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THE LOG BOOK

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Happy New Year

The year 1941 lies before us with unmeasured and untold possibilities. Without question there will be many problems of a more or less complex nature also confronting us and requiring solution. While the opportunities and problems each year vary somewhat, 1941 is in many ways not dissimilar from other years. It will require patience, forbearance, tolerance, serious thinking and continued effort if we are to make the most and best of its possibilities. It will also require courage, vision and determination if we are to give a good account at the end of the year for our stewardship given to us by Father Time.

Osteopathy has come a long way in the nearly 70 years since its humble beginning. There are so many things of which we may be proud. Our growth as a profession has been steady and continuous. Our development as an organized profession has been an outstanding achievement. Our standing as a constructive influence in the world of therapeutics has continually mounted, and our service to humanity has been one of increasing value. Never in the history of our profession has the public been so well informed and so acutely conscious of the real values in osteopathic service as it is at this time. Osteopathic education has made strides of mighty import and we can look forward with confidence to continued growth and development.

Let every member of the osteopathic profession recognize that they are an integral part of a truly great profession, a profession larger than any indivdiual or any group in it. Let us determine that in 1941 each one of us shall make some definite contribution looking to further increase and improve our service to our patients and to the public. Let us resolve to support with renewed enthusiasm the hundreds of osteopathic institutions and the splendid services which they are rendering. Let us make it a long pull, a strong pull, and a pull all-together for a bigger, a finer and a more useful osteopathic year.

—A.D.B., D.O.

O. B. Dept. Hits New High

Since the beginnnig of the fall semester last September, the obstetrical department of the college has really been more than busy. The average number of cases has been better than one baby a day and we are very proud of this fine report

The department broke its all-time record, which was 45 cases delivered in one month, established in 1936. Now the thermometer takes another spurt to make the reading 49 deliveries for the month of December, 1940.

The following are the figures from September through December, inclusive: September, 33, October, 41, November, 38 and December, 49.

Deleterious Effects of Sulfanilamide

O. EDWIN OWEN, D.O.
Department of Pathology

During the past few years the drug sulfanilamide and its derivatives have sprung into rapid use in the treatment of a great many diseases. Only a cursory glance at the volumes of current literature on the subject need be given to learn that this group of drugs is a "two-edged sword." This brief paper does not intend to touch upon the many desirable features of the drugs but rather to point out the dangers in their use so that they may be more carefully guarded.

Mode of Action:

Sulfanilamide is readily absorbed and excreted and is recovered in all body fluids. It is absorbed in four hours from the digestive tract. Sulfanilamide does not arouse a specific response on the part of the host and does not stimulate antibody production. It has no direct effect upon phagocytic activity and neither does it have a desirable effect upon the reticulo-endothelial system. The present interpretation of the action of sulfanilamide is that bacteria are weakened or degraded, so that their elimination by the white blood cells and tissue phagocytes is possible. This is the desired effect of sulfanilamide and its derivatives. At the same time, a number of deleterious effects may take place which must be carefully understood and interpreted by the physician.

I. Cyanosis

In some patients cyanosis will begin soon after administration and is due to:

A. Methemoglobinemia.

(Continued on Page Four)

Trip to Florida

Dr. and Mrs. Arthur D. Becker spent the Christmas holidays taking a motor trip to Florida. The trip was occasioned by the wedding of their son, Dr. Alan R. Becker of Winchester, Kentucky, to Miss Catherine Schumacher of Eustis, Florida, on December 28th. The former Miss Schumacher is the daughter of Dr. and Mrs. E. L. Schumacher. Dr. Schumacher is one of the well-established osteopathic physicians of that state.

An added pleasing event in the trip to Florida was a complimentary luncheon given at Orlando on Sunday, December 29th, in honor of Dr. and Mrs. Becker by the trustees of the State Osteopathic Association and by the Directors of the State Osteopathic Auxiliary Association. The osteopathic profession is very active in Florida and this occasion gave a splendid opportunity to meet many old friends and to make new ones.

Holiday Trip by Leininger and Owen

The day after Christmas Doctors Leininger and Owen left Des Moines upon a very worthwhile trip in the interests of student recruiting and college alumni activities.

Their first stop was Oshkosh, Wisconsin, where time was spent with Dr. John Rogers; then to Milwaukee where they met with Dr. F. E. Hecker and others. They report a pleasant boat trip across Lake Michigan to Luddington. In Detroit they met with the alumni group and attended the Osteopathic Ball held at the Book-Cadillac hotel in honor of the osteopathic students home for the holidays.

In Cleveland an afternoon tea was attended at the Hotel Cleveland, also with students home for the holidays as guests. In Cleveland, Doctors Dunham and Sprague did the honors. The last stop of the interesting trip was at Columbus Ohio.

Doctors Owen and Leininger wish to thank the Doctors in the various cities who made the trip so interesting and worthwhile.

Pursuit for a Reason

The Reticulo-endohtelial System

Andrew Taylor Still, M.D., 1874:
"The body is a self-repairing machine."
"The body contains within itself all the chemicals, all the medicines necessary for the cure of its curable diseases."
George W. Crile, M.D.:
"Since chemical and vaccine therapy have failed, there remains only the physiologic method of attack against pyogenic infections. The physiologic method implies, first, a recognition of the principle that infection must be overcome by the same means of defense which are inherent within the organism itself; and second the application of measures which will remove handicaps and interferences, on the one hand, and on the other will build up the defense."
Moynihan:
"It is the natural defensive powers of the body fluids and tissues, of serum and leukocytes, that are the chief agents in finally subduing the bacterial infection. Sufficient reliance does not appear to be placed upon the stupendous power the body tissues possess for controlling infection."

In 1911 Aschoff and Kiyono injected mercury, trypan blue, carbon and other colloidal suspensions into laboratory animals. These substances were found on dissection to have been concentrated in a specific group of cells consistently. These cells are found forming the reticulum of the lymph nodes, spleen, bone-marrow and lining the sinusoids of the spleen and liver and to an infinitely less extent in other structures. Since these cells, though widely dispersed, exhibit identical functions and are similarly disposed in tissue, they are called, collectively, the reticulo-endothelial system. As a system it has its physiological duties to perform, assuming a most vital capacity relative to infectious processes. Upon this system depends the development of immunity and the formation of antibodies without which no one would survive any infection.

All reticulo-endothelial tissues are of mesenchymal origin. The spleen is almost entirely of this origin so it is only reasonable that we should find here a greater proportion of this vital tissue than in the rest of the body. Practically, it is common usage to think of the spleen as being synonymous with the reticulo-endothelial system even though it is an incomplete truth.

Reticulo-endothelial cells: are the Kupffer cells of the liver, form the reticulum of some tissues and line the sinusoids of others as mentioned above, are present in the hematopoietic tissue of the ribs, vertebral bodies, and the proximal ends of the long

(Continued on Page Two)

N. O. I. C.

On November 27 this office sent out a call to each of the subordinate chapters for a cut of their group and some information about the chapter. Complete reports from each of the thirty-nine chapters could have been in this office by the 15th of December but the time was extended to December 30th. This was an opportunity to secure a complete coverage of our entire Council membership in a nationally known fraternity magazine and a chance that will not come to us again perhaps for several years. The slight expense on each chapter amounted to less than $5.00 each and well worth the investment. As a result of the failure of almost 50 per cent of the chapters to respond, the article cannot go in as originally planned but will have to be changed to fit the material sent. We will have an article in the Fraternity Month in the issue of March, 1941, but as stated above, not quite as originally planned. Review with me the results of this request.

COLLEGES—

Des Moines stands at the head of the list, having sent in six cuts with full and complete information out of a possible seven.

Los Angeles responded next with four out of six.

Kansas City, three out of five.

Kirksville sends five out of ten.

Chicago, two out of six.

Philadelphia, one out of five.

Total, twenty-one out of thirty-nine.

FRATERNITIES—

Axis 100 per cent.

Iota Tau Sigma 100 per cent.

Psi Sigma Alpha 100 per cent.

Phi Sigma Gamma,, four out of six.

Atlas Club, three out of six.

Lambda Omicron Gamma, two out of four.

Sigma Sigma Phi, two out of five.

Acacia, Alpha Tau Sigma, Delta Omega and Theta Psi failed to send in either information or cuts.

Regardless of this failure on the part of many of the chapters to respond to the call they will be listed, but not in the March issue as first intended.

It is to be hoped that if future opportunities offer a similar chance for ethical publicity such as this that there will be a much better response. We constantly hear the cry that we need to get our name and science before the right people in order to secure students. This was an opportunity and some have passed it by without giving it the serious thot it deserved.

This office feels that the year 1940 has been a good one. We have been able to accomplish more than we anticipated at the beginning of the year. We start 1941 with a clean slate in some ways and with some records that need to be erased. We hope the erasures will take place before the meeting of the Council in Atlantic City in June.

A little better understanding, a little more cooperation and a little more enthusiasm for our science will do wonders towards solving the problems ahead. We hope that the New Year will bring to each of you everything you need and most of the things you want.

J. Paul Leonard, President,
Detroit, Mich.
H. V. Halladay, Exc-secy.,
Las Cruces, N. Mex.

ATLAS CLUB

With the beginning of another year we find several new faces among the Club's officers for the new semester: Noble Skull, Tom Hewetson; Occipital, Bob Berger; Stylus, Gordon Elliott; Pyloris, Howard Johnston; Sacrum, Merton Worster; Styloid, Don Mack; and Receptaculum, Laurel Dietrick. Installation of officers, as well as the initiation of a new member, Joe Cullen, took place on Sunday, December 15th. In honor of the three graduating members of the fraternity, Jim Watt, Bob Smith, and Paul Rutter, the semi-annual senior banquet was held on Thursday, December 19th.

—G.L.E., Stylus.

ΨΣΑ

Election was held on December 17th. New officers elected were: Berger, president; Brail, vice president; Taylor, secretary; Ford, corresponding secretary; Ferguson, treasurer; Wood, reporter.

Senior banquet was held on Tuesday, January 7th. The seniors receiving life certificates were: Hardy, Bahling and Jemison. Dr. O. E. Owen was toastmaster and Dr. H. A. Graney was guest speaker.

—P.W.

ΣΣΦ

Our chapter is proud to announce that three new members have been initiated and are now ready to assume the responsibilities of an active member. These men are R. H. Johnston, H. W. Morey and T. Linck. May these men regard the fraternity as the men that selected them regarded their character.

At our last senior banquet we honored four graduating seniors, we are happy that these men have been connected with our fraternity during their stay at school. These men are J. E. Miller, P. T. Rutter, P. W. Gehman, and R. E. Smith.

—H.P.

ΦΣΓ

With the approaching of the new semester Phi Sigma Gamma is proud to announce its new officers for the coming year.

Archon, H. Tagart
Sub Archon, R. Sowers
Pronatarius, H. Livingston
Crusophulax, J. Yagoobian
Sub Crusophulax, G. Deer.
Phulax, William Reinfried

To the school for the new year we pledge ourselves to efforts to make it the best in fraternity history.

—H.H.

ΛΟΓ

After a busy two weeks we are glad to be back and get into the swing of things again. Many of the fraters were guests of the various osteopathic associations and the interest in our Alma Mater by all those in the field was very enheartening.

We take this opportunity to extend to the graduating seniors our congratulations and best wishes for a successful future. Osteopathy may be duly proud of these new physicians and we may be sure that they will do all in their power to further its advances in the field. Good luck!

EDITOR'S NOTE

Due to the lack of space in this Log Book, we are more than sorry that it became necessary to cut down the fraternity notes. We shall make every effort to restore their usual space in the next isue.

PURSUIT FOR A REASON

(Continued From Page One)

bones. The cells are free in the circulation as the Endothelial Leukocyte of Mallory, found in the lymph spaces and connective tissues as the Resting-wandering cell of Maximow and have been called the large monocyte, transitional cell, large mono-nuclear, monocyte, macrophone, histiocyte, hemo-histioblast, and so on by other authorities and I observe still other more common appellations by students that it seems best not to print.

Functions of the Reticulo-endothelial system are varied and indispensible to the organism. These include, at least, hemolysis of old erythrocytes and blood platelets, phagocytosis of foreign bodies, formation of giant cells, hematopoiesis, erythrocyte production is a reversion phenomenon in acute anemias, and the very essential production of antibodies that are specific for the specific antigenic substance in the serum.

The production and liberation into the serum of specific antibodies that are specifically effective on the particular antigen in the serum of the patient in the course of an infection immediately places the reticulo-endothelial system and its physiology at the highest peak of interest from the viewpoint of the student and physician. Bacteria and their toxins are elements for concern and consideration in most of the pathologic states and in spite of the aid received in some instances from the bacterio-statics, preformed sera, non-specific protein therapy, etc., it is obvious that the proper Reticulo-endothelial response to the specific antigen of the disease is the determining factor in the balance as to whether the patient overcome the infection or the infection kills the patient.

Our ability to control the antigen-antibody balance or reaction is therefore a criterion of our adeptitude as a physician or a profession in the treatment of infections.

As has been mentioned above, the spleen and reticulo-endothelial system are in a sense visualized as synonymous because of embryonic origin, the enormous quantity of reticulo-endothelial tissue in the spleen and a general rule that dictates, "as the spleen functions, so does the reticulo-endothelial system." It is desirable that we examine the spleen as to its physiological activity. Secondly, indicating the study of the spleen is the fact that the spleen is more accessible by manipulative measures coinciding with Sympathetic response than the remainder of the reticulo-endothelial system, and the results of Sympathetic activity are rapidly evident in reduction of the symptoms of the patient that are produced by the toxemia. The humeral changes are demonstrable in the laboratory by simple and standardized routines. "The conclusions that flow from these most careful experiments are that the spleen affords great aid in resisting infective processes, and that its removal robs the body of its resistance, or diminishes that resistance until such time at least as compensatory processes have had a chance to establish it once again in its original strength. Hektoen's experiments appear to show that anti-bodies are produced in the spleen, lymphatic tissues, and bone marrow."

B.E.L., D.O.

(To Be Continued)

Editor's Headache

I am beginning to appreciate why editors leave home! Last month in our Christmas number of the Log Book we published a Christmas Greeting from the Des Moines Still College Osteopathic Family. I checked the list of names and so did two others.

Dr. Lonnie L. Facto

Even so, we left out the name of Dr. Lonnie L. Facto. We extend apologies to both Dr. Facto and our readers. It surely should make one tolerant to errors of others when, in spite of more than reasonable care, errors can creep into one's own work.

—A.D.B, D.O.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

REGION BELOW THE DIAPHRAM

(Number 24 in Series)

BILIARY COLIC

Biliary colic occurs in both men and women, and for the most part it occurs above the age of 40 although it is not rare in people in the thirties. It is most frequently due to chronic disease of the gall-bladder (chronic cholecystitis), with or without gallstones and as a result of acute or subacute exacerbations. It is more common in women than in men, and childbearing, sedentary occupation, lack of exercise, obesity and antecedent typhoid all seem to act as predisposing factors. Malignancy of the biliary apparatus is a possible cause, and adhesions involving the biliary structures are occasionally found as etiological factors. Involvement of lymphatic glands at the hilus of the liver as a part of abdominal malignancy or other disease as tuberculosis may occasionally be causative. The passing, or attempted passage, of gallstones is probably the most common cause of severe attacks of colic.

Gallstones usually form in the gall-bladder, but may form in the biliary ducts or in the common bile ducts. They are usually found to consist mainly of cholesterin (about 95%) with calcium and bile pigment. When small, they may lodge in the cystic duct or in the common bile duct. If formed in the biliary ducts or lodged in the common bile duct, the atack of colic is associated with jaundice of varying intensity. Jaundice which waxes and wanes, accompanied with biliary colic is indicative of lodgment of stone in the common duct, usually in the Ampulla of Vater. Severe and persistent jaundice of increasing intensity, with or without attacks of colic, suggest the possibility of cancer of the head of the pancreas. About one case of biliary colic in five has more or less jaundice as an associated symptom. There are many causes of jaundice without gall-bladder disease and without gall-stones.

The symptoms of biliary colic consist mainly of pain, usually severe, in the right hypochondrium and extending to the back beneath the right scapula, and also extending toward the umbilicus. Pain may extend into the thorax and also into the lower abdomen. The pain is frequently associated with nausea and vomiting, and may last for a few hours or several days. The attacks are paroxysmal and the affection tends to be recurrent. Differential diagnosis must be made between biliary colic and peptic ulcer, renal colic of the right kidney, appendicitis, perforations of a viscus (malignancy of colon or peptic lucer, acute pancreatitis or other acute abdominal emergency. In many cases of chronic cholecystitis with or without gall-stones there may be no colic attacks. In these cases without colic, more or less persistent digestive disturbance is a common symptom and various degrees of indigestion may be evidenced or may occur in the interval between attacks of colic.

In considering treatment, it will be wise to give a moment's consideration to the autonomic innervation of the biliary tract. These structures are supplied by both the parasympathetic and the sympathetic division of the autonomic nervous system. The parasympathic is by way of the vagus and its function is chiefly that of activating peristaltic movement of the gall-bladder and the ducts. The sympathetic innervation is by way of fibers from the 7th to 10th dorsal segments of the cord by way of the lateral chain ganglia and the greater splanchnic nerve. This function is vasomotor, secretory, trophic and visceromotor inhibitor. This last-named function is a most important one in the consideration of our present subject; that of biliary colic.

Osteopathic treatment at he time of the attack of colic consists for the most part in gradually applied, slowly-and-steadily-increased deep insistent pressure just to the right of the spinous proceses in the 7th to 10th dorsal area. If the patient is lying in bed on the left side, turned slightly forward from the exact lateral position with his back toward the edge of the bed, the osteopathic physician by standing at the patient's back may apply such pressure with the heel of the hand forward and somewhat downward (mesial). This presure should be maintained for two or three minutes at a time, or longer if possible, and should be of sufficient intensity as to bow the spine somewhat forward. This type of pressure, applied as described, seems to prove profoundly stimulating to the sympathetic innervation whose function is visceral inhibitor. It tends to lessen the hyperperistalsis and to relax the overstimulated common bile duct. It tends to control pain and to facilitate the passage of the stone if present. In about 60 per cent or more of cases, this treatment is entirely effective and in my personal experience results have been excellent.

I have had a number of cases in which, in addition to such treatments, it was necessary to give a narcotic, preferably 1/6 or 1/4 of a grain of morphine with 1/150 or 1/200 of a grain of atropine. The patient should be kept quiet and in bed, with light diet. Hot moist packs applied over the gall-bladder area seem to be soothing and relaxing in many cases. If nausea and vomiting is unduly persistent, a lavage of the stomach with a solution of bicarbonate of soda is indicated.

For a number of years I have kept careful account of cases of chronic cholesystitis and here is one condition in which in my judgment we usually find a specific osteopathic lesion. Practically every one of these cases has a lesion, either of the 8th, 9th or 10th ribs on the right-hand side, and frequently there is a group rib lesion involving all three. Normalization of these lesions and their maintenance in normal structural position is indicated and in many cases is followed by complete cesstion of all symptoms related.

A type of treatment that has found a real place in therapeutics in diseases of biliary apparatus is known as duodenal biliary drainage. I will not attempt to describe the technic for this procedure in this brief article, but will make the comment that this type of treatment has a real place in consideration in therapeutics. It is a valuable measure. Its indication is in the treatment during the latent period in these cases of chronic gall-bladder disease.

In cases which do not respond to conservative treatment and where one is satisfied that a chronic cholecystitis exists or where there are stones as determined by X-ray studies and by cholecystography using opaque dyes, it is best treatment, in my judgment, to deal with the situation surgically. Complete removal of the gall-bladder is the operation of choice where possible, and has practically entirely replaced the older method of gall-bladder drainage.

—A.B.D., D.O.

Marriages

Clare G. Howe of the senior class was married to Miss Margaret Christensen of Buffalo Center, Ia. The ceremony took place at the St. Johns Lutheran Church in Des Moines, January 11. The Rev. Mr. Gruhn officiated.

Deaths

Dr. Mary Schwab of Vinton, Iowa, died in the hospital at Vinton November 27, 1940. Dr. Schwab was graduated from the Des Moines Still College of Osteopathy in the May closs of 1918 and practiced in Vinton (her home) for several years.

In Elizabethan times in Germany a simple uroscopy cost about three cents; ningle visits by the doctor eight to fifty cents; consultations $2.50 for each doctor—if by letter, $1.25.

DESERT-ATIONS

By H. V. H.

New Year's Day found me with about half a million others watching the beautiful Sun Carnival parade in El Paso. The day was ideal with warm sun and dry streets altho it had rained the day before. There were nearly one hundred units in the parade, many of which were were drawn from the enormous training camp at Fort Bliss. The twenty-six bands arrayed in brilliant colors and each with a full complement of acrobatic drum majors and majorettes took me back many years to my parade days and the saxophone. The elaborate floats depicting music in our own country and many foreign lands were startling in their beauty and evidence of careful design and many hours of real labor. I had not expected to see such a colorful display in that division of the two and one-half hour panorama. I did anticipate the variety and extent of the display from Fort Bliss but it impressed me doubly. I did thrill to the fact that we have in training at Fort Bliss some exceptionally fine looking young men. I felt a very strong swell of pride in the modern motorized equipment that they drove easily in the parade. No one could keep from admiring the thousand fine horses and marvel at their control by their riders. You and I have helped to pay for this demonstration of preparedness and we should be proud of it. I am glad that my few pennies have been voted to increase the strength of our defenses. But—my patriotism and desire for safety and a strong defense program is divided.

I wonder if we as osteopathic physicians have carefully taken stock of our own defenses. We are constantly being harassed by an enemy, sometimes real and sometimes imaginary. I wonder if we have examined our own equipment and brought it up-to-date in order to meet not only our present needs but our future expectations. Give one of our defensive units a thot. Our colleges are in existence for the purpose of extending our field and replacing those who drop out of practice. Just how are they getting along and if they are not doing so well what must be done about it?

Take a pencil and paper and do some figuring like I asked you to do last year and the year before. With fewer entering our colleges it must follow that even less will graduate, for in the filtering thru four years there is always a loss at the end of the training period. If we are showing a weakness in this line of defense we will have to remedy it by modernizing our methods of approach. If we have moved out of a field productive of recruits and into another field still productive, we will have to adapt our methods to the new site. We have not done this so far. This

(Continued on Page Four)

I. S. O P. S.

Society President

President Jordan has been rendering a most outstanding service to the Iowa profession. It is well recognized that, due to his efforts, cooperation exists to an unusual degree among the entire membership. Daily correspondence emanates from his office pertaining to the work of the so-Society and the problems with which it is confronted. He has been present at all committee meetings to advise and assist committee members in handling their duties and responsibilities in the light of all Society activities. When committees have considered that certain non-official work should be assigned to him, he has promptly accepted and fulfilled such responsibility. His unstinting and untiring devotion to further the best interests of the profession has inspired many others to do likewise.

Not only has President Jordan given freely of his time, but he has also sacrificed greatly in money. He has not only gladly paid the maximum in contributions requested by the Society from its membership, but he has refused to accept reimbursement by the Society for the expenses he has sustained in fulfilling the duties of the office of President.

Yes, the osteopathic profession in Iowa has, indeed, a true and unselfish servant in the person of President Jordan—one whose sole and only thought is for "the good of osteopathy."

Legislative Sub-Committee

Dr. S. H. Klein, Chairman of the Legislative Committee, recently selected members of his legislative sub-committee, a body created by order of the Legislative Committee and Board of Trustees.

The following members of this recently-created committee met in Des Moines at the Savery Hotel on Sunday, January 5:

A. D. Craft, Osceola; Beryl Freeman, Des Moines; Mary E. Golden, Des Moines; W. D. Tindall, Woden; C. K. Risser, Maquoketa; D. S. House, Dubuque; J. A. Kline, Malvern; Paul L. Park, Des Moines; O. E. Rose, Des Moines; J. H. Hansel, Ames; Rolla Hook, Logan; W. A. McVane, Dyersville; W. D. Andrews, Algona; Holcomb Jordan, Davenport; N. A. Cunningham, Marshalltown; Ralph Jack, Ogden; J. K. Johnson, Sr. and Jr., Jefferson; Preston L. Etter, Washington; N. D. Weir, Woodbine; Roy G. Trimble, Montezuma; and T. A. Kapfer.

A.O.A. Unit Contact.

The Board of Trustees, at its meeting on December 8, 1940, selected the following as Iowa personnel of the A.O.A. unit contact system:

Grace Urban, Iowa City; Holcomb Jordan Davenport; B. M. Gotshall, Waterloo; B. D. Howland Decorah; Charles L. Wheeler Centerville; S. H. Klein, Des Des Moines; Phil McQuirk, Audubon; Marvin Green, Storm Lake; R. B. Gilmour, Sioux City; J. A. Hirschman, Cherokee, and J. P. Schwartz, Des Moines.

Vocational Guidance

Dr. L. A. Nowlin, Chairman of the Vocational Guidance Committe, is developing a comprehensive plan of service in this most important field of activity. Further information will be published at a later date.

Basic Science

Dr. D. E. Hannan, Chairman of the Department of Public Affairs, will meet with the Basic Science Board on Tuesday, January 14, at the Home Lodge, 603 East Locust Street, Des Moines.

Industrial and Instituional Service

Valuable information, concerning the by-laws of an accident insurance company, which the American Osteopathic Association had been endeavoring to obtain for the last ten years was procured by Doctor Paul O. French, as Chairman of the Society's Committee on Industrial and Institutional Service, on December 18, 1940.

Detention Hospital

Petitions are being circulated in Scott County calling for a vote on construction of a detention hospital in the city of Davenport. Doctor J. H. Sunderbruch, M. D., health officer in Scott County, has been very active in their circulation.

Application for Membership

Arley G. Edgerton, Boone, Iowa.
Dwight S. James,
Sercetary-Treasurer.

Desert-Ations

(Continued From Page Three)

line of osteopathic defense is broken and must be repaired and strengthened immediately.

We have never taken the trouble to put ourselves in the way of monetary gifts. This is another evident weakness in our defense. Each osteopathic physician should appoint himself a committee of one to keep an alert eye on opportunities that will help our educational institutions financially.

Suppose we were invited to enter our talents and assets in the Sun Bowl parade or the Rose Bowl cavalcade what sort of a showing would we make? We do have an enviable record of service and growth and all from within but in our near half century of existence as a separate school of therapy we have been too selfish as individuals. Now—at this time of year—we must be preparing for next Fall. Out of nearly ten thousand active osteopathic physicians we surely have five thousand who will work individually and together to bring to our colleges next Fall an overflow of material out of which the colleges will develop the strength we need in the field. The other five thousand will be alert to endowment and foundation monies and our parade next Fall will equal or surpass that of the Rose Bowl and the Sun Bowl together.

—H. V. Halladay.

Deleterious Effects of Sulfanilamide

(Continued from Page One)

This is produced by a chemical combination of sulfone or SO2 radical of these drugs with hemoglobin, thus preventing it from uniting normally with oxygen. Cyanosis is not as dangerous as one time thought to be.

B. Sulfhemoglobinemia.

This is produced by the union of hydrogen sulfide radical of sulfanilamide with hemoglobin. During the use of sulfanilamide it is thought that there may be an increased absorption of hydrogen sulfide from the bowel as saline cathartics are used, or if foods such as beans, cheese, clams, cocoa or bran are included in the diet. One to two grains of methylene blue by mouth every four hours will often relieve the symptoms of cyanosis.

II. Gastric Intolerance

Some patients show a local irritation to the gastric mucosa but it is not a constant finding.

III. Central Nervous System Reactions

Cerebral excitability, insomnia, restlessness, delirium, drowsiness, stupor and dizziness are symptoms which indicate reduction in dosage or even discontinuance of the drug. Ambulant patients should be cautioned of these symptoms, particularly automobile drivers.

IV. Skin Reactions

Purpuric, urticarial, scarlatinal, erythematous, rubellaform, and exfoliatives dermatitis reaction may enforce discontinuation of the drug and even be the precursors of renal complications.

V. Hepatic Reactions

Hemolytic jaundice may appear, due to overloading of the liver with hemolytic pigments from the rapid destruction of erythrocytes. This is characterized by nausea, vomiting, jaundice, and bile in the urine. This is a serious warning—a precursor of anemia!

Toxic hepatitis may be brought on by a toxic effect of the drug upon the liver cells and is characterized by nausea, vomiting, jaundice, excessive bile in the urine, enlargement of the liver and high bilirubin content of the blood plasma. These hepatic reactions are often associated with dermatitis and may be followed by renal complications. The drug must be stopped.

VI. Anemias

Anemia may be produced by the destruction of erythrocytes by the drug.

1. A mild, **simple anemia** may appear after several days of administration, with a drop both in erythrocytes and hemoglobin This is more common with sulfanilamide. The drug may be continued, if large doses of vitamin B1 are used.

2. An acute, **hemolytic anemia** may develop during the first week of treatment which will become progressively severe. It is rare with sulfanilamide but common with sulfapyridine. The anemia is characterized by a rapid fall in erythrocytes and hemoglobin, macrocytosis, reticulocytosis, leukocytosis, jaundice, hematuria and albuminuria. The drug should be discontinued; fluids forced; liver, iron, and vitamin B1 administered; and perhaps a blood transfusion given.

VII. Agranulocytosis.

This is one of the more dangerous complications, appearing late—after perhaps two weeks of administration of sulfapyridine, in particular. It is caused by the depressing effect of the benzine ring contained in the drug, upon the blood-forming organs. There will be a marked lowering of the white count, with relative decrease in neutrophils; temperature; weakness; gastric distress; generalized glandular enlargement; enlargement of the liver and spleen; inflammatory edema of the throat and mouth, with white patches resembling Vincent's angina, may be necrosis of the membranes; blood-casts and albumin in the urine. These symptoms **may** appear several days after discontinuation of the drug. Guard against too hasty dismissal of patient! Immediate treatment including blood transfusions must be administered.

VIII. Renal Complications

1. Simple albuminuria without casts or blood cells and without nitrogen retention. This symptom will clear if the drug is discontinued or the dosage reduced and fluids forced.

2. Nephritis is a more serious complication. It is more apt to occur with sulfapyridine, particularly if the fluid intake is low. The intake of fluid should be not below 3000 cc. in 24 hours. The signs will be albuminuria, casts, anuria, increased non-protein nitrogen of blood and edema. Nephritis is a contra-indication for the drug.

3. Urinary calculi formation is even more serious. Their formation follows the use of sulfapyradine and sulfathyazole. Crystals of acetylsulfapyridine and acetylsulfanilamide form in the pelves of the kidneys and the ureters, and may be demonstrated by X-ray. Obstruction may cause dilation of the pelvis, hematuria, pyelitis and pyelo-nephritis. The crystals form when there is decreased urinary output with super-saturation of the urine and is favored by highly alkaline urine. the pH of the urine should be kept at about 7.0. There is a question as to whether sodium bicarbonate should be used routinely in the light of calculus formation in the presence of highly alkaline urine.

This brief survey of some of the more important deleterious effects of sulfanilamide and its derivatives is not intended to discourage the use of these drugs in the treatment of diseases where indicated but rather to point the way toward more careful administration.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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Graduation

The week of graduation for the January, 1941 class was preceded by the gala event of Senior Assembly. This assembly was held in the auditorium at the college and was thoroughly enjoyed by the entire student body, in addition to a considerable number of guests present. The usual class history and class prophecy were given, along with a number of entertainment features of rather unusual merit. Paper ribbon, balloons and horns added to the general merriment and festivity.

Senior Banquet

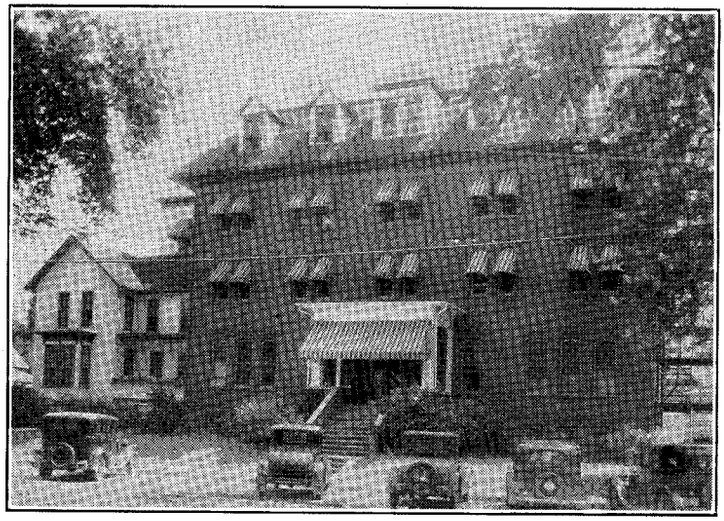
On Monday evening, January 13, the banquet for the seniors and their guests given by the officers of the college was held in Younker's beautiful tea rooms. In many ways this senior banquet is an outstanding social event in the school year. The tables were beautifully decorated with flowers and candles. Covers for 55 were laid. Talks were given by Dr. Ed. Leininger, faculty class advisor, and by Dr. Owen, the assistant dean. Dr. Becker, president of the college, acted as toastmaster and also made a brief talk. A response was given by Jack Miller, president of the class. The announcement of the Psi Sigma Alpha Scholarship Award was made on this occasion and Miss Edythe Gates was found to be the winner, with Mr. Hollis Jemison and Miss Georgiana Harris as runners-up.

Dr. F. A. Gordon

Graduation exercises were held at 8 p. m. on Friday evening, January 17, in the St. Johns Lutheran Church. The class was distinctly honored in the fact that Dr. Ferris A. Gordon of Marshalltown, Iowa, president of the American Osteopathic Association, was present and gave the Commencement Address. His remarks were eminently suitable to the occasion, stressing the fact that character, ability and high idealism in one's work as a physician and surgeon are requirements for success. In spite of the fact that this happened to be a cold, stormy night, a fine large audience of relatives and friends of the graduating class practically filled the auditorium. The college is proud to send these fourteen osteopathic physicians into the field. We extend to them sincere wishes for their success and shall follow them in their various activities wherever they may be.

(Continued on Page Four)

The Surgical Department



Des Moines General Hospital

The Log Book is very proud to present a few of the statistics about a fine osteopathic institution located in the city of Des Moines. The Des Moines Still College of Osteopathy is more than fortunate in having such an associated institution where students of the college are privileged to witness operations as well as following through many other interesting cases in which hospitalization has been necessary.

The highly efficient work being accomplished at the Des Moines General Hospital is in large part to be credited to Dr. J. P. Schwartz who is surgeon in chief of the hospital. Associated with Dr. J. P. Schwartz are Drs. J. L. Schwartz, H. A. Graney, H. J. Marshall, B. L. Cash, P. J. Maloney, A. W. Dennis and Garth Anderson. Dr. J. P. Schwartz is dean of the college and head of the Surgical Department.

In 1939 there was installed at Des Moines General Hospital a new Roentgenotherapy Department. The therapeutic equipment in this department consists of a high voltage unit with a variation from 100,000 to 220,000 volts. It gives a complete range for therapeutic application for every type of condition in which either superficial or deep X-ray therapy is indicated.

The year 1940 was a busy year indeed for the hospital. The total number of admissions was 1,712; the number of major operations performed, 411; the tonsil clinic had 1,523 cases, (not included in the number of admissions) with 41 cases as the high mark for any one day. There were 216 babies born in the hospital during the year. In the X-ray Department under the direction of Dr. B. L. Cash 5,378 pictures were taken during the year. The hospital owns 60 milligrams of radium available in cases where indicated.

The city of Des Moines is indeed fortunate, along with the Des Moines Still College of Osteopathy for having this splendid institution among its assets. The excellent record and superior service afforded to citizens of the state mark it as one of the better type of hospitals in Iowa.

Brain-Dusting

It is not too early to begin planning for your annual brain-dusting during the week of May 26 to 31st, inclusive. The many expressions of appreciation by the class during the past several years have given this week of Annual Review and Clinic increasing importance in the year of professional life.

Perhaps the Review Week of 1940 was in many ways the most successful up to that time. We are already making plans for the 1941 season. Take advantage of this opportunity to "brush up," to get in touch with newer developments and as well have opportunity to see the many improvements in and about the college and the additions in equipment. You owe it to yourself, to your patients, and to the profession to keep in the very forefront of osteopathic progress.

Low Back Pain

Knowing that there are many etiological factors to be considered in the discussion of backache it is not an easy matter to deside where to begin. However, it has been found that abnormalities of development in the lumbosacral region of the spine is such a common condition, in those patients complaining of pain in the lower back, that it seems advisable to consider them first. Other conditions accounting for low back pain will be discussed in subsequent articles.

There are a few of these abnormalities that are important enough to warrant a brief discription as to what they are and an attempted explanation as to how they produce symptoms, how they are diagnosed, and what can be done in the way of treatment.

Sacralization is a condition in which during the process of development one or both of the transverse processes becomes large and strong and may form more or less intimate connection with the sacrum or ilium, or both.

Lumbarization is an anomaly in which one or both of the lateral masses of the first sacral segment fails to fuse with the second sacral segment. The lumbar spine is lengthened with increased lordosis and the weight shifted to the weakened area between the first and second sacral segments.

Spina bifida occulta is present in those cases where there is a failure of fusion of the spinous process of the fifth lumbar, or the first sacral segment; in some cases both. Probably the absence of the lamina or pedicle on one side should be considered a part of this condition.

Spondylolisthesis occurs when there is a slipping forward of the fifth lumbar vertebra on the sacrum, sometimes the fourth on the fifth, due to absent or defective laminae, pedicles or articular facets.

Positional anomaly or asymmetry of the facets of the lumbosacral spine may be the cause of pain in this area. The articular surface of one facet may be in the anteroposterior plane while

(Continued on Page Three)

ANNUAL BRAIN DUSTING, MAY 26th to 31st Inclusive

N. O. I. C.

We seem to have passed over the peak in the year's work and we hope we are sliding down now to the end of the year with no more obligations other than the routine of correspondence. The several projects undertaken by this office have been completed and our contacts closed with the corresponding publications. There is another feature bit of publicity being discussed but it may get no farther than a letter or two so it can be disregarded this month.

The next big event affecting our membership will of course, be the convention in Atlantic City. The name and reputation of this famous resort will attract many. Our committees are at work preparing for a big convention and they want you to really enjoy your visit as well as profit thru your program. It is time now for you to begin saving the pennies and dimes for this important meeting.

Baird's Manual has been received and we are well pleased with the display of Osteopathic Organizations. Leland's Directory is on the press and it will be a valuable addition to our data. The editor of Banta's Greek Exchange has been sent corrected proof and copy for the next issue of our listing and we may now be able to take that week off and hide in some deep canyon of the Organ Mountains.

H. V. Halladay, Exc.-Secy.
Las Cruces, N. Mex.

ΑΟΓ

The new semester was started with the semi-annual election of officers. The men elected for the executive positions were: Dave Friedman, Cerebrum; Sam Gross, Cerebellum; Dan Feinstein, Calamus Scriptorius; Paul Green, Pons.

The pledgeships of Art. Abramson, Normon Kurzer and Bill Diem culminated ceremoniously when they were officially initiated into the fraternity Sunday, February 2. Good luck, men!

The new officers and the new actives were honored at a banquet held at the Des Moines Club, Monday night, January 26, 1941. Our guests of the evening were Dr. Lonnie L. Facto, and Rabbi Monroe Levens.

The boys on the bowling team show promise of being "up in the running" in the current Bowling Tournament being held at school. The spirit of friendly competition and good sportsmanship is quite evident among all of the respective groups participating in the Tournament.

We feel that it was a distinct privelege to have seen the research film, "The Second Lumber Lesion," produced under the auspices of the American Osteopathic Association. As a group of future osteopathic physicians we would like to urge every member of the profession in the field to endeavor to see this excellent picturization of the Osteopathic Lesion Complex.

ATLAS CLUB

Among the graduates of the class of January '41, we find three three members of this fraternity, all of whom, we are proud to announce, have been fortunate enough to secure hospital internships. Dr. James Watt will be spending the next year in Kansas City, Mo.; Dr. Robert Smith will be at Lexington, Nebr., and Dr. Paul Rutter has gone to the west coast to intern in Seattle, Wash. The club wishes the best of luck to its newest men in the field.

At the invitation of Dr. Becker, about twenty of the club members attended Plymouth Congregational Church, on Sunday, Jan. 12th. We enjoyed the opportunity of representing the student body at the College President's home church.

On Sunday, February 2nd, several of the club's officers had dinner and were entertained at the Phi Sigma Gamma fraternity on Grand avenue. We sincerely appreciate the increasing feeling of friendliness and cooperation among the members of the various fraternities in the college and trust that we can reciprocate in a similar manner in the near future.

G. L. E. Stylus.

ΦΣΓ

Another semester has gone down for the count and already most of us are in there swinging hard on the new adversary. Sophomores, with the "Tough" opponent out of the way, anticipate an early kill in the ensuing bout. Let us hope we do not become overconfident with a resulting KO victory for Dissection or Pharmacology.

Ray Sweeney, trainer for the Brooklyn Dodgers professional football club is back with us for the Spring semester. Welcome, Ray.

On Friday, January 31, the Chapter held a "Dog-patch" jig which was well attended and appreciated by all. "Lil Abner" with his curvesome "Daisy Mae" was well represented. Someone heard a cute little MAE humming to herself—Oh happy day, the PSG Lil Abners don't run away.

House improvements are in swing again. Curtains and blinds are all new; rugs being changed; basement completely plastered and redecorated; bathrooms rearranged and painted; etc. Drop in and see us.

Ed.

ΙΤΣ

Initiation was held on January 12, 1941 at the Dr. Cash residence. Our Chapter is happy to announce that three new men have been initiated. The three new members are Robert Hatchitt, Maurice Geraghty, and Harland Hofer. Election was held the same evening. The officers for the new semester are: President and Historian, Jack Lilly; Secretary, Maurice Geraghty; Correspondent Secretary, Robert Hatchitt; Treasurer, Wm. Furgeson; Vice President and Chapter Editor, Harland Hofer. Present at the initiation ceremonies were Dr. D. E. Sloan and Dr. W. P. Kelsey. Following the ceremonies a very tasteful dinner was served by Mrs. Cash.

January 29th a business meeting was held at the Taylor Clinic. President Lilly presented a tentative program for the semester, along with other usual business transactions. We are all happy to see the gay face of Robert Bennington appear upon the scene again this semester after a year of absence.

Each and everyone of the members of Iota Tau Sigma as well as the entire student body was very much surprised when Robert Hatchitt right out of the clear sky become the bridegroom of a local girl during the holdiay vacation. Congratulations Bob.

—H. G. H.

UV

Pledges, God Bless them, are no more. They were made actives January 16th at Grace Ransoms Tea Room. After initiation, they were royally feted by their new sisters. You noticed those lovely flowers Mary and Millie wore the next day. Dinner was followed by election of officers. We were happy to have with us Mrs. A. D. Becker and Mrs. L. L. Facto who are our new Patronesses, and Dr. Rachel Woods our new Field Advisor, also Dr. Berl Freeman. Mrs. Grainey also was elected Patroness.

To end a very successful school year the farewell dinner for Georgianna Harris and Lillie McClure Dunlop, our graduating seniors, was held at the Dr. Woods home. The Des Moines alumni, both practicing and non-practicing were in attendance as were the Doctors wives. Dinner was prepared and served by the sorority to 26 jeople. Our thanks to Miss Emma MacAdams who had charge of the dinner and Dr. Rachel Woods for the use of her beautiful home. After dinner the seniors were presented with gifts, things they most desired. Installation of officers completed the evening.

New officers: President, M. Seablom; Vice-President, E. MacAdams; Secretary, M. Toriello; Corresponding Secretary, M. Weygandt; Treasurer, M. Williams; Guard, R. Payne.

Cor. Sec., M. G. Weygandt

ΣΣΦ

The bowling tournament sponsored by the Beta Chapter of the Sigma Sigma Phi, seems to be bowling some of the fellows over. But after all, why should the sponsors win? We are very glad to see the sportsmanship and the friendly atmosphere that exists at the alleys and may the best team win.

Regular meeting was held February 11, 1941. Another meeting and banquet will be held February 25 with Dr. Bennie Devine as the guest speaker.

—K B. R.

DESERT-ATIONS

I have just finished reading "Shall We Proclaim Ourselves D. O.'s?" in the February issue of the Forum. In New Mexico the law requires that you do so if you practice in the state and from my observation it seems that it is a very beneficial ruling. Dr. Canoyer, here in Las Cruces is known as an osteopathic physician and yet he is County Physician and also a member of the Examining Board for the Insane of the county. It does not seem to have hurt him any to have his osteopathic physician sign displayed on his window and over his door. It might be that the mental attitude and the personality of the physician has something to do with these things also.

There is another phase of the subject that was not mentioned in any of the letters received by Dr. Walker.

We are stirred up considerably about the situation in the matter of student recruiting. There are a good many sides to this question and the majority of them face the profession. A good many years ago when we had so many students that we did not know what to do with them, we had osteopathic enthusiasm in the field. The osteopathic physician was proclaiming himself as such and had more to do than he could take care of. His success was based entirely upon his ability to relieve or cure the patient by a method that the old line doctor knew nothing about. His success and the news of his superior service spread from his patients and radiated from him so that others were attracted to the study of osteopathy.

It seems to me that it should not be necessary for us to force our profession to proclaim itself. It is an admission of a lack of pride and faith and surely we have both. I have traveled a little myself in the last 25 years and have talked before nearly every state convention during that time. I have always found the profession anxious to know more about osteopathy. It is still a deep subject to many of our best known field men and women. I believe that we still have the pride too that is necessary to put over a strong osteopathic influence in any community.

With these two AT WORK there will be no need for anxiety in the matter of the size of the classes. Success and faith go hand in hand and produce the enthusiasm that we need now to augment the number in our colleges.

An osteopathic sign on your door certainly can do no harm and offers many opportunities to make the passer-by stop and think. The word "Doctor" associated with an individual usually produces nothing more in thots than, "O, he is just another doctor." Osteopathic physicians are not in that class.

—H. V. H.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

REGION BELOW THE DIAPHRAM

(Number 25 in series)

RENAL COLIC

The term "renal colic" is used to designate colicy pain of renal origin, or perhaps more frequently pain of a colicy nature involving the ureter. In fact, the entire urinary tract may be included in severe cases.

The most frequent cause of renal colic is the result of the passage or attempted passage of calculi. These calculi, if in small particles as sand or gravel, may pass from the kidney pelvis through the ureter into the urinary bladder, remaining in the bladder and acting as the nidus of bladder stones or may pass through the urethra and appear in the urine. When renal calculi forming in the kidney pelvis are too large to enter the ureter they may block the proximal end of the ureter. Again, calculi may form in the substance of the kidney and sometimes form large coral-like branching stones.

As to the cause of renal calculi there have been many theories advanced. It is now believed that a metabolic disturbance may be the underlying factor. Calculi form in either acid or alkaline urine and while of several types or kinds, the calcium oxalate and calcium phosphate types predominate in the kidney stones and the uric acid and urates in the bladder stones. Infections of the kidney pelvis (pyelitis) probably serve as a predisposing cause.

Renal calculi occur more commonly between the ages of thirty and forty, and about equally in men and women. The passage of blood clots, frgaments of tissue and masses of bacteria (colon bacillus pyelitis) through the ureter may cause colic of a more or less severe character. Dietl's crisis associated with ectopic kidney must be remembered (usually right-sided). Calculi are frequently bilateral.

The outstanding symptom of renal colic is the pain, its location and character. It is said, in severe cases, to be the most excruciating and agonizing of all pain to which human flesh is heir. Characteristically it begins in the loin and extends through the groin to the bladder. It is frequently referred to the external genitalia and to the upper and inner side of the thigh. It is a cutting, lancinating sharp pain which tends to wax and wane. In certain cases no actual colic occurs but the distress consists of a deep pain in the costo-vertebral angle. Blood, either visible or microscopic, is usually found upon examination of the urine. There may be anuria. Strangury occurs in severe cases and repeated vomiting is by no means rare.

A rule of prognosis has a certain value in those cases where calculi become arrested in the course of their passage down the ureter. "Such stones will usually pass within three attacks and within three months." The point at which arrest occurs is most often where the ureter passes over the brim of the pelvis. Intervals between attacks may vary from daily to months or years. There maybe in given cases but a single attack.

Diagnosis is made by the characteristic pain, by the examination of the urine, and by X-ray studies. Appendicitis must be differentiated in right sided cases and intestinal colic may closely simulate. Ureteral catherization is a valuable means of investigation in diagnosis and may be of value in treatment If the ureter becomes blocked hydronephosis and pyonephrosis may supervene.

(To Be Continued)

A. D. B., D. O.

Dr. Woods Speaks At Cherokee

The fifth district Osteopathic meeting was held at Cherokee, Iowa, February 7, 1941, where Dr. John Woods had the honor to be the main speaker before a large attendance.

Dr. Woods' subject was on Osteopathic Technic and Respiratory diseases.

Polk County Osteopathic Association

The last meeting of the Polk County Osteopathic Association was held January 10, 1941 at the Des Moines General Hospital. The usual dinner was served by the hospital staff and if possible excelled those of previous occasions.

The discussion was Ezema, diagnosis, differntial diagnosis and treatment given by Dr. P. J. Maloney of the hospital staff. Following the lecture many questions were asked.

A regular business meeting followed the talk. About forty-five members and guests were present for this very interesting occasion.

We can guard our tomorrows from the mistakes of today, but we cannot alter our yesterdays. There is no eraser on the pencil of time.

Low Back Pain

(Continued from Page One)

that of the other may be in the transverse or oblique plane.

Anyone of the abnormalities mentioned creates an unstable lumbosacral joint and this instability, places undue stress and strain on ligaments, muscles, and joint surfaces. It is probable that the mechanism producing the pain is by the overriding of the posterior articulations which takes place when there is either an increased lordosis in the lumbar region or a more acute angle at the lumbosacral junction. This latter condition may be due to pressure thinning of the intervertebral disk posteriorly. In the former case the weight is not entirely borne by the vertebral bodies, but is partially supported by the posterior articulations, placing a strain on their capsules and articular facets. Thinning of the intervertebral disk does not directly cause pain, but the resulting extension lesion of the articular facets may cause it by the increased tension upon the capsular ligaments, encroachment upon the size of the foramina, and impingement of the ends of the articular processes against the pedicles above and the lamina below.

The diagnosis of the abnormalities of the lower spine is made by X-ray pictures taken in the anteroposterior and lateral positions. However, a flat lumbar spine, scoliosis with a prominence on the convex side is fairly common in cases of unilateral sacralization. In spina bifida occulta there are some signs that may suggest the diagnosis; talipes equinus, a tuft of hair over the lumbosacral region, and enuresis. The waddling gait and acute lumbosacral angle are fairly characteristic of spondylolisthesis although it may be confused at first with bilateral congenital dislocation of the hip-joints. If the pain passes into the lower extremities it follows the course and distribution of the fourth and fifth lumbar, and first sacral nerves.

In talking with the patient about his condition and explaining the X-ray pictures to him we should be careful not to over emphasize the fact that his back will never be normal. Some patients are very susceptible to such suggestion in which case they continue to have some pain in the lower back regardless of the type of treatment given. Some of these patients are difficult to treat and if there is a history of an injury or accident, and compensation is pending, it is hard to relieve the pain in the back before the claim has been settled.

Clinical observation indicates that there must be secondary osteopathic lesions occurring in these cases. No doubt the abnormalities predispose to secondary lesions above and below the involved area, and it is the correction of these lesions that gives the relief to the patient, although there may be some relief obtained by relaxing the tissues under tension in those segments showing abnormal changes.

Operation for the removal of an enlarged transverse process, abnormal spinous process, and in some cases the facets, is performed with apparent benefit to the patient, but considering all cases operations are rarely done.

—L. L. Facto

'Where Are They Going?'

"Where are they going?" That is a very common question around school now, especially since the qualifying exam. grades have been turned back and they (the senior A's) found out that all have successfully passed the test covering their full four year course. So your reporter made a special effort to do a little eavesdropping and found the answers to the question stated above.

Harold C. Bahling will intern at the Massachusetts Osteopathic Hospital.

Lillie McClure Dunlop will take the Iowa board and expects to practice here.

Edythe M. Gates will take the West Virginia and Ohio boards and will locate for practice in that area.

Paul W. Gehman will intern at the North East Hospital in Kansas City, Missouri.

John Hardy will intern at Waldo Hospital in Seattle Wash.

Georgiana B. Harris will take the Ohio board and then go into a general practice and eventually specialize in obstetrics, gyn. and pediatrics.

Hollis G. Jemison will intern at the North East Hospital at Kansas City, Missouri.

William I. Laut will take the Michigan and Missouri boards, then settle down to a general practice in some small town.

Jack Miller will go to West Virginia and take the boards and practice in that state.

Paul Rutter will intern at the Waldo Hospital in Seattle, Wash.

Rudolph A. Sabo is a little undecided what he is going to do.

Ted Schloff will take the Ohio board and the second half of the national board in the spring, then expects to go into a general practice in some small community in Iowa.

Robert Smith will intern at the Widney Hospital and Clinic at Lexington, Nebraska.

James Watt will take the Missouri board and plans to intern.

We take great pleasure in congratulating these students and wish them all the luck they deserve. There is one thing that that new graduate must keep in mind and that is, to work together and stay united so that the profession may be able to successfully meet the the many problems that confront it.

I. S. O. P. S.

Legislative Committee

Dr. S. H. Klein, Chairman of the Legislative Committee, reports that to February 5, 1941, the following public health measures were introduced in the present legislative session which convened January 13, 1941:

SENATE FILE 1, a bill to provide a program of uniform, statewide aid to dependent children in conformity with the Social Security Act of Congress.

SENATE FILE 2, providing certain physical requirements as a prerequisite to the issuance of a marriage license.

SENATE FILE 10, relating to new qualifications of the superintendent of Glenwood state school namely, "the superintendent shall be a well educated physician with at least five years experience in the actual practice of medicine."

HOUSE FILE 24, dealing with the committment, care and support of insane persons.

HOUSE FILE 35, authorizing the taking of chemical tests to determine intoxication of persons arrested for crimes in which intoxication may be an issue and designating those competent to take the test.

SENATE FILE 60, authorizing counties, cities or towns and school districts to appropriate money for the support and maintenance of health, psychological and psychiatric clinics.

SENATE FILE 76, providing for the transfer of the powers of local boards of health from township trustees to county boards of supervisors.

HOUSE FILE 42, relating to motor vehicles and providing for examination of those deemed to be physically or mentally incompetent to operate same.

HOUSE FILE 45—SENATE FILE 69 (companion bills), providing for the pledging of net earnings of a municipal electric light and power plant in any city of the second class wherein a state educational institution is located for the purpose of constructing a municipal hospital or an addition thereto.

HOUSE FILE 70, relating to aid for the needy blind.

SENATE FILE 78, relating to the fund from which the expenses of the County Board of Health are paid.

SENATE FILE 95, being a bill for an act to repeal Chapter 123, Code, 1939, relating to the practice of Pharmacy and to enact a substitute therefor entitled "State Pharmacy Chapter."

SENATE FILE 97, providing for an appropriation for the board of pharmacy examiners to continue enforcement of the Narcotic Drug Act for the next five months.

SENATE FILE 157, a bill for an act to repeal Chapter 119, Code, 1939, and to enact a substitute therefor, relating to the practice of Chiropractic.

SENATE FILE 162, giving cities and towns the power to create housing assessment districts; to provide for the alteration, removal, repair and improvement of unsanitary and unsafe dwellings, houses, apartments and tenements.

SENATE FILE 180, relating to fraternal beneficiary associations and authorizing the issuance of certificates not exceeding $300.00 in amount without regard to age or medical examination.

HOUSE FILE 168, a companion bill to Senate File 2 (above described).

HOUSE FILE 174, relating to narcotic drugs, providing for certain exemptions, providing for confiscation and forfeiture of vehicles unlawfully used in the narcotic trade and relating to penalties for violations of the provisions of Chapter 155.1, Code, 1939—the Narcotic Drug Act.

SENATE FILE 211, a bill for an act to amend Chapter 122, Code, 1939, relating to the practice of optometry and the dispensation of opthalmic lenses and providing, in part, as follows: "It shall be unlawful for any person to dispense an opthalmic lens or lenses, without first having obtained a written prescription or order therefor from a duly licensed practicing optometrist, or licensed practitioner of medicine and surgery as defined in Chapter 116 of the Code."

Members of the profession desiring a copy of any bill listed above may secure same by writing the Chairman of the Legislative Committee, S. H. Klein, D. O., 1212 Equitble Building, Des Moines.

Due to limited space, it is impossible to publish further professional news and information in this issue of the Log Book.

Application for Membership

W. C. McWilliams, Wapello.

Dwight S. James,
Sec.-Treas.

Pursuit for a Reason

(Continued From Last Issue)

In ancient Greece, when marathon running seemed to be the principal diversion, pain in the splenic area was observed by these contestants. Anatomists found no association between the spleen and the gastro-intestinal tract. The swift giraffe possesses no spleen so it was deemed an adventitious structure causing pain on exertion and constituting an excess weight. Hence splenectomy was almost an entrance requirement for the marathon, and the spleen appeared to these ancients to be a definite impediment to rapid and prolonged locomotion.

The largest branch of the coeliac axis artery goes to the spleen (suggesting its great importance) and carries with it the post-ganglionic fibers of the Sympathetic division of the vegetative nervous system from the semi-lunar and lateral chain ganglia The cells of origin and reflex centers lying in the lateral horn of the gray-matter of the medulla spinalis from the third to the eleventh thoracic segments and connected with the lateral chain and semi-lunar ganglia by white rami communicantes. The leinal vein is one of the largest veins in the abdomen and with the superior mesenteric vein forms the portal vein to the porta hepatis of the liver. The terminal ganglia on and within the spleen of the Parasympathetic division of the vegetative nervous system receive fibers from the nucleus dorsalis, vegetative nucleus of the tenth cranial nerve. The vagus opposes the more important Sympathetic innervation to the spleen.

The spleen contains smooth muscle tissue innervated by the Sympathetic. The purpose of smooth muscle tissue is to contract, rhythmically, consequently the spleen is a contractile organ. The loosely formed sinusoids of the spleen are lined with reticulo-endothelial cells and the circulation is open. This permits the vascular fluids to come into direct contact with these cells. The lymphatic bodies or malphighian bodies in the spleen are similarly exposed to the open circulation. They were found to have reticulo-endothelial cells as their reticulum as is present in all lymphoid tissue.

To summarize the physiological activities of the spleen, briefly, in order of importance possibly, we see it first as a reticulo-endothelial structure having as much to do with actually overcoming and preventing the spread of an infection as the rest of the body in an entirety; secondly, a contractile structure invaluable in general and portal circulation; thirdly, a lymphoid organ.

During exercise or any Sympathetic stimulation or following injection of adrenalin, the blood vessels of the gastro-intestinal tract contract as does the sphincters, and the smooth muscles in the spleen. This forces the blood into the somatic area. This is a factor of inconsiderable importance, for in the dog 20% of its blood is stored in the spleen for such emergencies. It is probably this extreme contraction which produced reflexly due to segmental hyper-irritability in the splenic ache of the marathon runner and doomed the spleen that was physiologically aiding him. The reaction to infection is a sympathetic response. Consequently, we find the spleen contracting rhythmically with the resultant expression of its vascular content, which serum has contacted the reticulo-endothelial tissue acting in response to the antigen in the serum that returned from the area of infection.

The application of the principles of Reticulo-endothelial activity and the Antigen-Antibody reaction in infections will be described in the next issue.

Habits

We have been informed by Central Office that the new A. O. A. Directory now in the press will contain the largest number of names of members in the history of organized osteopathy. That is a most interesting and important fact. It means that the osteopathic profession recognizes the high value in organization. To be welded together, to be compact, to be unified means that we are building the structure for more intensified effort and accomplishment.

With this thought in the back of our minds, we should begin planning to attend the Annual Convention of the American Osteopathic Association in Atlantic City from June 23rd to 27th inclusive. We should establish another new record for 1941 in the attendance and the success of this representative meeting of our profession. I have not missed a national convention for many years. I attend not only our own state conventions but several state conventions each year. I attend all of the city and many of the district conventions.

The point I wish to make is that I have the "Convention habit." I recommend it to every member of our profession. No one can afford to miss the information and inspiration attendant upon such activities. Neither can one afford to miss the meeting and making of our many professional friends made possible in convention groups. Good habits are just as binding as bad habits. Begin the formation of the convention habit by attending the next Annual A. O. A. Convention at Atlantic City. If you already have the convention habit, begin planning now that there shall be no break in it.

Advance information regarding arrangements and program for the Atlantic City Convention indicates that in many ways this convention will set a new mark. Many opportunities for side trips and entertainment before and after the convention give this particular convention, because of its advantageous location, an added value.

Yours for the development of a habit that will bring you profit and pleasure.

—A. D. B., D. O.

Graduation

(Continued From Page One)

The doctors graduating at this time were: Harold Bahling, Lillie McClure Dunlop, Edythe M. Gates, Paul Gehman, John Hardy, Georgiana Harris, H. Gordon Jemison, William Laut, Jack Miller, Paul T. Rutter, Rudolph Sabo, Theodore J. Schloff, Robert Smith, James P. Watt.

To seek only our own good, regardless of others, is always bad business.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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Volume 19 March 15, 1941 Number 3

The Accessory Food Factors II

John B. Shumaker

Minerals

Since our resume of the vitamins in the December 15th issue of the LOG BOOK, important domestic changes have been developing in the field of accessory food factors. Recently our government has recommended the fortification of white flour with thiamin, riboflavin, and nicotinic acid; calcium phosphorus, and iron.

It has long been known that the processing of wheat to produce white flour has deprived this indispensable cereal of most of its vital properties . Very soon now, this deficiency will be remedied and our growing army of young men will benefit in health by the addition of these substances to flour and other foods.

In the mineral fortification of foods emphasis is being placed on the elements calcium, phosphorus and iron. Iodine, of course, is equally important, but it is being supplied to most of us in ample amounts in iodized salt. Diets are most often deficient in these four elements, and since they are essential, they assume prime importance.

The elements which compose the body may be divided into two classes, the metals consist of the elements sodium, potassium, calcium, magnesium, iron, copper, manganese, cobalt, nickel, zinc, aluminum, and traces of many others. The non-metals consist of oxygen, nitrogen, hydrogen, sulfur, chlorine, bromine, iodine, phosphorus, silicon, fluorine, and traces of other elements whose presence may be accidental. The present discussion will be limited to a brief review of the metals.

Sodium (Na.)

This element is not present in sufficient quantity in plant foods and muscle cuts of meat. Table salt supplies the additional quantities required. Na is associated in the body with chloride and bicarbonate. It occurs largely in the plasma and interstitial fluids but is almost absent in erythrocytes. The daily requirements are about 4 grams of Na in the form of 10 grams of salt. The body will tolerate an intake of 35-40 grams of salt per day without showing edema. This element is largely responsible for maintaining the acid-base equilibrium of the body, minor parts being

(Continued on Page Three)

Pursuit For a Reason

Antigen-Antibody Reaction

Infection, defined as the successful invasion of tissue by bacteria, occurs. There follows an incubation period during which the bacteria acclimate themselves to a new environment, begin multiplying, increasing in virulency and liberating an ever increasing amount of toxin and number of bacteria into the venous and lymphatic return from the area of infection.

During this period there may be no symptoms. As the toxemia increases, there occurs a group of symptoms due specifically to the toxemia, i. e. anorexia, malaise, weakness, elevation of temperature, increase in metabolic rate, nerve instability, alteration in disposition, and increased irritability of reflexes. These symptoms may vary in predominance but one or more of them are always present. Although the patient is not aware, toxemia results in a lowering of the synaptic resistance of the reflex arc and an alteration in the ionic content of the colloidal cells tending toward the acid side.

The lowered synaptic resistance facilitates the canalization of near-by reflex arcs with the resultant expression in their trajectory of alterations in vasomotor control, nutrition, sensation and muscle tonicity. The symptoms of infection by which we deduce the type and location of the process are thus expressed according to the embryonic segmentation of the body by the Sympathetic nervous system to somatic structures that must be segmentally associated with the diseased area. Over the Parasympathetics canalization of approximating reflex arcs occurs and symptoms more variable than those expressed by the Sympathetics but more comprehensible to the patient, i. e., nausea, vomiting, constipation result.

The sympathetically expressed symptoms, pain, muscle spasticity, impairment of joint motion, skin tenderness, etc., dictate that the visceral involvement has been present and developed long enough and irritating enough to produce sufficient segmental hyper-irritability that the intimately associated somatic area is definitely inflammed. Until this stage in the infection is reached, although the patient has needed osteopathic treatment, he usually has not seen a physician. A disease, to a patient, is, with regard to seriousness, in direct proportion to the amount of pain or incapacitation that the malady induces. Hence the possibility of aborting an infectious disease by manipulative treatment is dwarfed by the fact that the disease is well established when the physician is called. When the physician contacts the infected patient, he finds two factors of paramount importance. One, the amount of antigen which also implies virulency of the organism, the type of toxin, the stage in the infectious process and the potentiality of the infectious process. Contrasting with this amount of antigen, we discover what is on the other end of the balance and summing these elements concisely, we mean antibody response. Antibody response similarly is conditioned by many things, reticulo-endothelial tissue activity, amount of stimulation by antigen, function of the reflex arc, extent of function of certain glands, the ionic content of the fluids and tissues of the body, past infections, general resistance, etc.

Precisely, therefore, we see the balance that is between the amount of antign and the amount of anti-body. The general tox-

(Continued on Page Four)

Dr. Arthur G. Hildreth

There are only a few men in any profession or group that may be correctly referred to as stalwarts. Dr. Hildreth was a stalwart in the osteopathic profession. Perhaps no finer thing can be said of any man than that he left a gap in the ranks which cannot be filled. No mere words of mine can measure the loss or express our regret in the passing of this great soul. His life and his work established a high mark which will forever prove an inspiration to the many thousands who knew him and loved him. His contributions to the profession which he served with outstanding distinction are beyond measure. In and out of season, his vigorous and eloquent support of fundamental osteopathic principles was truly "a cloud by day and a pillar of fire by night" for a rapidly growing and developing school of therapy. His constructive influence will live forever through his many services to the profession he loved and cherished. It was a great privilege to have known Dr. Arthur G. Hildreth.

—A. D. B., D. O.

Low Back Pain

(Continued From Last Issue)

Last month a discussion of the anomalies of the spine and the part they play in the causation of backache was given. The present article will deal with chronic arthritis of the spine, generally known as spondulitis deformans, not alone because it is a common condition but because of the disabling effects which in many cases are permanent. It is the purpose of this paper to briefly describe the types of arthritis grouped under spondylitis deformans; therefore, no attempt is made to give a detailed discussion of any one type.

Arthritis of the spine occurs in all classes of people and at all ages. It is more common in males than females and is present in some degree in practically all cases after the age of forty-five. An inherited predisposition, nervousness and worry, infection, trauma, endocrine malfunction, metabolic disturbances, constipation associated with visceroptosis, and faulty body mechanics are important etiological factors.

In some cases the changes taking place in the joints are proliferation of the synovial membranes, degeneration of the cartilage and bone, with infiltration of the periarticular tissues gradually progressing to deformity and ankylosis; and in other cases there is breaking down of the cartilage, marked hypertrophy of the bone, with deformity of the joints but no ankylosis.

The clinical picture is one of slow onset characterized by stiffness and pain. The pain in the lower back is not unlike that occurring in other cases of backache. Dull aching sensation with stiffness of the muscles especially marked when bending over and lifting which may not completely disappear upon going to bed. Coughing and sneezing aggravates the existing pain or cause sharp shooting pains in the back extending into the legs. If the spine higher up is involved the pain extends to the anterior thoracic and abdominal walls. This occurs more frequently when the costo-vertebral articulations are included in the pathology. At times there are gastrointestinal symptoms present, such as, diarrhea and constipation. If ankylosis takes place all pain may completely disappear.

Spondylitis deformans is divid-

(Continued on Page Three)

REFRESHER COURSE, MAY 26th to 31st Inclusive

N. O. I. C.

The past month has been a great inspiration to us. Our correspondence has been satisfactory to the percentage of 90. The delays we have had to suffer have not always been due to neglect but to caution and in one case to serious illness. Our last project of the year seems certain to go over 100% but we will not boast nor commit ourselves until later.

Copies of Leland's directory and Banta's Greek Exchange have been received and our complete membership is listed. We have the rather bad news that the World Almanac did not give us the space we thot we were entitled to and so we have started an investigation to find out where the slip occured. Final word has not been received on the item. Proof has been returned to the Fraternity Month for an article that will appear shortly in that publication and while we would like to have it a little different we must be satisfied with this first apperance of the Council and its membership in a nationally known fraternity periodical. Those of you who will read it please remember that this office merely sent in the material asked for and we had nothing to do with the editing or the selection of pictures.

Again may we urge you to start with your preparations for the meeting in Atlantic City. The program already partly outlined will present many items of importance to our subordinate chapters, our Grand Chapters and our total fraternity Alumni.

—J. Paul Leonard, Pres.
H. V. Halladay, Exc.-Secy.

ATLAS CLUB

One of the highlights of the fraternity's recent social activities was the combination Hard-Time and Millionnaires' party held on Saturday, February 22nd. The decorations included old newspapers covering the walls as murals in the lounge-room and seemed quite appropriate for the variety of outfits worn by the guests and members. The lady's prize for the best costume was awarded to Mrs. Nadene Taylor and the gent's prize to Jerry Robb.

Practical-work nights have been continued this semester and on February 24th we received an excellent discussion on Traumatic Injuries by Dr. E. J. Leubbers of Cramer's Health Farm of this city. Plans are under way for more of these practical evenings with outstanding speakers both from within and outside the profession.

The first Atlas Sunday Dinner of this year was held on March 2nd with about twenty members present. Dr. and Mrs. Becker, as well as friends and wives of the members were among the guests.

The first of the assemblies sponsored by the individual fraternities of the college was held on Friday, March 7th with the Atlas Club in charge. An excellent dramatic and musical program was presented through the cooperation of the American Institute of Business. Those taking part included, Norma Beasley; Nedra McCall; Bobby Beers; Dorothy Boud, accompanist; and Verdo Weddle, master of ceremonies. We wish to thank this institution of "modern business training" for their spontaneous response and willingness to cooperate with the college in all its activities.

—G. L. E. Stylus

ΑΟΓ

We would like to go on record and retract our original prediction of "being up in the running" in the Bowling Tournament. Thanks to the unerring aim of our erstwhile opponents, it certainly looks like we're a good bet for the cellar position.

A practical session followed the Fraternity meeting last Monday. The boys practiced suturing—on **ham** hocks. A round table discussion on the different methods of suturing ensued. We plan to hold practical sessions in Osteopathic Technic in the future. These are to be held in seminar fashion; a sort of review on various methods of Manipulative Therapy.

The Fraternity will conduct services at the Polk Blvd. Synagogue Friday evening, March 7, 1940. These services are in commemoration of our third anniversary as a Fraternity.

The latest reports from the field indicate that Dr. Maxwell N. Greenhouse is doing very well with those dextrous "ten fingers." Maxie's enthusiasm has always been contagious. We extend to Dr. Al Yarrows all of the best wishes for success in his new offices, which he recently opened in Detroit, Mich.

Plans are now being made for our Assembly program, to be held at the college, March 28, 1941. We hope to make it an interesting one.

—L. R.

ΣΣΦ

Sigma Sigma Phi has shown the work of the perfect host by allowing the Psi Sigma Alpha the Honor of Victory in the bowling tournament. We can't understand why P. S. A. does not believe it is chivalry.

On February 25, 1941 an excellent discussion on the plans for the college extension program was given by Dr. Paul Parks. Our hats are off to the enthusiastic group who have already accomplished so much toward this goal.

—K. B. R.

ΙΤΣ

The days are growing longer each time the sun sets and rises, but for some unknown reason time is going by mighty fast. In twelve more weeks we will wonder where today has gone to in such a sneaking way from under our partially opened eyes.

It seems as though the bowling tournament is leaving the Iota Tau Sigma pretty far behind in a cloud of smoke. It so happens that the Seniors are pretty much incompacitated the past few weeks preparing for "Qualifyings" that will be held the 28th, 29th and 30th of April.

Wednesday the 5th of March a meeting was held in the college library, at which some important business was transacted. At that time a pledge banquet was announced to be held Wednesday night the 12th of March.

—H. G. H.

DESERT-ATIONS

Dr. Arthur G. Hildreth

So much will be written about Dr. Hildreth by more talented writers than myself that I hesitate to offer a paragraph. To me he was Osteopathic Physician Number 2, the Old Doctor being Number 1, of course. It has been my privilege and honor to know Dr. Hildreth for 42 years and of course more intimately during the past 28 years or since I have been a small part of the profession. In that time it seems to me that he has not let a day pass without doing something for the advancement of Osteopathy. His nearly 50 years of service will never be equaled for his influence has extended into every state either thru his legislative work or his teachings. We knew he must pass on but his death shocks us all. How fortunate we are that he published his book. In it we have a constant companion that will bring him back whenever we wish and that should be often. It will be difficult to pciture our annual convention without Dr. Hildreth there. He was so much a part of our osteopathic pattern that the design will now have to be altered to allow for his absence.

Books

This past month has brought several letters to my desk asking about Osteopathic texts. I am not sure just what interpretation to put on this. There are not enough to consider it an awakening desire for osteopathic literature but there may be a trend that way. I have been asked to rewrite a fine old osteopathic text that has been out of print for many years. I know this is a valuable book and that there should be a demand for it but I also know that, comparatively, only a few copies will be sold. We do not have many purely osteopathic texts. Perhaps we have enough but I do not think so. If we are not producing books each year we are not advancing very much. Books are records of discoveries or new applications of proven facts and our expansion certainly offers the opportunity for more osteopathic books. Our Journals cannot take the place of printed texts. Demand regulates supply and until we can bring ourselves to demand more osteopathic texts written by able osteopathic physicians these evidences of our advancement will be kept under the proverbial bushel.

Letters

The most of you know me well enough to pass this with a grin or to really give it a serious thot. I get mad enough at times to commit murder. Fortunately for the offender he or she is usually miles away and safe. I cannot understand why letters are not answered when they should be. I know we write a lot of letters that do not need immediate attention but we also write quite a few that should be answered in a day or two or ahead of some that may be on the desk. I checked my mail today and find that I am awaiting replies from eight that really do have an important bearing on some matters of concern to our entire profession. Not many of us write letters just for the fun of it. We ask for information, or authority, or approval, or help on an idea, or we ask for cooperation in a project for the common good of all of us and yet we find an uncalled-for delay in getting answers to important letters. As a profession we should make it a point of pride to apply promptness to ourselves in the same degree that we ask it of patients who have made an appointment for a certain hour. Delay is the most costly luxury we enjoy. The apologies I will eventually receive with the answers to those eight letters cannot make up the lost time nor bring back the opportunity that has passed on and will not return.

—H. V. H.

Student Council

The election of officers for the ensuing semester was held on February 28, 1941 along with the regular business meeting. The new officers are: Philip Reames, president; Howard Johnston, first vice president; Merton C. Worster, second vice president; W. Dunbar, secretary and treasurer.

Committees were appointed to assume the responsibilities of directing the student assemblies, student activities and the student fund.

The newly appointed assembly committee announced that the assembly programs for the remainder of the semester will be in charge of the various fraternities and sorority.

Plans for the annual spring picnic were discussed and announcements regarding this event will soon be known.

The student band was voted an appropriation for the purchase of more music.

The student council announces that it is especially anxious to cooperate with both the student body and the faculty in the interest of the school.

Deaths

Last rites for Dr. Robert W. Hubbard, 33, were held November 27, 1941 in Parskburg, West Virginia. Dr. Hubbard had just recently joined offices with Dr. W. R. McLaughlin in Parksburg.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

REGION BELOW THE DIAPHRAM

(Number 26 in series)

RENAL COLIC (Cont'd)

Having considered the definition, causes, symptoms and diagnosis of renal colic it now becomes logical to discuss the matter of treatment. All of one's knowledge of diseases and deviations from normal functioning, from etiology to minutest pathological change and from symptoms and clinical findings to differential diagnositc criteria, should contribute finally to skill and success in treatment. Correct, logical and effective treatment is the goal sought by both patient and physician, and the reputation of the physician must eventually be gauged by the merits or the lack of merit in his applications in treatment.

Whatever the cause of renal colic, the immediate problem at the time is the control of pain and distress. As has been said in the preceeding article, the pain is often of an agonizing character and well-nigh intolerable. The osteopathic treatment to control the pain in this condition is in many ways exactly similar to the method used in the treatment of biliary colic, (January Log Book) excepting that the application of pressure is lower in the spine, 11th dorsal to 2nd lumbar. Deep, steady and continued pressure sufficient to bow the spine forward and applied chiefly on the side of involvement is entirely effective in many cases. This deep, steady presure should be maintained for three to five minute periods and may require repetition for twenty to thirty minutes—or longer.

The sympathetic innervation of the ureter, through which we get our chief results in osteopathic treatment in colics, is by way of the renal plexus and the spermatic (or ovarian) plexus for the abdominal portion (kidney to the pelvic brim). The pelvic portion of the ureter receives its sympathetic innervation from the hypogastric plexus. In either case, the preganglionic origin of this sympathetic innervation is from the lower dorsal and upper lumbar segments of the cord. Viscero-somatic and somato-visceral reflex arcs are best controlled at the segments where preganglionic nerves have their exit.

The rationale and the effectiveness of this treatment is dependent upon the physiological fact that one function of sympathetic innervation is viscero inhibitor and acts to relax plain muscle fibres and to lessen peristaltic-like contractions. The pain, due to muscle spasm, forceful dilation and alternating contractions is lessened or entirely relieved by profound sympathetic stimulation. The treatment, then, not only relieves distress but also facilitates the passage of the foreign object (gravel, clot, etc.) The sympathetic innervation supplies other functions as vasomotor control, trophism and secretory functions.

The osteopathic treatment of visceral colics where ever located is in many ways similar; that is, the underlying principle of treatment is the same. If the colic is gastric, intestinal, rectal, bladder, uterine or tubal, the objective sought is to lessen peristalsis or peristaltic-like contractions and to relax spasm. The location of chief application of leverage will vary with the nerve supply of the structure involved. Pelvic colics, as rectal or uterine colics, may also be controlled by firm pressure over the posterior sacral area opposite the second to the fourth sacral foramina. This later effect is by way of the pelvic nerve.

Patients with renal colic should rest in bed at the time of the attack. Copious intake of fluids is desirable. In about one-third of such cases it may be necessary to use some type of pain-relieving medication in which case morphine probably is best.

Surgical interference may be indicated where the ureter becomes blocked by stone or where there are stones in the kidney pelvis or in the kidney substance. Nephrectomy may become necessary in case of hydronephrosis or pyonephrosis.

—A. D. B., D. O.

The Accessory Food Factors II

(Continued From Page One)

played by K, Ca, Mg. Deficiency may arise from lowered intake, prolonged vomiting, and from excessive dehydration (diarrhea, sweating, diuresis). Being largely confined to the circulatory fluids of the body it is not stored and leaves the body rapidly in the form of chloride. An adequate daily intake must therefore be maintained except in a few cases, i. e., diabetes insipious, where salt and water intake are both limited.

Potassium (K.)

Potassium is held largely within the cells and most of that present within the cell is tightly bound in the protoplasm. Very little K is found in the circulatory fluids. Plant foods and lean meats supply ample quantities and potassium deficiencies are rare. Urinary excretions of K and Na occur together, an increase in one causing an increase in the other. High intake of sodium chloride causes greater loss of K in the urine. The automatic properties of the central nervous system and of the heart are ascribed in part to the presence of potassium. K plays a probable role in carbohydrate metabolism.

Calcium (Ca.)

The role of calcium and phosphorus in bone and tooth formation is well known. In addition, Ca is needed for blood clotting and for activating trypsinogen into trypsin. Lack of Ca causes stunted growth in the young. There is growing evidence that Ca deficiency may be in part responsible for susceptibility to disease and allergy. The normal blood level is about 10 mg. percent in serum. Lowered concentrations eventually cause hyperirritability of the nervous system and tetany. Ca absorption may be lowered by gastric hypoacidity and by decrease in bile flow. Marked Ca deficiencies may be indicated by constipation, vomiting, fever, and acetonuria. Eczema sometimes occurs. A quart of milk per day provides 1.2 grams of Ca which is almost the daily requirement.

Magnesium (Mg.)

Magnesium exerts a depressing action on the nervous tissue. The daily requirement is about that of calcium, i. e., about 1.5 grams per day. It is abundant in most plant foods and deficiency is rare . . This element is essential in the oxidation of glucose, and along with manganese, it is necessary in the activation of vitamin B1 (cocarboxylase).

Iron (Fe.)

Iron, as we know, is necessary in the production of hemoglobin. Nutritional anemias may arise for several reasons. Faulty iron absorption may be a cause. Lowered gastric acidity, diarrhea, decrease in bile flow resulting in formation of iron soaps of the fatty acids, formation of insoluble iron phosphate when phosphates are fed at the same time, all may be reasons for failure to absorb Fe. Hydrochloric acid and reduced iron are often administered together. Ferric phosphate with sodium citrate is a soluble form of iron unaffected by alkalinity, and is readily absorbed.

Copper Cu.)

Copper is without doubt frequently necessary as an adjunct in the formation of hemoglobin. It appears to serve as a catalyst in iron assimilation. The daily requirements appear to be about 1 milligram per day. Copper is stored in the liver. This is particularly true of infants where they must depend upon milk as the only food for some time. Milk is a poor source of iron and of copper. Milk anemias are usually relieved when a little copper is given along with iron. Foods of the adult usually contain sufficient copper to meet daily requirements.

Manganese (Mn.)

Manganese deficiency, as mentioned above, decreases carbohydrate metabolism. This element appears to prevent sterility, and is necessary for normal growth. Lack of manganese causes slipping of the leg tendons of fowl. Manganese is frequently employed in anemias and amenorrhea. The daily requirement is not known but for children it is believed that o.l mg. per pound of body weight is necessary. Whole wheat bread is a good source of manganese.

Traces of Other Metals

Cobalt, nickel, aluminum, zinc and other metals are known to exist in the body, but their function is unknown. Their presence may be purely accidental and without significance.

Of all the metals, most emphasis must be placed upon calcium and iron. Our present day foods are apt to be most deficient in these elements . The day is not far distant when most of our foods will be fortified with minerals as well as vitamins, and rational food preparation will then have taken the place of the intuitive selection of foods which our stoneage progenitors found so adequate.

Low Back Pain

(Continued From Page One)

ed into atrophic and hypertrophic. Atrophic arthritis includes the type known as spondylose rhizomelique (Strumpell-Marie). In this condition there is a primary ossification of the ligaments of the spine, particularly the anterior common ligament, and by the involvement also of the shoulders and hips. Usually the sacroiliac joints are affected very early in its course. This type often appears in the absence of any of the etiological factors mentioned above. It is more common in men than women, and they are more susceptible between the ages of twenty and forty. Under hypertrophic there is a subtype known as Von Bechterew's arthritis. It is characterized by proliferative changes in the vertebrae mainly in the dorsal region and degenerative changes in the nervous system, but apparently there is no proven relationship between the changes in the bones and those in the nervous system.

The diagnosis is made by the history of the case and the x-ray examination. In the differential diagnosis tuberculosis, syphilis, tabes dorsalis, tumors of the cord, fractures, back sprains, malignancy, rupture of an intervertebral disk, and osteopathic lesions have to be considered.

As to how much can be done in a given case depends upon the age, type of person, their resistance, occupation, and whether or not foci of infection are playing a part.

Some patients are relieved by heat, counter irritants, increased elimination such as colonic irrigations, and removal of foci of infection. Others show improvement when arthrotrophic vaccines, supportive corsets, corrective braces, and traction are used.

Rest and diet are important. Absolute rest on a hard mattress, with or without traction, gives great relief in many cases. In those cases with severe pain, not

(Continued on Page Four)

I. S. O P. S.

Spring District Meetings

The spring district circuit meetings will be held as follows:

District I, April 4, Cedar Rapids, Roosevelt Hotel.

District II, March 31, Council Bluffs, Chieftain Hotel.

District III, March 30, Ottumwa, Ottumwa Hotel.

District IV, April 2, Fort Dodge, Wakonna Hotel.

District V, April 1, Storm Lake, Bradford Hotel.

District VI, April 3, Marshalltown, Tallcorn Hotel.

Doctor J. Leland Jones, instructor in infectious diseases and emergency practice, and a member of the clinic staff at the Kansas City College of Osteopathy will be on the program. He will lecture on (1) Common Symptoms and Treatment of Acute Diseases, (2) Heart Diagnosis Simplified.

Doctor Byron Laycock, instructor in osteopathic principles and osteopathic technique at Des Moines Still College of Osteopathy and Surgery will likewise speak at each meeting. He will lecture on "Osteopathic Principles That Apply Today" and will demonstrate osteopathic technique giving particular attention to the occipito—atlantal and low back areas.

President Jordan, who has arranged for the above program, will speak on State Affairs.

Society Convention

Doctor S. H. Klein, Chairman of the Convention Program Committee, reports that the annual convention of the Society will be held at the Savery Hotel, Des Moines, on May 7 and 8.

Legislative Committee

Doctor S. H. Klein, as Chairman of the Legislative Committee, advises that the work of this Committee on legislative problems confronting the profession has thus far been successful.

Applications for Membership

Alan M. Nelson, Belmond.

Charles L. Wheeler, Centerville.

Mary Wheeler, Centerville.

—Dwight S. James, Sec.-Treas.

Polk County Osteopathic Association

A banquet for the Polk County Osteopathic Association was held at the Hotel Kirkwood February 14, 1941.

Following the dinner an excellent film was shown on Anterior poliomyelitis and Human Fertility.

The senior A students of the college were invited to attend this meeting.

—P. E. K.

NOTICE

If and when you change your address, please notify the Log Book promptly.

Pursuit For a Reason

(Continued from Page One)

emic symptoms are the indicators of the proportion that exists between these two opposing elements. Specific antibody is only produced in consequence of stimulation of the reticulo-endothelial system by specific antigen. The antibody is specific for the chemical group that composes the antigen and none other. It is the antibody in excess that destroys the antigen, consequently all that we can hope to do, which is all that needs to be done ,is to increase the amount of specific antibodies in the serum. This must be done by bringing the proper amount of antigen from the infected area into contact with the reticulo-endothelial tissue. This can only be accomplished by facilitation of the venous and lympathic return from the infected area and can never be attained with all the foreign proteins or nonspecific antigenic substances, or bacteriostatics that can ever be manufactured by our usually helpful pharmacological laboratories. Specific antigen results in specific antibody formation; and a patient that is absolutely immune to any quantity of sterile milk is just as easily killed by specific antigen in excess and will for all practical purposes be just as head as though he never saw a drop of milk, if specific antibody formation does not result to obliterate antigen in the serum.

Antibody production is due to reticulo-endothelial tissue activity and can only be stimulated by antigen from the area of the infection. It is the antibody that destroys the antigen and the only thing that ever has or ever will destroy specific antigen. This is true in spite of all the intravenous mercurials and magic red dyes that ever have or ever will be developed. Were this not true, the specie of homo sapiens would never have existed long enough to beguile themselves with the ever attractive color of red.

What can be done, then, to influence the antigen antibody reaction? This influence is the ultimate in therapeutics, everything else being incidental. Antigen produces the toxemic symptoms that tell us of the presence of infection. Antigen stimulates Sympathetic response. We must bring antigen into contact with reticulo-endothelial tissue and maintain a proper stimulation of that system as indicated by the general symptoms of toxemia so that the infectious process can be responded to with sufficient force to carry on to recovery in the safest, shortest period of time. We remember that just as repair is a stage of inflammation, so recovery is a phase of the infections. People usually recover and it is our object to force the course of the infectious process to a rapid, normal termination. When the toxemic symptoms demonstrate a decrease of antigen in the serum, we must treat the patient to increase antigen. This implies an increase of venous and lymphatic return from the area of infection.

What factors control venous and lymphatic return normally? Muscle contraction and relaxation facilitate return; alternate increase and decrease of the negative intra-thoracic and positive intra-abdominal pressures by virtue of diaphragmatic excursion constitute the greatest single factors in maintenance of venous and lymphatic return.

Taking our clue from these definite factors, we stimulate venous and lymphatic return by increasing the rapidity of oscillation in these positive and negative pressures; by varying the pressure within the belly of and beneath muscles by stretching, and relaxing the muscles of the somatic area, elevation of the infected part if possible. No portion of the technique is traumatic. It does not destroy the continuity of tissue. Its only attainment is that of its objective, the facilitation of venous and lymphatic return. As a general rule, therefore, the lymphatic pump and other mechanical means of increasing venous and lymphatic return are specifically indicated in any condition where we desire a greater venous and lympathic return.

Objections to the lympathic pump have been raised. It is the only way to scientifically increase venous and lympathic return, and in the instances of infection so by increase antigen in a serum. Still, it has been termed dangerous. Morphine in ten grain doses is dangerous, too, one would imagine, and if no more discretion is shown than that in the application and the indications for the lymphatic pump, you may expect a method potent enough to produce striking results therapeutically when indicated, to be dangerous when not indicated or when applied incompetently. If a physician applies the lymphatic pump forcibly enough to traumatize inflammatory process in the lung tissue, or long and frequently enough to draw into the serum sufficient antigen to kill the patient, it is only natural that results would be undesirable. We treat empirically in our profession, also, paying too slight attention to indications and contra-indications. Hence it is only to be expected that a measure as effective as the lymphatic pump and other methods of facilitating venous and lymphatic return would receive detrimental credit for killing a patient or intoxicating a patient too much, when in reality these measures were given at a stage in the infectious process when they were contra-indicated.

The technical procedure of the lymphatic or thoracic pump is varied by different physicians under different conditions, but its application on a patient with an infection must not diverge far from the following outline. Indication—when we desire a greater intoxication.

1. Stand or sit at the head of the patient.
2. Observe the **extent** or respiratory excursion of the patient. This must never be exceeded under any circumstances or else the treatment may be traumatic and in some conditions fatal in its effect.
3. The hands are placed lightly upon the patient's chest anteriorly with the thenar eminences about an inch below the clavicles, the fingers extending toward the abdomen.
4. Intermittent pressure is applied to the thorax causing the diaphram to descend and ascend rapidly, 120 complete oscillations per minute.
5. Force is distributed equally over the hands and fingers so that no area is traumatized, particularly below the thenar eminences, and the amount of force used must not exceed the respiratory excursion used by the patient previous to treatment.
6. Thoracic or lymphatic pump is applied for 5 to 15 minutes, depending upon the symptoms of toxemia present and may be applied as often as each four hours, if indicated.
7. Lymphatic pump should be discontinued when the temperature reaches 101 degrees and the other signs of toxemia in proportion, to avoid too great intoxication to the patient.

Within two hours the increase in venous and lymphatic return following this treatment should induct enough antigen to intoxicate the patient sufficiently that he will return to the Optimum Reaction Area.

—B. E. L.

Low Back Pain

(Continued From Page Three)

relieved by the above methods or by manipulation, some sedative may be used to make the patient comfortable for the first few days.

The diet, in general, should be rich in minerals, vitamins, high in fatty foods, but moderate in proteins and low in carbohydrates. It is of value to have the diet so regulated that the stout person loses weight and the thin individual gains.

The general osteopathic treatment should be given to aid in the increase of elimination through the digestive, urinary, and respiratory tracts, and through the skin; and for the purpose of stimulating the fighting forces of the body to increased action thereby building up the resistance of the patient.

The correction of lesions by osteopathic manipulation may relieve the acute pain because slight articular malrelations in these cases may cause severe pain which is immediately relieved through the nomralization of these articular lesions. Many do not appreciate the fact that it is just as important to correct articular malrelations occurring in arthritic spines as it is to normalize them in nonarthritic spines. However, a great deal of thought should be given in the prescription of the osteopathic treatment for these cases and just as much thought used in the giving of the treatment.

—L. L. Facto

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Volume 19 APRIL 15, 1941 NUMBER 4

Annual

POST GRAUATE REVIEW and CLINIC WEEK

All graduate members of the Osteopathic Profession are invited to join with us in six days of study and clinical demonstration

MAY 26th to MAY 31st inclusive

Classes begin at 8:00 a. m. each day

No Tuition Charge Certificate of Attendance

DES MOINES STILL COLLEGE OF OSTEOPATHY

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8 A. M.	**Dr. R. B. Bachman** Obstetrics	**Dr. E. F. Leininger** Gynecology	**Dr. R. B. Bachman** Obstetrics	**Dr. E. F. Leininger** Gynecology	**Dr. R. B. Bachman** Obstetrics	**Dr. E. F. Leininger** Gynecology
9 A. M.	**Dr. A. D. Becker** Cardiology	**Dr. B. E. Laycock** Osteopathic Principles	**Dr. P. E. Kimberly** Applied Anatomy	**Dr. B. E. Laycock** Osteopathic Principles	**Dr. P. J. Maloney** Skin Diseases	**Dr. B. E. Laycock** Osteopathic Principles
10 A. M.	**Dr. L. L. Facto** Differential Diagnosis	**Dr. J. M. Woods** Examination Of the Lung	**Dr. L. L. Facto** Neurologic Clinic	**Dr. J. M. Woods** Examination Of the Lung	**Dr. P. E. Kimberly** Applied Anatomy	**Dr. O. E. Owen** Blood Chemistry
11 A. M.	**Dr. J. P. Schwartz** Surgical Diagnosis	**Dr. H. A. Graney** Fractures	**Dr. J. P. Schwartz** Surgical Problems	**Dr. H. A. Graney** Prostate	**Dr. J. P. Schwartz** Surgical Diagnosis	**Dr. H. A. Graney** Surgical Problems
2 P. M.	**Dr. Mary Golden** Pediatrics	**Dr. B. L. Cash** Roentgenology	**Dr. O. E. Owen** The Cancer Problem	**Dr. H. J. Marshall** Ear, Nose and Throat	**Dr. O. E. Owen** Edema	*Program subject to change as necessity may indicate* — *Register promptly at the office on arrival*
3 to 5 P. M.	**Round Table on Osteopathic Technic** By Visiting Physicians and Dr. Laycock	**Proctological Clinics** Dr. J. L. Schwartz Dr. Maloney and Dr. Facto	**Round Table on Osteopathic Technic** By Visiting Physicians and Dr. Becker	**Proctological Clinics** Dr. J. L. Schwartz Dr. Maloney and Dr. Facto	**Round Table on Osteopathic Technic** By Visiting Physicians and Dr. Woods	

Banquet Thursday evening at 7:00 P. M.

N. O. I. C.

This office is just a little too busy this month to write much. The final project (we hope) for the Council is well on the road to a successful completion. Thru the 100% cooperation of the membership of the Council money was subscribed to place over 4,500 Year Books in an equal number of college fraternities. This might be classed as publicity but was done to insure us against possible neglect by some readers of three other listings of our membership. We sincerely hope that the book will add to the education of our college students so that they will know what the word Osteopathy means when they hear it and that it will also excite their curiosity to the point of making some personal inqueries. Time will tell whether or not we have been wise or foolish in this.

This office wishes to commend the officers of our fraternities and sororities for their fine support and encouragement. Very little time has been lost by delays within our own organization. The use of half-tones by outside publications has delayed not only the printing of our Year Book but also considerable work on two or three college annuals. Even as we write this we are short some half-tones that are holding up one form of the booklet.

With the funds limited we cannot send this booklet to the entire profession and this is to be regretted for we feel sure that all of you would like to see our organizations in the form in which they will be presented to our college fraternities. We are sorry that no extra copies will be available.

J. Paul Leonard, Pres.
H. V. Halladay, Exc.-Secy.

ΙΤΣ

Iota Tau Sigma actives and pledges are beginning to convert their climatic inspirations from winter to the good old spring. Seems rather nice to now approach the campus daily without the slippery ice. Although laughter often intervened to see certin ones go flip flop, around and around before entering the door of knowledge each and every morning. The supposed thoughts are that we can now come in with the tide each morning during the energetic April showers.

March the 12th a pledge banquet was held at the Grivaro Italian Gardens. The main speaker of the evening was Dr. Bennie H. Devine. His subject titled "The Three Major Qualities of a Good Physician." Each and everyone, I am assured obtained some thoughts for silent thinking in order to ever classify themselves as a doctor. The new men that were pledged are as follows: Luka, Shafer, Schultz, Gaudet, Blohm, Gustofson, Des Lauriers and Belden. We are happy as actives of the Iota Tau Sigma to have such a fine group of members pledged into our chapter.

Monday, March 31st, a business meeting was held at the Taylor Clinic for pledges and actives. Several business transactions were brought before the platform. A vote by majority including pledges, decided that the present capacity as President, and hereafter would be presented with an emblem. It was also decided that a movie picture would be shown at the next meeting, based upon an educational factor.

H. G. H.

ΥΔ

Bowling seems to be one of our main interests. If we beat the non-frats, there will be a three way tie for first place. Here's hoping.

Mrs. Byron Laycock entertained the girls with chicken dinner March 2nd. No one can imagine what you've missed, with the Doctor playing chef and head waiter.

The assembly by the girls given April 4th seemed to go over big with the boys. Never did I believe so many students would attend any one assembly. Thanks so much for your spontanious reaction.

M. W.

ATLAS CLUB

The most important event during the past month has been the initiation of five new members of this fraternity. The ceremonies began on March 18, terminating on Sunday, March 23 with formal initiation and a special Atlas Dinner in the afternoon. The new men, honored at that time, and whom we are proud to welcome, are Mike Corrigan, Jerry Dierdorff, Bob Patton, Vern Stoner, and Karl Waterbury. We were also glad to have a short visit from Dr. L. C. Boatman, of Sante Fe, New Mexico, who dropped in on Saturday, March 22 to assist in part of the initiation proceedings. We appreciate the interest and co-operation of the graduates and alumnae who so readily offer to further our efforts in any way possible.

On March 10, we were visited by Dr. R. B. Kale, of Des Moines, who gave us an excellent demonstration and informal talk on various methods of Osteopathic Technique. On March 18 our Practical Work nights continued with Dr. O. E. Owen, of the college, offering us many helpful suggestions with regard to examination procedures.

Most (?) of us were very surprised to learn only recently of the marriage of Bud Brail, one of our Seniors; the event having taken place in the early part of January. Congratulations to you Doc, and also to one or two other club members of whom we are slightly suspicious,—but, nuff sed!

G. L. E. Stylus.

ΑΟΓ

We were pleasantly surprised to have as a visitor, Dr. Martin Friedenberg. "Marty," fresh from the plains of Kansas, where he is interning (Garden City), gave us a few interesting thoughts on "Internships." "Marty" also informed us of the latest surgical procedures and explained two surgical films. These movies were an Appendectomy and a Hemorrhoidectomy. This completed the educational part of our bi-weekly meeting—made much more enjoyable through Brother Friedenberg's presence.

Several of the boys are planning homeward journeys over the Easter Holiday vacation. Through them we extend greetings to our alumnae in their respective cities.

We would like to take this opportunity to extend to everyone the best of greetings on the Easter Holiday. May good cheer and happiness be the order of the day. There is nothing like the good, old-fashioned holiday spirit to bolster the feeling of brotherhood.

L. R.

DESERT-ATIONS

The desert has always been beautiful to me even in its many shades of brown to the exclusion of the more brilliant colors but this year it wears regal raiment. I took a drive the other day to see miles and miles of poppies and many other flowers that I could not name. The old Indians say that the flowers were never as profuse as this year and all because of an exceptional rainy season. The cacti are also in bloom and many have taken on such a quantity of water that they are bursting. That may sound just a little fishy but it is true. I visited the Saguara Forest and found many of the plants that stand 30 to 40 feet high with longitudinal splits that extended for several feet. Small cacti that usually are easily seen are hidden by the dense growth of the gamma grasses and cattle-men are elated over the prospect of plenty of grazing land this season. The desert dwellers are all happy. But—of course—there is a moral to this story and it is a shame to spoil the picture by what must follow.

The desert is only a desert because of a very necessary factor in growth and development. The earth contains all of the elements needed for plant life but depends on the sky for the one thing that life depends upon more than any thing else. Water is the ingrediant that is usually short.

We as a profession lack the water necessary for our more rapid growth and development. If we had it in sufficient quantities we would be attracting the "O's" and "Ah's' that out here express our surprise at the beauty of our country.

It is more gratifying to me than I can express, that my little group of fraternities have recently watered a project that we feel sure will bloom and produce fruit. It has taken considerable sacrifice on the part of some of our membership but they have worked hard and we will see results. We hope to produce a fine crop of new students and if not so many students this year, we will select the seed and plant again next year and with proper irrigation we will enjoy a better crop.

It would make us all happy to have a little water fall on our plans for endowments and money gifts for immediate use of our colleges. We would be elated to know that the element of support was augmented in favor of our P. &. P. W. and other needed divisions of our protective and research projects.

Like the desert we have the talent, we have the inspiration and we have every reason to want to go forward but we do need the one element that will enable us to do all of these things. Our science is based upon natural laws and it is not difficult for us to turn to Nature to see how these work either for the individual or the group. Without all of the factors necessary for growth and reproduction a species dies and leaves only a few remnants of its existance. We are anxious for our science to grow, to blossom and produce fruit. If we take the time to find the deficiency and then supply it we will see the results just as I have seen the desert this year "arrayed in all its glory."

H. V. H.

HONORED GUEST

Des Moines Still College of Osteopathy was honored on April 10th by the visit of Dr. W. Ballentine Henley of the College of Osteopathic Physicians and Surgeons, Los Angeles, California. A special general assembly was held to give Dr. Henley an opportunity to talk to the entire student body. He spoke on "Constructive Programs in Osteopathic Development."

During the day Dr. Henley was occupied with attending classes and laboratories throughout the college building. He was the guest of Dr. Robert B. Bachman at the noon meeting of the Rotary Club.

At 6:30 the same evening Dr. Henley was the guest of the Polk County Osteopathic Association at a dinner meeting held at the Kirkwood Hotel. Invitations were sent to osteopathic physicians in the nearby Des Moines territory. On this occasion Dr. Henley spoke to a large and interested gathering. Many of the osteopathic physicians attending brought their wives and other guests. Dr. and Mrs. J. S. Denslow of Kirksville, Missouri, attended this evening meeting as guests of Dr. Arthur D. Becker, President of the college.

Des Moines Still College of Osteopathy, as well as the local profession, was distinctly honored in this visit of Dr. Henley. His stop in Des Moines was made possible as a part of an itinerary which took him from California to New York City, and return. It was his pleasure to visit all of the accredited osteopathic colleges with the view of further cementing the fine spirit of cooperation

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The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

OBSTETRICS
Prenatal Care

(Number 27 in Series)

In order to define the scope of these discussions regarding obstetrical practice, it seems wise to indicate a number of items not included in our considerations. It is, and has been, the purpose of these thumbnail sketches in Osteopathic Therapeutics to keep them brief, to avoid general and controversial discussions and to pass over rather quickly those routine procedures in treatment and care more or less common to all schools of practice. It has been particularly the object in these brief articles to emphasize the particular and peculiar contribution made by osteopathy in the cases under discussion.

In these articles on obstetrical practice we purposely leave out many routine procedures such as pelvimetry, blood pressure readings, urinalysis, blood tests, diets, aseptic and antiseptic technic at the time of delivery, indications and contraindications for interfering with the normal course of pregnancy and labor, surgical repairs and many other matters, each one important in itself. Rather, it is the purpose to discuss as briefly as is consistent some of the procedures in which osteopathy has made a distinct and worthwhile contribution.

The matter that appeals to me first in consideration of prenatal care in pregnancy cases is one concerning posture. As the uterus grows with the development of the fetus the expectant mother makes some rather remarkable adaptations in posture. As the abdomen enlarges there is a constant and continued shifting of the center of gravity. There is increased inclination of the pelvic girdle and an accentuation of the lumbar curve with compensating adaptations (accentuations) in the dorsal curve and the cervical curve. The entire spine makes adaptation in anteroposterior curves to this constantly changing center of gravity. In the late months of pregnancy even the gait is altered as the patient walks with a somewhat broader base.

It is to be noted that many of the articular facets in the lumbar spine become weight-bearing structures late in pregnancy. Muscular pull on both the dorsal and lumbar spine becomes altered materially late in pregnancy. These are normal occurrences and necessary adaptations should occur ideally without undue stress, and readily and effectively without abnormal localization in tension stresses. Many of the discomforts associated with pregnancy are due to the fact that because of osteopathic spinal and rib lesions these necessary adaptations in posture are made at the expense of localizd stress tensions. Toxic crises of various kinds occur. Excessive morning nausea and vomiting, headaches, vertigo, constipation and pelvic weight and distress in many cases are due to abnormal localization of spinal stresses.

It becomes the province of the osteopathic physician, then, in these cases during the period of gestation to secure and maintain normal mobility of spinal and pelvic articulations. It has come to be the belief of many women that discomfort, disability and distress are a necessary part of the gestation period. This is emphatically not true. The period of gestation should be one of abounding good health. The gestation period is normal physiology, not pathology.

Again, let me say that it is a matter of securing normal pelvic, spinal and rib articulation and mobility so that the expectant mother may make easily, readily and effectively the logical and necessary adaptations in posture to a constantly shifting center of gravity.

(To Be Continued)

A. D. B., D. O.

STAR ASSEMBLY

Items concerning the college assemblies held each Friday morning have of necessity been omitted because of lack of space in our Log Book. It might be interesting for our readers to know that these assemblies have been held regularly throughout the fall and winter and for the most part have been not only interesting but valuable contributions to the work of the college. The college orchestra, while starting out in the fall rather insufficient in numbers, has gradually been augmented and with continued practice and association has been turning out some very creditable opening and closing numbers for each assembly period. The entire student body enjoys and appreciates their efforts under the guidance of maestro Phil Reames.

It would be an error not to make special mention of the entertainment put on in the assembly period of Friday, April 4, by the Delta Omega Sorority. The young ladies of this organization produced a skit called "The Ghost of the Freshman" which was witty, clever and highly entertaining. One could almost believe that it was produced by professionals. The stage settings were in many ways the most complete and the most effective in the history of our assemblies over a period of years. The entire student body with many guests thoroughly enjoyed the production. As can well be imagined, this fine presentation must have been the result of a great deal of work and planning on the part of those presenting it. Our hats are off to Delta Omega for a four-star assembly period!

CONVENTION?

The spring and early summer is a busy time, indeed, for professional groups ,as well as for individuals. Many state associations have their annual convention in the spring, postgraduate courses are presented in a number of the various educational institutions and the annual convention of the American Osteopathic Association may be said to serve as the climax of these various and most important professional activities.

The day has long passed when it was possible for individual physicians to isolate themselves and gradually descend into the vegetating class. The heavy demands made upon the modern physician and surgeon require that he not only be well prepared primarily but that he shall constantly take advantage of the many opportunities presented to keep abreast and alert to the advances made in the healing arts. Many state osteopathic groups have included a requirement of postgraduate work as a necessary part of reregistration, and it is anticipated that others will follow this excellent procedure. Osteopathic groups are to be congratulated upon their foresightedness in such a requirement.

On the first page of this issue of the Log Book is presented a schedule for our week of Postgraduate Review and Clinic. It is available, without tuition charge, for graduate osteopathic physicians and surgeons. We anticipate an even larger group than the excellent representation of previous years. If posible, I would like to stimulate every osteopathic physician and surgeon to attend his state convention, to attend a postgraduate course, and by all means to plan for the prize of them all—the meeting of the American Osteopathic Association in annual convention at Atlantic City, June 23-27.

A. D. B., D. O.

Pursuit For a Reason

(Continued From Last Issue)

Antigen-Antibody Reaction

We have considered one basic form of treatment to increase the amount of antigen in the serum to increase the reaction of the patient. Other types of treatment are used also, but the lymphatic pump has been poorly understood and too infrequently used, consequently it is stressed here.

In the course of an infectious toxemia there occurs periods of too great a concentration of antigenic substances in the serum. With antigen in excess in the serum, the toxemic symptoms show a pulse, temperature, etc., that are too high for safety. With more intense toxemia, tempera-

(Continued on Page Four)

LOW BACK PAIN

(Continued From Last Issue)

The preceding article brought us to the discussion of tuberculosis of the spine. This paper will deal with a brief discussion of tuberculosis, cancer, fracture of the spine, myositis and reflex pain of the lower back.

Tuberculosis of the spine is always secondary to tuberculosis somewhere else in the body. We should keep in mind that the onset of this condition may be associated with trauma which might erroneously lead us to believe that it is merely an osteopathic lesion or subluxation of the vertebral or sacroiliac articulations.

However, tuberculosis of the spine is most common in children between the ages of three and five and usually the premonitory symptoms of loss of weight, weakness and fatigue are present before the localized symptoms appear.

Muscular rigidity, pain, night cries and angular deformity are typical of the localized lesion. The patient walks slowly and carefully with the body held rigid, avoiding any sudden jars or quick movements, and in picking things off the floor he will bend the knees and hold the spine in the vertical position. The gait becomes more difficult if the disease spreads to include the spinal cord and spinal nerves.

Other infections such as gonorrhea, syphilis, and pyogenic infections may also involve the spine at times. We should also remember that severe low back pain occurs in some of the acute infectious diseases, particularly, in small pox, influenza, and septic sore throat.

Cancer of the spine occurs more frequently than we sometimes think. It is secondary to primary carcinoma in other tissues. It should be thought of if the patient has pain that is not relieved by the ordinary methods of treatment; and especially in those cases in which there is a history of an operation on the breast, or prostate gland; but it may follow primary carcinoma of the stomach, colon, uterus, or even the thyroid gland. Most of these malignant metastases develop in the lower part of the spine but now and then they are found in the dorsal or cervical region. Sarcoma of the bone may occasionally be found in the lower spine and pelvic bones. It should be thought of along with tuberculosis in children complaining of backache. Here a history of trauma may make you feel that you are dealing with a traumatic condition when the trauma is only incidental. However, there seems to be evidence that trauma is an exciting factor in some cases.

Fractures of spinous and transverse processes, of pedicles, or compression fractures of the bodies of vertebrae, are becoming more common due to the increase in automobile accidents. Injury or disease of the spinal

(Continued on Page Four)

I. S. O P. S.

Forty-Third Annual Convention

The Iowa Society of Osteopathic Physicians and Surgeons will hold its Forty-Third Annual Convention at Hotel Savery, Des Moines, on May 7 and 8.

Doctor S. H. Klein, Convention Program Chairman, reports that he has completed arrangements for speakers who will address the general convention. The following well-known osteopathic physicians are on the program:

F. J. Trenery, D. O., radiologist, Los Angeles, California.

Anton Kani, D. O., Omaha, Nebraska.

J. P. Schwartz, D. O., Head of Department of Surgery and Dean of Des Moines Still College of Osteopathy.

W. J. Huls, D. O., Davenport.

O. Edwin Owen, D. O., Department of Pathology, Des Moines Still College of Osteopathy.

E. J. Leininger, D. O., Department of Obstetrics and Gynecology, Des Moines Still College of Osteopathy.

Ray G. Hulburt, D. O., Editor, American Osteopathic Association, Chicago, Illinois.

In addition, the following faculty members of the Des Moines Still College of Osteopathy will conduct a "Symposium of Technic": A. D. Becker, D. O.; L. L. Facto, D. O.; B. E. Laycock, D. O., and J. M. Woods, D. O.

Pre Marital Law

The pre marital bill became the law of the State on Wednesday, April 9, 1941. All marriage licenses issued thereafter must be in compliance with this law which makes a certificate of freedom of both bride and bridegroom from communicable syphilis a prerequisite to the issuance of a marriage license.

It is estimated that approximately 200 samples of blood will be drawn daily in compliance with the new law and sent to the university hospital which is at present the only testing agency approved by the state department of health for this work.

Dr. R. M. Sorenson, Director of the Iowa state health department maternal health division, has advised that all samples received by the department will be mailed out to the university hospital the same day and should be returned to the physician within a period of three days.

Osteopathic physicians are recognized under the state law as eligible to participate in this public health program, and will receive complete and detailed instructions from the state department of health pertaining to the manner and method of compliance with the law.

Applications for Membership

A. G. Shook, D. O., Seymour.
D. H. Wire, D. O., Corydon.
Lester J. Swift, Monticello.

Dwight S. James, Sec.-Treas.

Pursuit For a Reason

(Continued from Page 3)

ture and pulse may drop rapidly in amount or volume. The pulse may be thready or too rapid to count. Signs of shock appear and evidence of extreme acidosis is present. All these findings demonstrate an excess of antigen. The only possible factor that will save the patient is a rapid increase in the defensive and offensive powers of the serum and aid to reticulo-endothelial tissue activity. The spleen and liver are the most accessible organs to compression manually and the spleen contains more reticulo-endothelial tissue than the rest of the body, hence when the patient is not producing enough antibody and the antigen is in excess, we resort to an emergency measure and stimulate the reticulo-endothelial system through the spleen and sometimes the liver. Ribs are raised to facilitate circulation to and return from the hematopoetic and reticulo-endothelial tissue there. The thyroid gland is manipulated directly to produce and liberate more thyroxin which seems to act as opsonin and also raise the metabolic rate, when the temperature is below the degree that should be present at the particular stage in the course of the infectious process.

The amount of tnigen and symptoms of toxemia which it produces are the criteria of our measures, therefore. Low antigen obsorption, few or slight symptoms of toxemia indicate the necessity for an increase in venous and lymphatic return from the infected area. High antigen and evidence of extreme toxicity indicate an emergency measure to increase antibody and reticulo-endothelial tissue activity.

Having defined the indications for increasing antibody and reticulo-endothelial tissue activity, it may be well to survey a summary of the laboratory data derived from patients that were given splenic stimulation as the only treatment for determining the alteration in the blood and serum.

Treating acute toxemia due to an infectious process requires the use of a number of methods and substances in addition to manual splenic stimulation, but since these are covered extensively elsewhere we will describe below only the technic and effect of splenic stimulation.

Indications. When the sign of toxemia become higher than the Optimum Reaction Area (101-104 degrees)

Technique.

1. Stand or sit to the patient's right and place your right hand under the lower two left ribs and pull upwards.

2. Your left hand should be placed along the anterior chest wall parallel to the costal cartilage. No part of the hand should extend over the end of the ribs onto the abdominal wall.

3. Slow compressive force is applied over the spleen with the left hand, while the right hand pulls upward to keep the spleen from slipping from under the left hand. A comfortable degree of force is applied and then the left hand is suddenly withdrawn. The procedure is then repeated.

4. Rate—15 compressions and sudden relaxations per minute—for two minutes.

5. Frequency. May be repeated each four hours until the signs of toxemia fall to the Optimum Reaction Area.

The laboratory technique for determining the effect of splenic stimulation is given below.

The technique is as follows: A specimen of blood is taken, then the treatment consisting of thirty manual compressions of the spleen in two minutes; one half hour after this a second specimen of blood is taken, and one and a half hours later, the final specimen is taken.

In a series of two hundred cases of patients who were acutely ill, the following averages resulted. In 80% of cases there resulted an increase in leukocytes, the average number being 2,200 pr cubic millimeter. With Arneth's index determination there was a shift to right on 80% of cases. There resulted a decrease of 600,000 erythrocytes per cubic millimeter in 76%. The reticulocytes were increased in 80%. The opsonic index was in-95% of cases. The serum agglutinins were increased in 80% of cases. The bacteriolysins were increased in 90% of cases.

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Byron E. Laycock, D. O.

Low Back Pain

(Continued From Page Three)

cord and meninges; tumors of the cord, meninges, and cauda equina; and hemorrhage, myelitis, tabes dorsalis, and radiculitis are conditions that cause severe pain in some cases.

Then there are those cases in which the pain in the lower back is coming from outside the spinal column. It may be from the muscles, fasciae, nerves, or from the pelvic and abdominal viscera. The muscles and fasciae in the lower back are on a constant strain which makes them more susceptible to toxic reactions. Chronic infections are factors in backache as they cause irritation to the fibrous tissues as well as the muscles and produce hypertrophy and hyperplastic changes with resulting chronic congestion and fibrotic contracture of the muscles. These muscles are no longer capable of functioning normally so that strain and fatigue that ordinarily would not cause any discomfort is now followed by marked pain.

Back pain occurs at times from reflexes coming from disease in the pelvis or lower abdomen; rarely, it may come from the upper abdominal region. Disease of the prostate gland and seminal vesicles in the male and from the reproductive organs in the female are found most frequently. Strange as it may seem, disease of the kidneys does not often produce reflex pain in the lower back.

The diagnosis of tuberculosis and other infections of the spine, cancer, and fractures are usually made by the history of the case and the use of the X-ray. When there are symptoms of cord involvement a thorough neurological examination should be made. Myositis and myofasciitis usually affects all of the muscles in the lower back and is frequently a bilateral condition coming on either gradually or acutely. Reflex pain producing backache is usually associated with other symptoms indicating the organ causing the trouble.

The treatment for tuberculosis and fractures of the spine consists of general measures for building up increased resistance and the use of proper casts and braces. Palliative measures to relieve pain and make the patient more comfortable are the main points in the treatment of cancer of the spine; this includes X-ray. The treatment of myositis is rest, the use of heat, and osteopathic manipulation for the purpose of normalizing the articular structures and to free the circulation in the congested areas. It is important in these cases to treat the upper spine to normalize secondary strain and stress areas that have followed the primary condition in the lower back. Reflex pain is removed by relieving the cause. This is not always easy to do but some cases are relieved by treating any ulcerated condition of the gastrointestinal tract, by normalizing a retroverted or retrocessed uterus; by relieving an irritation in the bladder; by massage of a congested prostate gland or through the correction of abnormal conditions in the rectum and the anal canal.

L. L. Facto

Honored Guest

(Continued From Page Two)

and unity existing in our osteopathic educational institutions. It is to be hoped that the occasion will offer again in the not-too-distant future for a repetition of this delightful visit.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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LOW BACK PAIN

(Continued From Last Issue)

This article deals with abnormal feet and poor posture as causes of backache. While there is more or less overlapping when these conditions are discussed separately, it is done for the purpose of placing a little more emphasis on abnormal feet as a contributory factor in low back pain.

There is every reason to believe that backache from malfunctioning feet is not uncommon. In these cases there is muscle strain in the lower back and often associated sacroiliac and lumbosacral lesions. Foot trouble may be caused by any one or combination of several conditions. The anatomical short leg, flat foot, over flexible arch, and eversion and pronation of the foot are the most frequent. We have not in the past given enough attention to the feet in the discussion of structural malrelations of the body, and even now, many of us do not examine the feet in the making of a routine physical examination.

It is very difficult at times to decide whether the low back pain is coming from lesions primarily at the sacroiliac or lumbosacral areas, or whether the strain here is due to malfunctioning structures in the feet and legs.

The feet and legs should be examined for tenderness, limited motion, and contracted muscles, in both the sitting and standing positions, and then by the use of any suitable technic normalize the feet and ankles before proceeding to the knee, hip joint, and the lower back. Most doctors would agree that the correction of lumbosacral and sacroiliac lesions will not stay permanently corrected in those cases in which there is unbalanced posture from abnormal foot function. Therefore, it becomes necessary to normalize the feet first and then treatment of the sacroiliac and lumbosacral regions will be effective. In case of the anatomical short leg the placing of a pad in the shoe or building up the heel on the short side, or lowering the height of the heel on the long side for the purpose of equalizing the pelvis and lower back will work wonders in some cases.

Poor Posture

We are here interested with the influence of poor posture as a cause in the production of low back pain and not in this particular discussion specifically concerned with the effects that it

(Continued on Page 3)

OSTEOPATHY — An Opportunity

The outstanding problem before alert and intelligent young men and women today is to find their constructive place in the social scheme of things. They want to find a place where they can really serve and where they can have the opportunity for development. They want to become useful and worthwhile citizens in a world of changing values.

There are thousands, and it is correct to say even tens of thousands, of young people with two or more years of college training who are earnestly seeking to find some avenue that demands the things which they have to offer, and that in return will secure for them an important part in the activities in the present period of economic and sociologic values.

We believe Osteopathy, as a science and as a profession, deserves the careful consideration and investigation of those qualified young men and women to whom the work of a physician has an appeal. Most professions today are either crowded or overcrowded, and Osteopathy stands unique among opportunities as one profession which is not crowded. There is a wide-spread demand for competent, well-trained osteopathic physicians and surgeons. The public is becoming increasingly informed and aware of the high type of service supplied by osteopathic physicians. It is necessary and indicated that we make every effort to meet this problem.

The training of a modern physician is an exacting one. It demands much of those who would qualify. It will require the best efforts of those who would seek this particular avenue of expression of their own inherent urge to fill a real place in the world. On the other hand, requiring much, it offers much. It offers an opportunity of service second to none; it offers the inner-satisfaction which comes only to those who have much to give, and along humanitarian lines.

The next class enrolls in September. Classwork begins on September 9th. The entrance prerequisite is two years of liberal arts and science, without subject designation, in an accredited college or university.

We would be glad to have a line from anyone interested, telling of plans as they have been formulated, and as to the progress made in crystallizing them. If you are interested, we want you to know how deeply we here in Des Moines Still College of Osteopathy are also interested in assisting you in the fulfillment of your ambitions.

—A. D. B., D. O.

Faculty Activities

Members of the faculty of Des Moines Still College of Osteopathy have been more than busy during the past few weeks in making their various contributions to convention programs in a number of states. A technic team composed of Dr. B. E. Laycock, Dr. L. L. Facto, Dr. J. M. Woods and Dr. A. D. Becker put on a symposium on Osteopathic Technic at the Illinois State Osteopathic Convention held in Peoria on May 5 and 6, and again at the Iowa State Osteopathic Convention held in Des Moines on May 7 and 8. If the apparent interest and many favorable comments regarding these presentations in osteopathic technic can be taken as evidence of its value and of the appreciation of those attending, then the work of this team has been liberally repaid.

Dr. B. E. Laycock and Dr. A. D. Becker gave papers on the program at the Children Health Conference at Kansas City on April 24 and 25. Dr. Laycock

(Continued on Page Three)

Graduating Class

The month of May, 1941 is indeed an important month for the graduating seniors in Des Moines Still College of Osteopathy. In many ways it is equally important for the college. It means much to any educational institution to send out a large, representative and well-qualified group of graduates.

The present graduating class in many ways has made a fine record. Out of fifty eligible to take the comprehensive qualifying examination covering the entire four years of the professional course forty-nine passed and will receive their degrees on Friday evening, May 23, at St. Johns Lutheran Church. Dr. John Owen Gross, President of Simpson College at Indianola, Iowa has been secured to give the Commencement Address.

Graduating festivities begin with senior assembly on Friday, May 16. On Monday evening, May 19, the senior banquet will be held in Younker's beautiful

(Continued on Page Four)

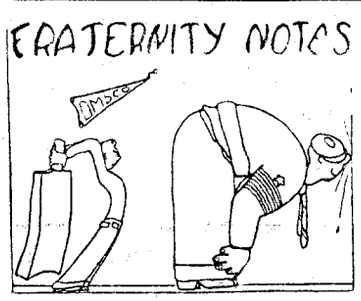
Pursuit For a Reason

We will now revert to the December issue for the continuity of this and subsequent articles of this paper. January interrupted us with the "Reticuloendothelial system" and we were concerned with it for the past four issues of the Log Book. A coverage of this system seemed desirable before the termination of the college year.

As physicians, we spend our lives in Pursuit Of a Reason; the reason for a disease, the reason for a symptom's presence or absence, the reason for a therapeutic modality, the reason for a successful termination to a disease, the reason for a fatal end. We have as serious a responsibility as providence ever places in human hands, directing a patient, at the dazzling speed with which infection or trauma takes place, thru the maze of conflict from which the patient usually emerges completely or partly victorious. Always some will fail, and it is toward that group that we incessantly strive to aid in a more effective way in the future than has been possible in the past. Our success in this pursuit in the future will be directly proportional to our gain in scientific facts, and that means, more than in any other single thing, a broader knowledge of vegetative anatomy, physiology and the reflexes arising incident to disease and the processes by which protoplasm counteracts its own infections.

It has been said, by those who should know better than to complain of it if true, that Osteopathy is losing much of its so-called religious zeal. Some even condemn the colleges for this and make obviously futile attempts to instill that chimerical spirit into our students. They were educated in the calomel and quinine days of the ordinary medical school when there was not the ever-increasing stress and instruction placed upon manipulation and body mechanics as there is today in all the schools of orthodox allopathic medicine. Every pound of fanatical, empirical religious zeal that is exchanged to gain a pound or an ounce of true enthusiasm for the pure science of Osteopathy will find us all a pound or an ounce advanced. Osteopathic science is too practical and if misapplied too deadly, and in the same degree that it is almost miraculously and specifically beneficial when accurately applied for it to be merely ardently administered. Osteopathic treatment must be accurately

(Continued on Page Four)



N. O. I. C.

With the Year Book in the mail all we have to do now is to figure out how we came out financially. We hope that this is the end of the planned projects for the Council for the year. It has been a pleasure to work with the 40 chapters and their officers both subordinate and grand and the results we hope will warrant another better and bigger Year Book next season.

It is only a short time until the A. O. A. Convention in Atlantic City. We have written for accommodations for our luncheon. At this writing we do not have the definite dining room where it will be held. BUT—we do know that it will be June 23 at noon so keep that open for an official notification a little later.

J. Paul Leonard, Pres.
H. V. Halladay, Exc.-Secy.

ΦΣΓ

Much activity has taken place around the house this last month. Especially the gray hairs the Seniors have acquired during qualifyings.

The recreation room has been completely remodeled, including a new plastering and paint job. We wish to commend the fellows that have given their spirit and help in securing this remodeling job.

The new members that were initiated into the fraternity during the last, and incidently the fiftieth initiation in the history of this chapter, are, E. Sperry, E. Sheldahl, M. Hodson and D. Frantz.

The Silver Anniversary Dance held May the Third at the chapter house, was a big success. The committee, headed by Ozzie Neilson, are at this time voted the thanks of the other members for their diligent work in making this affair such a success.

The Senior Banquet is being held May 15th, at the Viking Cafe. "Watcha' say," we give the graduating members a big send-off. The Senior members are, H. Taggart, R. Sowers, J. Yagoobian, T. Koenig, H. Morey, R. Woods, L. Gatien, H. Plautz, J. Edgerton, K. Fowler, O. Neilson and C. Henkel.

The following men were elected as officers for the coming semester: Archon, T. Deegan; Sub-Archon, J. Mills; Pronatarius, D. Frantz; Crusophulax, G. Deer; Exastase, W. Rodgers; Phulax, E. Sperry.

With the present school year just about at a close, let's hope for just as successful a one in '41-'42.

—D. W. F.

ATLAS CLUB

To the graduating seniors of the fraternity the undergraduates offer congratulations and the best of luck The Atlas Club members who are in the class of May, '41 include the following: Robert Berger, Max Bergau, James Clapperton, Laurel Deitrick, Robert Drews, Claire Howe, Tom Hewetson, Dick Johnson, Howard Johnston, Dan McKinley, and Robert Rheinfrank. In honor of these eleven members the Semi-Annual Senior Banquet is planned for Thursday evening, May 15.

Election of the Club's officers for the next semester was held on April 29 Those elected to the various offices were: Merton Worster, Noble Skull; Ron Woods, Occipital; Gordon Elliott, Pyloris; Vernon Stoner, Stylus; Jerry Dierdorff, Sacrum; Mike Corrigan, Styloid, and Bud Brail, Receptaculum. Installation of officers is planned for Monday, May 12.

The fraternity's annual spring picnic was held as usual this year on Mother's Day, May 11. A good attendance was recorded.

Once again the fraternity has another wedding announcement to offer—This time it is our good friend Joe Cullen, who has "gone and done it." Congratulations and the best of everything, Joe!

Due to the Senior qualifying examinations and the extra strain of tests experienced by the underclassmen, the social functions of the Club have been necessarily reduced to a minimum, but it is hoped that we will be able to have a final get together of some kind before the majority of the members leave for home for the summer vacation. And incidently next fall, when we take roll again and find some students missing because the draft got you (or me), don't say we didn't have our fingers crossed or that we forgot to say "We'll be seeing you." (I hope).

—G. L. E. Stylus

ΑΟΓ

The Fraternity was honored Monday evening, May 4, 1941, by having as a guest speaker, Dr. Paul Park. Dr. Park delivered a very interesting and enlightening address on "Office Practice." The dynamic personality and keen insight of the speaker was felt by all present. We hope that one day in the future Dr. Park will honor us again.

Election of officers for the ensuing semester was held Results were as follows: Dan Feinstein, Cerebrum; Irving Ansfield, Cerebellum, Norman Kurzer, Pons; Lou Radetsky, Calamus Scriptorious.

Dave Gateman was unanimously elected Sponsor to take Dr. Berck's place next year. Dr. Berck is opening up his practice in Detroit, Mich., early this summer. We shall certainly miss Dr. Berck—his guidance in the last three years has been flawless. We know that our loss is Detroit's gain.

The Fraternity takes this opportunity to wish every one a very happy summer vacation. To those who graduate we extend every hope for a successful professional and a happy personal career. May the Osteopathic Concept forever be their creed; for with it the element of success is almost a foregone conclusion.

—L R.

ΙΤΣ

We now find that the time has approached to where there is only a few more days until the school year is over for another nine month period, and for the Seniors forever. Thoughts in the past have been very pleasant to look forward to a summer vacation, but in the midst of the present world conditions we are very seriously thinking whether we will be spending a pleasant summer vacation this year.

Tuesday evening, May the 6th Iota Tau Sigma held its Senior Banquet at the Younkers Tea Room. We were very fortunate in having with us Dr. Floyd Trenery from Los Angeles, California. He spoke on "Fraternal Problems and Advantages." Dr. Trenery at present is the Supreme President of Iota Tau Sigma, and he certainly give us all some very good pointers. Other Brothers that were guests at the Banquet were: Dr. Byron Laycock, Dr. V. A. Englund, Dr. Byron Cash, Dr. Raymond B. Kale, Dr. D. W. Roberts, Dr. E. E. Steffen, Dr. Donald E. Sloan, Dr. W. P. Kelsey and Dr. E. Isobaker, all from Des Moines Other out of town Brothers were: Dr. Victor Pohl, Baxter, Iowa; Dr. D. E. Hannan, Perry, Iowa; Dr. J. W. Rinabarger, Keosoqua, Iowa; Dr. E. W. McWilliams, Columbus Junction, Iowa; Dr. B. W. Catschall, Waterloo, Iowa, and Dr. Dresser, Humboldt, Iowa. It was indeed a pleasure to meet all of these men who have been out in the field for several years. Also present at the Banquet were the pledges, and feel that they enjoyed every bit of the program as much as the Seniors.

The other day we were very much surprised to see the gay face of Brother Wooliscroft, who is now practicing near Denver, Colorado. He stopped in at the college for a little visit while making a tour through Des Moines. We are all happy to see that Dr. Wooliscroft is looking prosperous out there in the hills.

The Seniors who are graduating this spring are: Lennard Clifford who intends to return to his native state of South Dakota and roam the hills, Charles Gray and we are assured that he will return to Ohio where Mother Nature provided a pond for him to fish, Jess Varner who plans on returning to his native state of Florida to research on the life cycle of the Anopheles Mosquitoes, and Harland Hofer who plans to go to Seattle and learn how fish actually swim in cans.

This being the last publication of the school year Iota Tau Sigma wishes to extend its best wishes to you all.

—R. G. H.

DESERT-ATIONS

The past month has been a busy one both in and out of the house. With nearly five thousand N. O. I. C. Year Books to prepare for mailing and many letters to be answered, too much time has been taken from the wonders of the flower gardens. Until you have seen cacti in bloom the majority of you would not be interested in the many varieties. Striking colors, waxy petals with contrasting stamens and style and usually much larger than expected even from a small plant, make them constant surprises that have stolen the seven colors of the rainbow. Add the gleam of humming birds and the flitting highly colored butterflies and you have a kaleidoscope that the eye can trail from the cacti to the roses to the honeysuckle to the columbine and continuing around the circle.

The major event of the month was the trip to Raton to the N. Mexico state convention with Harold Donovan and wife as hosts. Everything was perfect but the weather in the North part of the state. Down here we have had our Spring and now it is Summer. If you prefer Winter at this time of the year go to Harold's part of the state. Rain changed to sleet and then to snow as the road wound thru the mountains on North and the old man was glad to get back to the warmer climate of the South. Can you believe that 125 osteopathic physicians from 12 states met in Raton for an intensive three-day convention April 24-25-26? Six from Missouri, two from Iowa, 12 from Nebraska, 1 from Tennessee, 1 from Illinois and the adjoining states well represented with 50 from our own state. The meeting was honored by the presence of Dr. F. A. Gordon, our National President and Dr. Paul Price, our National First Vice President. Other notables were on the program and the three days were filled with valuable talks and demonstrations and the evenings, planned by Mrs. Donovan, were delightful social affairs. Dr. and Mrs. Donovan opened their beautiful home to nearly one hundred guests the first evening and served a buffet supper that left us hard to pry from comfortable chairs. The magnificent home, the excellent food and the congenial company made this affair an attraction that will be the major urge to return to this meeting next year. An operation not planned nor scheduled was necessary Saturday morning. Dr. Donovan's eight year old son suffered an attack of acute apendicitis and was operated upon by Dr. Curtis Brigham. Harold re-

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The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

OBSTETRICS
Prenatal Care

(Number 28 in Series)

The percentage of mothers finding themselves unable to nurse their babies, either adequately or in part, is entirely too high. It is the consensus of opinion of both the obstetricians and the pediatricians that breast milk is not only the most satisfactory and the most complete food for the newborn baby during its first several months of life, but that breast feeding is distinctly beneficial for the mother. Perhaps Osteopathy has made no greater single contribution to the practice of obstetrics than it has in the ability to establish and maintain the normal functioning of the mammary gland during the desired period of lactation.

It is to be hoped that we can, by bringing this subject of physiological lactation into this discussion, serve an even greater field of usefulness in the osteopathic treatment and care of the expectant mother. We recognize the fact that some mothers must artificially feed their babies because of various factors making it physically impossible to nurse the baby at the breast. Such factors as employment, serious depleting disease and social demands as reasons for inability to nurse the baby do not come within the scope of this paper. It is highly desirable, however, that every expectant mother who really desires to nurse her baby shall be able to do so.

There are two main reasons why the mammary gland may fail in function. One is quite entirely mechanical, interfering with venous drainage from the breast, and the other reason is in part mechanical, consisting of osteopathic lesions which interfere with the nerve supply to the mammary gland and thus disturbing the vasomotor control of its circulation and also the nervous control of its secretory activity.

A less frequent and perhaps a less important cause of inability to nurse the baby is a psychological factor consisting either of a fear that they will not be able to supply adequate nourishment for the baby, or the sincere conviction that they will be unable to do so. This psychological factor is an important one in some cases and one of the great obstetricians of the country has said that "the making of milk is largely factored upon the belief that one can do so."

It is desirable, at this time, for us to consider the blood supply of the mammary gland which is by way of the internal mammary artery, a branch of the subclavian artery. These internal mammary arteries, right and left, run down the anterior wall of the thorax on either side, and on the inside of the thorax. It reaches the mammary gland by perforating branches which pass through the intercostal spaces perforating the intercostal muscles. The venous return from the mammary gland is by way of venae comites of the internal mammary artery which internal mammary veins empty into the innominate vein or the superior vena cava. If as a result of poor posture or multiple rib lesions the anterior intercostal spaces are narrowed and the intercostal muscles contractured and fibrosed, the venous drainage from the mammary gland is profoundly interfered with mechanically. This lack of adequate drainage is in many cases a sufficient cause for disturbed functioning capacity of the mammary gland. The other of the two more common causes consists in osteopathic spinal and rib lesions impairing the innervation to the mammary gland. The mammary gland has only sympathetic innervation. The vasomotor control is vasoconstrictor influence. This vasomotor innervation and the secretory innervation is by way of the sympathetics from the second to the sixth dorsal. Osteopathic lesions in these areas may seriously impair the functioning capacity of the mammary gland.

It is fully recognized and not to be ignored, that undoubtedly there is a very important hormonic control and influence in lactation as the result of the integrated activities of the glands of internal secretion. This consists for the most part of the secretion of prolactin by the anterior pituitary gland.

While the function of the mammary gland as a means of nourishing the new baby is chiefly in evidence postnatal, the preparation for this important function falls very definitely into the realm of prenatal care. Beginning at the seventh month of gestation, regular osteopathic treatment should be given to normalize the upper thoracic cage. The upper six ribs should be carefully normalized at their vertebral articulations. At each treatment these ribs should be thoroughly raised and the anterior intercostal tissues carefully stretched and normalized. As was mentioned in the preceding article in the April number of the Log Book, errors in posture should be carefully studied and corrected. This prenatal treatment for two months preceding delivery is of greatest value and may be almost universally depended upon to secure normal functioning of this important glandular tissue. While perhaps not entirely logical to be discussed in this connection, it is important to mention that for the first three or four days immediately following delivery these upper six ribs on each side must be carefully raised and the anterior intercostal tissues normalized. True, this is postnatal treatment, but it is practical to mention it in this discussion.

It is the province of the osteopathic physician to make it possible for the new mother to nurse her child. The almost complete absence of breast disturbances under such treatment and care is the best possible evidence of its value. During the period of lactation while the breasts are heavy they should be supported by a properly fitted brassiere which is not constricting and which properly lifts and holds the breast in normal relations to the chest wall.

A. D. B., D. O.

Postgraduate Review and Clinic

Many favorable comments heard regarding the program for the Annual Postgraduate Review and Clinic to be held at the college, May 26-31, inclusive as published in the April number of the Log Book have given the officers and the faculty of the college genuine pleasure.

We believe we have a worthwhile program for those who can arrange to be present for that week. We anticipate an even larger class than average. The invitation is a broad one, being extended to graduate osteopathic physicians and surgeons from any accredited osteopathic college.

Won't you plan to join with us in a week of condensed, intensive review? Enjoy the opportunity of meeting with your many colleagues associated in activities similar to your own. Enjoy the pleasure of mind meeting mind and elbow rubbing elbow in a social and professional get-together between sessions. Find out what the other fellow is doing and thinking, and be prepared to make your own contribution along these same lines.

Someone has tritely remarked that "when mind meets mind a new spark is generated which lights both minds to new truths." Take this opportunity to keep in touch with the newer developments and later acquisitions in professional information and progress.

—A. D. B., D. O.

Faculty Activities

(Continued from Page One)

had several appearances on the program of the Minnesota State Osteopathic Convention at St. Paul on May 2 and 3.

Dr. J. P. Schwartz spoke at the Ohio State Osteopathic Convention held at Columbus on May 12 and 13, while Dr. A. D. Becker gave several discussions on the program of the South Dakota State Osteopathic Convention held on May 12 and 13 at Sioux Falls, South Dakota.

Low Back Pain

(Continued From Page One)

might have on the general function of the body.

Correct posture assures the conservation of energy because the highly efficient mechanism of the body carries on its greatest activity with the least expenditure of energy in this position.

Let us see how bad posture produces backache. With the head forward there is flexion of the neck, stooped shoulders, the chest narrow and sagged, and a weakened and protruding adbomen. There is lordosis in the lumbar region and increased muscle strain thrown on the lower extremities with increased pronation of the feet. The increased effort, necessary to maintain the upright position under such conditions, causes a waste of energy, increased muscle strain, and articular impingement in the lower spine. Pain and discomfort in the lower back will be found in many of these cases.

The cause of bad posture is congenital, acquired, or a combination of both. Congenial causes such as abnormalities in development of the spine are fairly common. Hereditary tendencies are mentioned because postural strain often may be observed in large heavy persons with heavy abdomen, in the thin, tall, persons with poor musculature who stand with round shoulders and marked lordosis, and in those who have the round back of adolescence. Occupation, sickness, lowered resistance, faulty diet or habits, are important in many cases. The visceroptosis associated with poor posture may be responsible for some cases of low back pain thru viscerogenic reflexes. Weak muscles may not be the cause of bad posture but certainly they allow the condition to occur.

The diagnosis is not difficult. However, we should be aware of the fact that some organic disease may be present and if this is true the symptoms may simulate those of poor posture.

The treatment consists of general care, exercises, and manipulation for improving and relieving structural changes and if necessary, supportive measures by the use of casts and braces.

Exercises should be carefully given, their object being to tone up and educate to proper action the musculature of the entire body. Special attention, should be paid to the muscles of the abdominal wall, shoulder girdle, and the gluteal region, that hold the body in the erect position. In postural training the advice is to "push the top of the head up" and at all times to keep the spinal column straight. Exercise tol-

(Continued on Page 4)

NOTICE

If and when you change your address, please notify the Log Book promptly.

I. S. O P. S.

The Forty-Third Convention of the Iowa Society of Osteopathic Physicians and Surgeons was held in Des Moines on May 7 and 8.

The following officers were elected on Thursday, May 8:

President, Holcomb Jordan, Davenport (reelected); Vice President, Mary E. Golden, Des Moines; Lay Secretary-Treasurer, Dwight S. James, Des Moines; E. F. Leininger was elected as trustee to fill the unexpired two-year term of Mary E. Golden. Trustees elected for three-year terms are, R. B. Gilmour, Sioux City (re-elected) and G. A. Whetstine, Wilton Junction.

H. L. Gulden, Ames, was elected to the Legislative Committee for a five-year term, succeeding N. A. Cunningham of Marshalltown.

Delegates to the American Osteopathic Association in Atlantic City are, Holcomb Jordan, Mary E. Golden and S. H. Klein.

The President has appointed the following as Department Heads and Committee Chairmen:

Department of Professional Affairs, J.K. Johnson, Jr., Jefferson; Membership, H. L. Gulden, Ames; Convention Program, Mary E. Golden, Des Moines; Hospitals, Howard A. Graney, Des Moines; Ethics and Censorship, J. W. Rinabarger, Keosauqua; Vocational Guidance, John Q. A. Mattern, Des Moines; Conventoin Arrangements, Ruth Paul, Des Moines; Ophthalmology, H. J. Marshall, Des Moines; Public and Professional Welfare Committee, Theo. Tueckes, Davenport; Press Relations, J. R. Forbes, Swea City; Public Education, Lester P. Fagen, Des Moines;; Radio, O. Edwin Owen, Des Moines; Department of Public Affairs, D. E. Hannan, Perry; Veterans Affairs, H. D. Wright, Hampton; Convention Exhibits (turned over to Secretary); Child Health Conference, Beryl Freeman, Des Moines; Industrial and Institutional Service, P. O. French, Cedar Rapids.

Membership Applications

H. Lachmiller, D. O., Clarion.

L. A. Stoner, D. O., Britt.

F. W. McIntosh, D. O., Keosaqua.

—Dwight S. James,
Sec.-Treas.

Graduating Class

(Continued From Page One)

tea rooms. Members of the senior class, their wives, the faculty and their wives, and the officers of the school will attend on this occasion, along with numerous guests of members of the class.

Des Moines Still College of Osteopathy is justly proud in presenting this splendid class as candidates for membership in the osteopathic profession. As a result of many sacrifices and much hard work they have really earned the distinction that has come to them. Our sincere best wishes for success go with them in their chosen field of professional activity.

Pursuit For a Reason

(ontinued From Page One)

measured, specifically administered, and intelligently spaced. It can **not** be a quackish panacea for it has specific indications, many definite modifications of application in different patients. It also has some contra-indications. One may have vibrating enthusiasm for a scientific fact—and any one interested in pure science inevitably grasps the answer to many, many problems in the scientific evolvements of the osteopathic school. One interested in the true science of osteopathy should never injure that science by applying it with blind zealousness and abandon. We must not be guilty of treating as empirically as have other schools of practice that are now trying to gain access to Osteopathy's back door and will eventually try to usurp the reception room.

In visualizing what is known of osteopathic science it is necessary for us to look back to the primary cell and watch its development and metamorphosis. We must study the anatomy and physiology of those organisms that were dropped off in various blind alleys from the train of evolutionary development. Only then can we begin to understand the answer to the sophomoric question, "How do we get this way" and "Why?"

In a very brief way we have traversed that road, and now we are up to the point of visualizing what little is known at present about the embryological development of the Vegetative Nervous System. This, in an outlined fashion, and thence to its known physiology.

The Vegetative or Autonomic Nervous System is that group of nerves, ganglia, nuclear tissue and end organs that presides over all involuntary functions. The Vegetative Nervous System is divided into two portions: Parasympathetic and Sympathetic.

The Parasympathetic Nervous System or Cranio-bulbar and Sacral outflow, although its physiology will be outlined in some detail later, is, briefly speaking, motor and secretory to the lungs, gastro-intestinal tract and its associated glands, and depresses the vascular rate and pressure.

The cells of origin of the preganglionic fibers of the Parasympathetics are developed and found in the nuclei of origin of the third, seventh, ninth and tenth cranial nerves, from the floor of the cerebral aqueduct for the occulomotor down to the medulla oblongata for the vagus. For the sacral portion of this cranio-bulbar and sacral outflow, the cells of origin lie in the upper four sacral segments of the medulla spinalis and emerge with the second and third sacral nerves to form eventually the pelvic nerve.

The embryologic development of this portion of the Vegetative Nervous System is in no way different from the cerebro-spinal nervous system in which and from which the cells of the Parasympathetics develop and arise in the adult system.

Intercalated or communicating fibres connect these parasympathetic nuclei, one with each of the others and also with many other cranial nerves. It is over these reflex pathways that the symptoms of some distant disturbances are expressed by producing physiologic perversion and inflammation in other areas. These areas of expression are frequently called Heads' Zones. The number of these areas utilized by expression parasympathetically are very few compared with the great number of those expressed by the sympathetic.

The symptom expression by way of the Parasympathetics is usually of visceral physiologic perversion. The symptoms; nausea, anorexia, vomiting, regurgitation, bradycardia, hypotension, questionable colic, diplopia, tinnitus, sialorrhea rhinorrhea, pain and inflammatory activity in an area supplied by any sensory cranial nerve, usually constipation, diarrhea, urinary urgency, etc., are mostly parasympathetic in origin and they can be produced also by a general toxemia. These symtoms in most cases do not localize a pathologic process. They tell us and the patient that he is ill—and they may identify the system involved, such as, Gastro-intestinal, Cardio-vascular, Pulmonary, etc.—but they do not localize the involvement at the appendix, or the gallbladder, or the pancreas, or stomach or esophagus for the Gastro-intestinal tract. etc.

For this localization phenomenon we must in most instances turn the palpating hand to the somatic area that receives the viscero-somatic expression by way of the sympathetic afferent fibres, and thence to efferent fibers (Pottinger, Head, Hilton).

We must, therefore, consider the development of the Sympathetic Nervous System or the Thoraco-Lumbar outflow.

—Byron E. Laycock, D. O.

(To Be Continued)

Special Assembly

A special assembly program was announced May 13, 1941, in the honor of Dr. Charles Copeland Smith, who is a representative to the Public Relations Committee for Industries.

Dr. Smith gave a very impressive speech, before the well represented group, on America Tomorrow.

The unexpected is doubly impressive—that's why it pays to bestow a compliment when it is deserved.

Low Back Pain

(Continued From Page Three)

erance must be carefully noted, and it may be advisable in rare cases to give the exercises in the recumbent position.

Osteopathic treatment serves to relax contracted muscles, frees the venous and lymph drainage, and normalizes the spinal articulations by the correction of specific lesions. Normalization of the articulations is necessary to abolish the abnormal reflexes initiating imbalanced muscular tension so that automatic control of spinal coordination may occur. On relieving deformity by supportive measures the restriction of apparatus as much as possible is desired, providing it conforms to the needs of the case.

No discussion of posture would be complete without at least mentioning something about scoliosis, knowing full well that this may be a part of the poor postural syndrome. In most cases the strain and stress of muscular imbalance are more noticeable in the lower back regardless of whether the primary curve is in the lumbar region or higher in the spine.

Dr. L. L. Facto.

DESERT-ATIONS

(Continued from Page Two)

ports that the boy is recovering nicely without any complications and with Curtis as surgeon and the complete appointments of the Donovan Hospital we do not need that assurance.

Several enjoyable cactus hunting trips were scheduled for the month, the outstanding one being with George Sholly of the White Sands National Monument. George wanted to investigate the varieties that grew in the region of the Lava Beds about 50 miles North of the Sands. This spot is interesting without investigating the vegetation. Miles of lava still in the form in which it cooled and many small craters and several large enough to drop in a good sized office building and then not fill the hole. We not only found two interesting varieties of cacti but George had a fight with a rattler and came off the victor so the day was recorded as a success in several ways.

Better plan to come down this way during your vacation this Summer and see some of the things that make it so attractive to the old man.

—H. V. H.

LIONS CLUB PRESIDENT

Dr. Homer Fredericks of Ankeny, Iowa, has just recently been appointed president of the newly organized Lions Club of that city.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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Pursuit for a Reason

The Sympathetic portion of the Vegetative or Autonomic Nervous System is properly named. This system of nerves is truly sympathetic to the physician and to the patient. The "State of Emergency," sometimes none too "limited" in which we find ourselves daily, is responded to by Sympathetic reaction. The Sympathetic response is our reaction to infection, trauma or impending characteristics in our environmental or social economy that may be deleterious to ourselves. The Sympathetic Nervous System expresses symptoms that localize disease processes. Without such localization accurate isolation of a disease or a pathologically involved area would be greatly delayed and in most instances of organic involvement impossible.

The Sympathetic Nervous System and certain associated tissues comprise our defensive mechanism and should be appreciated to a greater extent.

The origin of the Primordia of the Sympathetics is still being debated, but the general concensus of opinion is that the Sympathetic Nervous System is derived from the Neural Crest. The Neural Crest is developed from Ectoderm that invaginates to from also the Cerebro-spinal Nervous System. It completes the neural tube posteriorly and then as the organism develops laterally as well as anteriorly the neural crest is pulled laterally and anteriorly.

The most proximal portion of the crest gets no farther in its migration than the intervertebral foramina. Thirty-one pairs of collections of this tissue form here the Dorsal Root Ganglia. These ganglia contain the cells of origin of all afferent fibres—fibres carrying impulses centrally. These fibres end centrally by synaptic relationship around a great number of cells in the central nervus system. Peripherally they contact tissues with their end organs. These end organs are in practically all tissues of the body, somatic and visceral, those supplied by Cerebro-spinal nerves and also those supplied only by Vegetative Nerve Fibres. Some of the fibers whose nutrient cells are in the Dorsal Root Ganglion pass over the White Ramus Pathway thru the Lateral Chain Ganglion without interruption, and thence over the grey ramus to the spinal nerve and travel on peripherally to somatic tissue. Some of these peripheral sensory processes pass thru the Lateral

(Continued on Page Four)

On to Atlantic City

The 45th Annual Convention of the American Osteopathic Association will be held in Atlantic City, New Jersey, June 23-27, inclusive. The June number of the Journal of the American Osteopathic Association contains, in detail, the splendid program which has been assembled under the chairmanship of Dr. Walter W. Hopps of Los Angeles.

Certainly, this fine professional program is a challenge to every osteopathic physician and surgeon in practice. It covers a wide range of professional interests and in the main is divided into the General Program running fro m9 a. m. to 12 noon and from 1:40 p. m. to 3 p. m. each day, excepting Friday when the general sessions close at noon. The meetings of the various sections are scheduled from 3:00 to 5:00 each afternoon, excepting Friday.

There will be many meetings of allied organizations beginning on Friday the 20th and extending through Convention Week. These programs of the allied organizations include a wide range of professional interests ranging from Advisory Board for Osteopathic Specialists to the newly-formed Auxiliary to the American Osteopathic Association composed of the wives of osteopathic physicians. Many reunions have been planned, among which chiefly are the annual meetings and banquets of the various osteopathic fraternities and sororities. These fraternal meetings are of outstanding interest and value and serve to keep alive the friendships established among physicians in their college days.

The Convention will be held in the Atlantic City Auditorium, offering every facility required by a large convention of this type and scope. Many fine entertainment features have been prepared for wives and families of visiting physicians, including the President's Reception and Ball on Monday evening, sight-seeing trips, bridge parties, luncheons, and the banquet on Thursday evening of Convention Week.

A most interesting and instructive scientific exhibit has been arrangd. It is indeed an opportunity for a splendid postgraduate course mixed with rest, recreation and amusement. Atlantic City with its beautiful beach and celebrated boardwalk has much to offer in the way of entertainment for the visitor. The hotel accommodations are generous and convenient.

A careful study of the program in its entirety indicates that this 45th Convention of the American Osteopathic Association will set a new standard of excellence and reflects much credit upon all the various officers and committeemen and committeewomen who have made it possible.

On to Atlantic City.

A Message to Young Physicians

In going over some of my father's (Dr. R. Rogers) effects the other day I found an address made by Dr. N. S. Davis. The address was to inaugurate the first session of The Northwestern University School of Medicine—October 9, 1859.

I feel that there is a message in that old manuscript for you—Students of Osteopathy. May I quote—

"In choosing the profession of medicine as your calling, you have individually assumed a high responsibility. In your future lives you will be in continuous conflict with disease and death."

"Day by day you are to deal with the most confidential, the most important, and the most sacred interests of man. Let me entreat each one of you, then in the prosecution of your professional career, not only to culti-

(Continued on Page Three)

Health Education Booths At County Fairs

It has been suggested that an excellent way to get merited publicity for local D. O.'s and for the profession of Osteopathy, is for us to supply health information at County Fairs. There is unquestionably a wide-open field for such a public service.

People attending County Fairs are naturally inquisitive and open-minded and eager to learn of new things. They can be readily approached with information on Osteopathy as an effective therapy and a desirable vocation.

Ordinarily County Fairs do not have proper facilities for caring for emergency cases (Boy Scouts often attempt to do the work), so we should have litle difficulty in securing space for a booth in return for our responding to emergency needs. 250 square feet

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LOW BACK PAIN

Rupture and Protrusion of the Intervertebral Disk and Lesions Of the Lumbosacral and Sacroliiac Articulations

(Continued)

While low back pain due to rupture or protrusion of the intervertebral disk has been known for many years it is only in the last few years that it has reached the place of common discussion among orthopedic surgeons.

In some of these cases the nucleus pulposus protrudes into the vertebral body after breaking thru the upper or lower vertebral plate. This causes marked localized pain restricted to the area of the spinous process of the vertebra involved, with rigidity of muscles and stiffness of the lower back. In other cases the intervertebral disk protrudes into the spinal canal or the annulus fibrosus ruptures with protrusion of the nucleus pulposus straight back pressing against the nerve root, or in the angle between the dural sac and the root sheath. The nerve lies just anterior and in close proximity to the articular facet arising from the vertebra below. This is invariably the position of the root as it crosses the intervertebral disk. Any protrusion or backward bulging of the disk margin tends to squeeze the root backward against the facet or against the ligamentum flavum.

According to the orthopedic and neurosurgeons the outstanding subjective symptom is pain; not mild sciatic pain, but severe, intracable, disabling pain, accentuated by coughing and sneezing, and which may be characterized by long remissions. In the typical case the pain runs down the back of the thigh and outer side of the leg. The pain in the lower back may precede the leg pain, and a definite history of injury is given in about half the cases. The most common physical signs are a positive Lasegue sign; sciatic tenderness, paresthesia, and diminution or absence of one or both Achilles tendon reflex. If the ruptured fragment is large there may be evidence of compression of all the elements of the cauda quina with paralysis of the sphincters and other symptoms of such a condition. These symptoms are due perhaps to a circumscribed meningitis which has been provoked by the mechanical irritation of a protruding intervertebral disk. The total protein of the spinal fluid is usually increased but not always

(Continued on Page Two)

N. O. I. C.

If everything is not in the bag for the Atlantic City meeting then it is too late now. The program looks like it would be sufficient reason for attending. Probably the only complaint we will hear will be the usual one of too much going on at the same time. The other features that go to make up a convention are all there for you in the way of new sights and a full program of excellent entertainment. The luncheon at the Dennis Hotel at noon on Monday, June 23rd is very important to all members of the Council. Hurry from the Convention Hall to it and help plan another year that will accomplish more than the past one.

Your fraternity banquets are all scheduled and your complete information will be given you at the registration desk. The committees at Atlantic City have put together a fine program of every convention attraction and you must be there to enjoy it.

—J. Paul Leonard, Pres.
—H. V. Halladay, Exc.-Secy.

Low Back Pain

(Continued From Page One)

and in some cases it is decreased. The use of intra-spinal injection of lipiodol or air has been used to detect the tumor as it protrudes into the spinal canal.

Lumbasacral and sacroiliac lesions are the most common cause of low back pain and are due most frequently to trauma, which includes postural strain discussed in a previous article.

The history of the case is one of lifting, bending over picking something off the floor, or twisting suddenly in most any direction. The history is similar to that given in rupture of the intervertebral disk.

There is severe pain most frequently localized to a certain area of the back but may be genralized across the back with the point of severest pain shifting from one side to the other, and relieved in most cases by recumbency, particularly so, if motion seems to aggravate the pain. Not infrequently the pain is referred to the leg, more often in sacroiliac than in lumbasacral lesions.

Most of you are familiar with the points of tenderness in these cases but a brief discussion of them may be of help to some of you. In the case of a flexion or extension lesion of the fifth lumbar the tenderness is most acute over the interspinous ligament and tissues between the sacrum and fifth lumbar. However, in the latero-flexion-rotation lesion the pain is as a rule most severe over the iliolumbar ligament on the side toward the concavity of the lesion although there are times when apparently it is on the side of the convexity; this may be due to a lesion of the sacroiliac on that side. When the sacroiliac articulation is in lesion the pain is localized mesial to, below, or rarely lateral to, the posterior superior spine. In some cases the pain is localized in the ilio-lumbo-sacral area, which probably indicates an associated lesion of the fifth lumbar. In other cases there is pain in the sciatic notch and over the sciatic nerve as it is palpated between the greater trochanter and the tuberosity of the ischium. In the more acute sacroiliac involvements there is a point of tenderness in the abdomen midway between the umbilicus and the antero-superior iliac spine on the side in lesion.

Muscle contraction is often marked in these lesions frequently equal on the two sides in lumbosacral lesions but in sacroiliac lesions most often asymmetrical with a resulting curvature of the spinal column with a short extremity on the side of the lesion. The hamstring muscles on the affected side may be contracted making it impossible to flex the hip on the pelvis while the leg is extended. Due to muscular rigidity there is limitation of motion in all directions with rotation more limited in sacroiliac than in lumbosacral lesions. It is well to test for motion with the patient sitting, and standing, as well as in the recumbent position.

The posture of the patient is of some diagnostic value. Lateral deviation is rarely seen in lumbosacral lesions unless there is a lesion of the sacroiliac at the same time. In acute sacroiliac irritation the spine lists as a rule away from the side of the lesion but in chronic cases the spine may be deviated toward the side involved. This is sometimes spoken of as sciatic scoliosis.

The diagnosis is made by the history, physical signs, and in some cases by special tests of passive mobility, described by Lasegue, Goldthwait, Gaenslen, and others. X-ray examination is not often of much value in lumbosacral and sacroiliac lesions. However, it is of marked value in helping to eliminate fractures, chronic arthritis, congenital abnormalities, rupture of the intervertebral disk with decsease in the intervertebral space, tuberculosis, and malignancy which along with traumatic neurosis, fibrositis, and referred pain from abdominal and pelvic viscera must be considered in making a differential diagnosis.

For the average case osteopathic treatment is the treatment. The patient should be seen every day for three days and then every other day until the patient is relieved of his symptoms which as a rule is no longer than two or three weeks. In the more severe cases it may be necessary to put the patient to bed on a hard mattress, with heat and light manipulation to the lower back and when the patient is permitted to be up and around it is advisable to have him wear a sacroiliac support for a few weeks particularly so if he does any heavy work. Rarely there is a case that may do better with a plaster cast applied to the lower back. This has been suggested for those cases with rupture of the intervertebral disk. Cases of low back pain if unsuccessfully treated by osteopathic manipulation may have been cases of protrusion and slight rupture of the intervertebral disk, because in latero-flexion-rotation lesions this protrusion of the intervertebral disk is a part of the lesion pathology. When the nucleus pulposus ruptures into the body of the vertebra as shown by the X-ray a plaster cast is indicated and should be worn for a period of eight to twelve weeks followed by some good back support for a similar period of time.

Operative treatment is done in a very small percent of the cases. This includes injections, myotomy, fasciotomy, removal of abnormal bone formations, and joint stabilization or arthrodesis.

This concludes the discussion on low back pain and while these articles have been quite brief it is the hope of the writer that they may be of some help to you in your every day osteopathic practice.

—DR. L. L. FACTO

Philosophy

The following lines have a ring of true homely philosophy. In this day of turmoil and strife and many perplexing problems it is well, occasionally to remind ourselves that these, too, will pass.

A hundred years ago and more
Men wrung their hands and walked the floor
And worried over this or that
As if their woes would squash them flat.

Where are those worried beings now
The bearded goat and festive cow
Eat grass above their moulded bones
And jay birds call in strident tones.

And where the ills they worried o'er?
Forgotten all forever more.
Gone all the sorrow and the woe
That lived a hundred years ago.

The grief that makes you scream today
Like other griefs will pass away,
And when you've cashed your little string
And jay birds o'er your bosom sing,

The stranger pausing there to view
The marble works that cover you
Will ponder on the uselessness
Of human worry and distress.

So let this worry business slide.
Live while you live and when you've died
Folks will say, standing round your bier,
"He made a **hit** while he was here."

—Walt Mason

DESERT-ATIONS

With so much to be done to wind up the year before the convention it has been a busy month for the several planned trips could not be postponed either. A check shows that over 200 pieces of mail left the old desk this past month but the trips are worth a mention.

Juarez

A shopping trip to the little city across the border netted some hand woven Mexican shoes and a few trinkets. The market was interesting as usual with its display of meats especially so I bought some garbanza instead. They look like a nasturtium seed but taste much like butter beans.

Hal Cox Ranch

A call from a friend about a place to rest inspired a trip to one of the so-called Dude Ranches and the afternoon was spent in watching several activities taking place on the 50,000 acres. The branding corral took most of my time but a short trip to the foothills and up a mountain trail was the most thrilling. Will make another trip there this coming week to survey the cacti.

"Billy the Kid"

World Premier opened in Las Cruces for Billy was a very intimate part of the early history of this immediate section. It is a fine picture but not exactly true to history. The great thrill was to see the fine acting of Bob Taylor (Spangler Arlington Brugh) whose father graduated in my class in Osteopathy. Billy the Kid never heard of Monument Valley but it photographed so well in colors that the producers had to bring it into the picture and the scenes taken there are real works of art.

The Hueco Mountains

Tomorrow will be on my way to the Huecos. Met a mining engineer in the Post Office the other day and he is certain that 100 different kinds of cacti grow on the Huecos. Must see for myself so am off with lunch, 4 cokes and all of the equipment necessary to stalk the elusive Epithelantha Micromeris. I'll be on a tall peak watching your antics at Atlantic City. Have a good time and drop me a card telling me, "Wish you were here."

—H. V. H.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....R. O. Drews

Osteopathy Without Limitation

Osteopathic Therapeutics

OBSTETRICS
Prenatal Care

(Number 29 in Series)

This is a third brief article on Prenatal Care and it is the plan to discuss at this time some procedures in which the active intelligent and continued cooperation of the patient is a prime necessity. It is of commanding interest to prospective mothers to find that there are things which they can do for themselves, under the guidance and direction of their attending physician.

It is highly desirable that the exercises herein indicated should be incorporated as part of the patient's regime early in pregnancy. They are suggested as the result of much practical experience in their use over a period of years, and have added value when associated with the osteopathic treatment and care outlined in the two immediately preceding articles (Log Book April and May, 1941).

We will not attempt in this brief article to discuss all the factors which tend to promote and maintain passive pelvic congestion. It becomes increasingly important, during pregnancy, that the pelvic circulation be maintained in normal tonicity and that venous and lymphatic drainage be kept at a high level of efficiency. The comfort of the patient and the function of pelvic organs and tissues are profoundly affected by varying degrees of passive pelvic congestion. It is easy to reason, then, that any method by which pelvic passive congestion can be eliminated is a matter of primary importance.

I early observed in my obstetrical practice a number of years ago that professional singers tended to have excellent health through their pregnancy and to have relatively short and easy labor. In a consideration of the reasons for these associated facts, I remember that one of the first things a professional singer learns to do is to breath properly; that they practice abdominal and diaphragmatic breathing as a necessary and important part of breath control for their vocalizations. It is well recognized that deep abdominal breathing with free diaphragmatic excursion is a most potent and powerful mechanism in aiding the return of the venous blood and lymphatic fluid to the heart. I encouraged a goodly number of my pregnancy cases to start a series of such deep breathing exercises, beginning gradually and working up to a very definite and liberal scheduled daily program. The result was little short of startling. Pelvic weight and distress was reduced to a minimum.

Another factor was considered and added to this program of breathing exercises. The average woman comes to her time of labor with inadequate muscular development in the abdominal walls. There is need for good muscular tone and adequate muscular development. So, along with these deep breathing exercises we instituted a series of exercises calculated to develop body wall muscles, particularly the abdominal muscles . It will not be necessary in this discussion to point out the great value of such muscular preparation. It was almost the universal rule as the result of these exercises that patients, even late in pregnancy, were enjoying abounding good health and able to indulge in their usual activities with entire freedom.

It was my plan to discuss these exercises in great detail with the patients, showing them just how to do them and explaining the reasons for doing them. It was my experience that universally patients were not only interested but very cooperative. Obviously, we had the advantage of working to a definite goal, and that only a few months distant.

Briefly, the breathing exercises were as follows:

With the patients lying flat on their back on the floor, they were to inhale as deeply as possible, bringing in the arms directly up over above the head on inhalation and bringing them back to the side on exhalation. Next, they were to carry the arms out sideways, bringing them up above the head on inhalation and back to the side on exhalation. Third, they were to push the abdominal wall out as far as possible on inhalation and contact it as far as possible on exhalation; each of these breathing exercises to be done five times at the beginning and gradually worked up during the first month of exercising to thirty or forty times for each one.

These breathing exercises could be interspersed with the muscular exercises without any strain. Have the patients lying on the floor on their back, lifting one leg from the floor and then the alternate one, with the knees extended; each five times. Then, lift both legs from the floor with the knees extended, bringing the feet in each case up as nearly vertical as possible. These were to be increased up to twenty-five times within the first month or six weeks of the exercises. Riding a bicycle in the air while lying in this same positon (on the back), starting in with a few seconds and gradually increasing it, was incorporated. Gentle bending and twisting exercises with the patients standing erect and the feet separated about 15 or 18 inches with the arms oustretched and turning the head and shoulders first to one side and then the other were valuable additions. These patients were instructed to do their exercises every day and were particularly warned to start in very gradually so as not to make themselves muscularly lame and thus discourage them.

It is recognized there may be cases in which such exercises are contraindicated. For this reason it should always be directed and guided by the attending physician. It proved, however, to be such a valuable adjunctive measure as a part of prenatal care that I could not forego the opportunity of placing it before our readers in this discussion. The ingenuity of the patient and of the physician might readily devise other exercises which could be incorporated with advantage.

I suggested to these patients that they do their exercises at some definite time in the day, and if not inconvenient perhaps the best time of day is the first thing in the morning, dressed in a suit of pajamas without any constricting clothing. At bedtime each day they are to take the knee-elbow position for five minutes and take a few deep abdominal breaths while in that position. This is to be done just before getting into bed.

It is to be remembered that vasomotor control of pelvic circulation comes from the spine from the tenth dorsal to the second lumbar. Consequently, all lesions in the lower dorsal, dorso—lumbar junction and upper lumbar area must be carefully corrected and maintained in normalization. As a matter of routine treatment and care other osteopathic lesions occurring in the pelvis and the spine generally receive consideration as discussed in the immediately preceding articles.

As a result of trying out these measures in my own private practice over a period of many years, I became convinced of the worth of this plan and recommend it heartily to the consideration of all osteopathic physicians and their patients.

—A. D. B., D. O.

Message to Physicians

(Continued From Page One)

vate the highest degree of familiarity with every branch of medical science and art, but also a mental discipline, which will enable you to use the facts and materials with which you become familiar, with the highest degree of promptitude and skill. You will require a moral integrity that no temptation can swerve."

"If you do these things faithfully, when you go out from these halls, your lives and acts will constitute the most efficient support for your Alma Mater, and the world will be better and happier for your living in it."

It is a privilege and a responsibilty to be a Physcian—an Osteopathic Physician.

—John E. Rogers, D. O.

Postgraduate Class a Success

The annual class in Postgraduate Review and Clinic which was held May 26-31, inclusive, was in many ways one of the best to date, according to the enthusiastic opinions of many of those who had been attending them regularly. There were 82 osteopathic physicians and surgeons registered from eleven different states and from as far away as West Virginia, Ohio, Michigan, Texas, South Dakota and Minnesota.

The course was intensely practical and dealt with modern methods in diagnosis and treatment. Osteopathic principles and osteopathic technic received a major emphasis. The regular attendance of the visiting physicians at all the sessions of the class was notable. A number of the visiting physicians took advantage of the opportunity to brush up on their technic in laboratory diagnosis.

The dinner held on Thursday evening of the Review Week at Wayside Inn was one of merriment and good fellowship. A pleasant and profitable evening was spent with all the fried chicken one could eat, and the associated fixings to make a banquet royal.

The class presented the college with a fine gift in money as an evidence of their apprciation. The officers of the college and the faculty were more than pleased at the many evidences of appreciation on the part of those attending. It was, without doubt, an unmixed success and it is planned to continue the work again next year.

The Resolutions by the class are herewith presented:

"Whereas, we have been duly appointed by the Postgraduate Class of DES MOINES STILL COLLEGE OF OSTEOPATHY, May 26, 1941 to May 31, 1941, to draft resolutions for the class, the committee submits the following.

1. "Be It Resolved: That we express our appreciation to Dr. A. D. Becker and Dr J. P. Schwartz, respectively President and Dean of Des Moines Still College of Osteopathy, to the faculty and to all who have helped make our week's study a profitable and pleasant experience.

"And Whereas, the members of this class have been the recipients of the generous giving of time, knowledge and interest on the part of the faculty of the postgraduate school.

2. "Therefore Be It Resolved: That we extend to this group of able instructors our sincere and wholehearted thanks.

"And Whereas, we practicing physicians deem it a valuable privilege to participate in this course of study.

3. "Therefore Be It Resolved: That we heartily endorse the continuance of this annual school of postgraduate review.

"And Whereas, we appreciate the high standard of instruction

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Pursuit For a Reason

(Continued from Page One)

Chain Ganglion as before, and pass on to Visceral tissues as the sensory portion of the reflex arc that governs the function, state of nutrition, etc., of all tissues.

The Dorsal Root Ganglion contains in addition to these sensory bipolar cells certain other cells. These are the large multipolar cells of Dogiel or Golgi type 11 cell. These multipolar cells enter into synaptic relationship with the sensory cells. The function is presumed to be trophic, governing the state of nutrition of the cells whose processes carry all sensory impulses. This is an important task. It has been suggested by physiologists in the last few years that the Golgi II cell has other functions; that of correlation, and association of the impulses passing thru the sensory cells. Further research may reveal these cells in the Dorsal Root Ganglion have a much greater importance than has hitherto been supposed.

Contrary to custom, I am including the Dorsal Root Ganglion in the discussion of the Sympathetic Nervous System for several reasons.

First, the Dorsal Root Ganglion is derived from the same tissue that gives origin to the Lateral Chain Ganglia and the Chromaffin cells. Secondly, the Dorsal Root Ganglion contains cells whose peripheral processes pass to visceral as well as somatic tissue and condition reflex function by way of the sympathetics. Any condition influencing the state of nutrition of the Dorsal Root Ganglion must affect visceral reflexes as profoundly as somatic, by way of the sympathetics. Thirdly, the possible correlation of impulses in the Dorsal Root Ganglion to produce a segmental hyperirritability that influences both visceral and somatic activity. For these three reasons I believe the Dorsal Root Ganglion should be included in any discussion relative to the Sympathetic Nervous System.

The antero-medial portion of the Neural Crest migrates or is pulled by the anterior and lateral development of the body further in the same direction and is found situated on the antero-lateral surface of the bodies of the vertebra. Here—symmetrically situated —this group of neural crest cells is called the Lateral Chain Ganglia of the Sympathetic Nervous System; the ganglionated cord.

The lateral chain ganglionic cord is a train of cells derived from the Neural Crest that is distributed bilaterally from the Ganglion Impar at the tip of the Coccyx upward or cephalward. The chain is continuous to the Superior Cervical Ganglion. There are discontinuous bits of sympathetic tissue distributed on up thru the brain to the Ganglion Ribes, a few cells at the Anterior Communicating Artery. Some authors contend that this was a complete chain from the Ganglion Impar to the Ganglion Ribes on either side of the vertebral column before the rapid growth of the human soma and cerebral hemisphere produced what slight disturbance it has to the original segmentation or metamerization.

The primordia of the Lateral Chain Ganglionic cells is doubtlessly from the Neural Crest. Some authors believe they are derived from the Anterior Horn of the Medulla Spinalis, and it is true that anterior horn cells are found present in the anterior root of the spinal nerve. These become constantly fewer in number the farther along the nerve one's sections are taken. They do not become more frequent at and beyond the intervertebral foramen as we feel that they should were they in reality the stragglers along the pathway of this ganglionic migration. They were probably pulled out of their horn location by the rapid growth of the tissues external to the spinal cord.

The lateral chain ganglia contain the cells of origin of the true Sympathetic post-ganglionic fibres. Some of these fibres are interganglionic, passing from the lateral chain to a pre-vertebral ganglion. Some are grey rami and pass to and with the corresponding spinal nerve. Each spinal nerve carries a grey ramus. The remaining fibers pass to viscera, usually by way of the blood vessels. All Post-ganglionic sympathetic efferent fibers are devoid of a thick myelin sheath.

The cells in the Lateral Chain Ganglion are connected by synapsing fibers that arise in the lateral horn of the grey matter of the spinal cord from the 7th cervical to the 3rd or 4th lumbar segments These fibers pass out of the cord with the 2nd thoracic to the 2nd lumbar spinal nerves inclusive. They are myelinated, are white, and external to the intervertebral foramina they leave the anterior division of the spinal nerves over which they have passed and create a pathway that is white too, therefore, and connect with the cells in the Lateral Chain Ganglion. Consequently, these fibers are called, "Connector Neurons." "White Rami," "White Rami Communicantes," and the pathway from the spinal nerve to the Lateral Chain Ganglion is called the "White Ramus Pathway."

Each White Ramus or Connector Neuron arising from a single cell in the Lateral Horn of the cord contacts by synapse from 8 to 32 cells in the Lateral Chain Ganglion. The possibility, therefore ,of an abnormal stream of impulses along a single white ramus producing radiation effect or a multiplicity of reflex arc disturbances is numerically expressed. It is important to remember that each afferent fiber connects in the Central Nervous System with a number of cells also, further magnifying the potentiality of reflex arc expression.

The Lateral Chain Ganglia are disarranged slightly from the original segmental plan of a pair of ganglia for each metamere. This is not true for the amount of ganglionic tissue nor for the grey rami to each spinal nerve. In certain areas the single ganglia are collected together to form under a common investment a single large ganglion. In the cervical area we find three of these, usually, on each side, the Superior, Middle and Inferior Cervical Ganglia. In the thoracic area the upper three or four make up the Stellate ganglia. Throughout the rest of the spinal area the purely metameric segmental distribution is more constantly preserved, there being a pair for each remaining thoracic segment, 4 or 5 pairs in the lumbar, 4 or 5 for the sacrial, and 1 to 4 in the coccygeal, depending in the number of coccygeal spinal nerves.

The antero-lateral growth pulled the crestal tissue to the antero-lateral surface of the vertebral bodies. The pathway of the Lateral Chain ganglia pulled the White Rami along, creating the white ramus pathway, and pulled also some afferent fibers from the dorsal or afferent trunk. These pass through the Lateral Chain Ganglion but do not terminate there.

In the Thoracic area the Lateral Chain Ganglia lie in relation to the articulation of the head of the ribs to the vertebral bodies. The ganglia lie in these paravertebral tisues and the grey postganglionic fibers, unprotected by a myelin sheath, pass through those tissues also, to terminate there and elsewhere in the somatic and visceral areas.

This anatomical fact dictates that the state of nutrition, venous and lymphatic return muscle tonus. fascial tension, joint motion, etc., must all be normal or normalized for normal synaptic levels to be maintained in the Lateral Chain Ganglion.

—B. E. Laycock, D. O.

MOVES OFFICES

Dr. Alan R. Becker has moved from Winchester, Kentucky to Jackson, Michigan where he has taken over the offices and practice of Dr. H. O. Peterson, 601 First St.

Marriages

The marriage of Dr. Ralph Everett Davis of Milwaukee, Wis., to Miss Helen Rebecca McDowell occurred on Saturday, the 7th of June, at 8 p. m. in the Second Presbyterian Church at Kansas City, Missouri. They will be at home at 1139 East Knapp at Prospect, Milwaukee, Wisconsin after June 25.

Our warm congratulations!

Births

Born to Dr. and Mrs. George C. Boston of Davenport, Iowa a son, James Richard, on May 17.

Born to Dr. and Mrs. Donald Leigh twin daughters, Karen Townsend and Sharon Klexney on May 19.

Born to Dr. and Mrs. Raymond Kale at the Des Moines General Hospital, a baby girl on Monday, June 2.

Born to Dr. and Mrs. Cliff Millard of Summit, South Dakota a baby girl, Harriet Jeannine, on June 1.

Health Ed. Booths

(Continued From Page One)

should give us ample space for a reception room, treating room and small storage and cloak room. The attending physician would be prepared to give child health counsel as well as to take care of such emergency work as might arise. In front of the booth should be a desk where a member of the Women's Auxiliary could distribute Osteopathic literature including vocational guidance booklets. On the walls of the reception room informative X-Ray films could be displayed, pictures of Osteopathic Colleges and Hospitals, not to mention charts on public health subjects that can be secured from the Federal Government. In short, such an emergency station could be made not oniy a health education center, but a potent "carrier" for Osteopathic educational publicity and student recruiting.

Such booths at County Fairs would give us publicity of the sort that would back up our legislative campaigns and bring to the local D. O.'s valuable contact with the public. The booth would require the services of only one Doctor and one assistant at a time for both the child health counsel and the emergency work. At the forthcoming Cuyahoga County Fair the Cleveland Society plans to have just such an exhibit.

Your Clinic Chairman will gladly furnish you details as to how to set up a booth with suitable displays. Here's an opportunity to do something worth while. Let's be doing it.

—R. H. Singleton, D. O.

Postgraduate Class

(Continued From Page Three)

which we have received, and the outstanding osteopathic atmosphere which has pervaded the classrooms.

4. "Therefore Be It Resolved: That we devote ourselves to the recruiting of new student for Des Moines Still College of Osteopathy.

5. "Be It Further Resolved: That a copy of these resolutions be sent for publication to the Log Book, and to the Journal of the American Osteopathic Association, and that a copy be filed in the college office."

(Signed) Fred A. Martin
Rachel Woods
J. Bowman-Buck

Receives Award

Dr. Jess Varner of Ocala, Fla., a member of the May, 1941 graduating class, received the Psi Sigma Alpha Award for high standing through his four years in the osteopathic professional course. The runners-up for this mark of distinction were Dr. Charles Stull and Dr. Robert Berger.

This mark of distinction is a worthy one and is made for each graduating class as the result of the generosity of Psi Sigma Alpha National Scholastic Honorary Fraternity.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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Volume 19 JULY 15, 1941 NUMBER 7

Women — A Career In Osteopathy

For women, no other profession offers the outstanding opportunities for service that are found in Osteopathy. In the first place, the Osteopathic profession is not crowded. The public demand for women physicians is steadily increasing. Unlike many other professional groups, women are welcomed to the ranks of Osteopathy and are given equal recognition in official positions in national, state, and local organizations. A woman now holds the Vice-Presidency of the Iowa Society of Osteopathic Physicians and Surgeons.

The Osteopathic Colleges offer special training in the fields of Obstetrics, Gynecology, and Pediatrics for women students who are interested in specialization. Very valuable contributions are made by women to the Child Health Clinics over the country.

The Osteopathic Women's National Association, (the national organization of Osteopathic women physicians), is affiliated with the National Federation of Women's Clubs of America, and is a very integral part of the American Osteopathic Association.

Des Moines Still College of Osteopathy takes pride in maintaining a splendid group of young women students who are doing excellent work in all departments of the College, and are an active force in the spirit of the institution.

In this present National Emergency, when many men are being called into active service of our country, there arises an immediate need for others to replace them professionally. This is a responsibility to the health of our Nation, which can be accepted by women who are interested in a career.

College entrance requirements will be found elsewhere in this issue of the Log Book. Enroll for the September class.

—Iowa O. W. N. A.

Back From Atlantic City

The Forty-fifth Annual Convention of the American Osteopathic Association has become history. Those of you who attended this splendid affair are still talking about the genial hospitality we enjoyed, can still feel the cool salt breezes against your face as you promenaded the Boardwalk, and saw the breakers roaring in to shore from the blue Atlantic. The program was excellent and the Program Chairman, Dr. Walter W. Hopps of Los Angeles, California, is to be warmly congratulated for his untiring effort and efficiency. The attendance was most satisfactory although not as large as when conventions are held in more central locations. The exhibits, both commercial and scientific, were of unusual interest and well repaid time and effort in visiting them.

Many matters of weight and importance consumed the time of those two hard-working groups, the Board of Trustees and the House of Delegates. Dr. Phil R. Russell of Fort Worth, Texas, was installed as president. We extend to him our heartiest congratulations and pledge to him our loyalty and support in his strenuous year just ahead. His wide experience in osteopathic organized activities should prove to be a valuable asset in meeting the many problems which always confront the highest executive of any large and active association. Dr. R. McFarlane Tilley of Brooklyn, New York was elected as president-elect and will bring to his work extended experience as an official and a fine understanding of its importance and the various relative values.

Those who attended the convention from Des Moines Still College were: Dr. Arthur D. Becker, president, and Mrs. Becker; Mrs. K. M. Robinson, secretary; Dr. O. Edwin Owen, assistant dean; Dr. Robert Bachman, head of the Obstetrical Department, and Mrs. Bachman; Dr. Lonnie L. Facto, clinic staff, Mrs. Facto and sons, Louis and Lonnie; Dr. Mary E. Golden, head of the Department of Pediatrics; and Thomas Deegan, Jack Lilly and O. O. Wentling, students.

The osteopathic profession of

(Continued on Page Two)

ENTER D. M. S. C. O. NOW!

Now is the time for students who plan to enter Des Moines Still College of Osteopathy in the fall class to make final plans for matriculation.

It is necessary that we have an official transcript of your credits sent directly from the Registrar of the college or university where the work was taken. The transcript must show 60 semester hours of work (or its equivalent).

For the September 1941 Class there is NO subject designation within the 60 semester hours. Beginning with the September 1942 Class, the 60 semester hours must include the following designated subjects:

12 semester hours of **Chemistry**
8 semester hours of **Biology**
8 semester hours of **Physics**
6 semester hours of **English**

If any of you men or women who are planning to enter have any question in regard to your individual credits, we will be glad to assist you with your problem.

We have a new Catalog just off the press which we will be happy to send to all who are interested.

Des Moines Still College of Osteopathy
722 Sixth Ave. — Des Moines, Iowa

Registration September 8th, 1941
Classes Begin September 9th

President Honored At Atlantic City Convention

Dr. Arthur D. Becker, President of Des Moines Still College of Osteopathy, was highly honored by the Board of Trustees of the American Osteopathic Association at the Forty-fifth Annual Convention of that society held at Atlantic City during the week of June 23rd. He was presented by Secretary Russell C. McCaughan with a Distinguished Service Certificate which stated that it was in recognition for meritorious work in "Osteopathic Education and College Administration, Osteopathic Organization and Literary Activities."

Dr. Becker has been president of Des Moines Still College of Osteopathy for the past six years. He is past president of the American Osteopathic Association (1931-1932) and for fifteen years was a trustee of that organization. For many years he has written numerous articles on osteopathic subjects. His personal acquaintance with Dr. A. T. Still, the discoverer of osteopathy, made it particularly fitting that he should be selected to give the "Still Memorial Address" at the Atlantic City Convention.

Summer Activities At the College

Be it known to you students who are home at vacation that activities are still going on here at the college during the summer. In fact, you would hardly know that regular classes are not in session. The General, Gynecological, Proctological and Pediatrical Clinics are going full force. The Obstetrical Clinic is going at more than its average pace since many of you students left for home. In fact, those who have stayed to get in extra clinical work during the summer are indeed getting more experience than they bargained for. These students are spending all day working in the general clinic and most of the nights on obstetrical cases. Although they are getting a big kick out of it, I am sure they will be glad to have a few of you vacationers back on the job the first of September. We have had some very interesting cases in the clinic this summer, some of which we hope to report to the entire student body when school opens in September.

The office force is busy with many and varied activities.

N. O. I. C.

The National Osteopathic Interfraternity Council held its annual meeting on the Roof Garden of the Hotel Dennis in Atlantic City with official representatives present from each of the eleven osteopathic sororities and fraternities. Dr. J. Paul Leonard, President, presided at the meeting.

Several items of business were discussed, the most important of which being the problem of what the N. O. I. C. could do in the way of student selection. It was the opinion of the group that the Grand Councils of each of the member fraternities and sororities should do everything within their power to promote student selection for the respective osteopathic colleges in which chapters of their organizations are located.

Dr. Mary Lou Logan will be president of the N. O. I. C. for the ensuing year. Dr. H. V. Halladay was re elected executive secretary of the group. He is to be commended upon his very fine work, not only in laying the foundation for the N. O. I. C. but being responsible for its perpetuation. It is the earnest desire of the group that he continue in this important position.

There are many important things to come before this group during the coming year. Under the capable guidance of Dr. Logan we may look for a year filled with activity.

DESERT-ATIONS

Without a word of warning Dr. Virg Halladay breezed into Des Moines on the morning of July 1. There may be cacti in the Southwest, but Virg had to be back in Des Moines for the Fourth of July, so he tells us. His swarthy complexion is a testimony to the invigorating climate of the Southwest. He spent several hours with us here at the College, met with the alumni group on Tuesday evening, visited with old friends and by the time this goes to press will be on his way to Louisiana where he plans to spend a few days with his son, Morrie, at Camp Claiborne. Virg promised Desert ations for this issue of the Log Book, but on account of this special trip we will have them for the next issue where they will be written from Old Mexico. He plans to spend some time beyond the border during the next few months doing special research in the taxonomy of cacti.

Marriages

Dorothy Jeanne Streitwieser, daughter of Mr. and Mrs. H. E. Streitwieser, to Dr. Walter A. G. Armbrust on November 16, 1940 at Hooper, Nebraska.

Forestine Marie Schaeffer, daughter of Dr. and Mrs. Forest Eugene Schaeffer, to Mr. Wendell Roberts Jenkin on June 19, 1941 at Detroit.

Back From Atlantic City

(Continued From Page One)

Iowa are proud of the fact that Dr. Ferris A. Gordon this year presided as President of the American Osteopathic Association. He and Mrs. Gordon were naturally in the limelight of convention activities. Dr. Gordon is to be commended upon his outstanding services to the osteopathic profession in serving as its president this past year. At the banquet given in his honor on Thursday evening, June 26, he was presented with a lovely token from the profession at large in appreciation of his meritorious activities.

Other physicians from Iowa included Dr. Holcomb Jordan who is for the second year President of the Iowa Society, and his wife, Dr. Lydia Jordan. Dr. Holcomb Jordan was First Delegate from this state to the House of Delegates of the National Convention. Dr. Mary E. Golden and Dr. S. H. Klein were the other two delegates holding seats in the House. They did a splendid job in representing our profession at the national business sessions.

Mr. Dwight James and his wife also attended the convention. Mr. James is secretary-treasurer of the Iowa Society and also serves as their very efficient attorney. In Atlantic City he met with the lay secretary treasurers and attorneys of other state societies and also spent considerable time in Washington, D. C. on affairs for the profession.

Dr. Phil McQuirk of Audubon, Dr. D. E. Hannan of Perry, Dr. J. K. Johnson, Jr., of Jefferson and Dr. Ellen Phenicie of Des Moines are among other physicians of the state who attended the Atlantic City meetings.

Prior to the convention proper, Drs. Becker and Owen attended the meetings of the American Association of Osteopathic Colleges where the current problems and advancements of osteopathic education in the various colleges were discussed and ideas interchanged. One of the most pertinent conditions confronting the osteopathic colleges, and all institutions of higher learning for that matter, is the problem of **student selection** in face of the present national emergency since those young men and women who would logicaly be entering our colleges are taking positions with good remuneration in preparedness industries or are entering the armed forces.

Dr. Arthur D. Becker presented the Memorial Address before the general session of the convention on Thursday morning, June 26, in honor of the founder of osteopathy—Dr. Andrew Taylor Still. Dr. Becker's address was a masterly eulogy, not only to the man who has founded our science but offered a living tribute to those who have perpetuated it, and gave a salute to those of the osteopathic profession who shall carry the torch of progress into future years. Mrs. Arthur D. Becker presided as President of the Auxiliary of the American Osteopathic Association. Mrs. Becker is to be commended upon the splendid work she has done in so capably heading this newly-formed organization.

Dr. Lonnie L. Facto served as Chairman of the Technic Section for the National Convention and was responsible for a very enlightening program which was well attended. Those who presented papers on this section brought out many new ideas and brought about a rebirth of enthusiasm for the use and improvement of osteopathic technic.

Mrs. K. M. Robinson, secretary of the college, presided in the College Booth and had the opportunity of recounting old times with graduates, both of recent years and of several years back. The College Booth provides a meeting place for Des Moines people and is always a high light of the convention.

Dr. O. Edwin Owen presented a paper before the Sacro-iliac Section and took part in several other convention features. Dr. Owen was re elected Secretary-Treasurer of Phi Sigma Gamma and re-elected as Editor of the Psi Sigma Alpha publication.

On Wednesday evening the Des Moines Still College Alumni Association held their annual banquet in the Club Room of the Hotel Traymore where 47 alumni and guests held forth in grand style. Now that we are all home again and can review the splendid time we had at Atlantic City, we are looking forward to another national convention which in 1942 will be held in Los Angeles, and in 1943 at Grand Rapids, Michigan.

Dept. of Physiology

The College annually entertains a large number of visitors whose privilege it is to give the institution an unofficial inspection. Of chief interest, for the moment, are the alumni who return for a visit. Their comments on the laboratories range from approval to amazement. All are interested, and many are enthusiastic about the changes that have taken place; and in a rough way, their enthusiasm is proportional to the number of years since they have left the college. The laboratories and laboratory courses underwent a marked and rapid change when Dr. Owen came to the Des Moines Still College eight years ago. He was well trained in Zoology and made every effort to provide for the students the means whereby they might obtain an adequate training in pre-clinical work. The laboratories were reorganized, and a great deal of equipment was added so that the students of the college might have not only an adequate, but an excellent training in the Basic Sciences.

In this general trend toward superiority in the Basic Science foundations, Physiology profited at least as much as any of the other fields. Nor did the ad-

(Continued on Page Three)

Des Moines Alumni Activities

Another year of alumni activity has just been completed and a new year began at the Atlantic City meeting held during the A. O. A. Convention.

We are grateful to the Log Book for this opportunity to submit a report of the year just ending.

We have had a successful year in many respects. There are 255 paid alumni members who have raised over $3,000 on the Hospital project.

The correspondence has been so heavy that it was an impossibility to answer all of it, but almost without exception we have received encouraging letters endorsing alumni activities.

At the Atlantic City Convention the same officers were re-elected to serve another year. They are: Frank Jones, Macon, Georgia, President; H. V. Halladay, Las Cruces, New Mexico, Vice President; P. L. Park, Des Moines, Iowa, Secretary-Treasurer; John Rogers, Oshkosh, Wisconsin, Endowment Counselor, and F. D. Campbell, Des Moines, Student Recruiting Counselor.

We were also directed to continue our main objectives. First, of course, is student selection which can be done by every alumnus and field physician; and which he should be glad to do because we must maintain a constant enrollment in our schools and replace the ranks of our doctors retiring from practice. We need a constant stream of new blood entering our colleges, which, in turn, will enrich the profession as a whole. **Fellow alumnus, select from your community young men and women for the September 1941 Class. Do it now!**

Second, the Hospital site project should be completed by early fall. We have $1500 left to raise; it takes only $10.00 from 150 doctors to complete this project. You who have intended to help, but have delayed, send your check today while it is fresh in your mind.

The ultimate completion of the Hospital depends upon the completion of this alumni activity. We are told on every hand that philanthropic individuals or organizations ask, "What have the alumni done for their own institution?" Therefore, we are going to complete the purchase of the hospital site before any outside funds are solicited.

Questions on alumni activities will be promptly answered if directed to P. L. Park, 500 Teachout Bldg., Des Moines, Iowa.

Respectfully submitted,

—P. L. Park, D. O.

Dr. Joseph Gurka writes us that he is now a Lieutenant in Co. I, 18th Infantry, 1st Division at Fort Devens, Massachusetts.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....Dr. O. Edwin Owen

Osteopathy Without Limitation

Osteopathic Therapeutics

OBSTETRICS
Postpartum Care

(Number 30 in Series)

It is not the purpose in these short, condensed discussions in osteopathic therapeutics associated with the various problems to be considered as a part of pregnancy and labor, to deal with any technic of the period of labor as such. Such technic is described in extended detail in many standard textbooks on the subject.

Before discussing, however, the postpartum treatment and care relative to the peculiarly osteopathic contributions, I would like to mention in this connection a measure of value applicable in the beginning of actual labor. Where the case is proceeding with more than reasonable deliberation, where dilation seems to be retarded and the first period of labor is unduly prolonged, it has been my experience that a very thorough osteopathic treatment freeing up the lower dorsal area, the dorsal lumbar junction and the entire lumbar area and the lumbo sacral junction, with thorough springing of the sacro-iliacs, has usually resulted in a definite and measurable speeding up of the entire mechanism of labor. In addition to the treatment just outlined, in many cases steady pressure over the clitoris for ten to twenty minutes, and steady firm pressure over the second, third and fourth sacral segments have seemed to be particularly effective in favoring dilation of the lower pole of the uterus and of the cervix.

Following labor, unless the labor has been unusually easy and brief, we find that most patients have a number of osteopathic lesions. These lesions are found not only in the pelvic articulations but in the entire spine, including the ribs. These patients have undergone a series of severe muscular efforts and strains with the logical result that many spinal, rib and pelvic articulations have been thrown out of normal articular relations. As such they constitute osteopathic lesions which have the power to effect and maintain disturbed functioning capacities. Here is another place where Osteopathy has made a very real and valuable contribution in the field of Obstetrics. These new mothers should receive daily osteopathic treatment for at least five or seven days following delivery. As was mentioned in the article in the May number of the Log Book, as a part of this treatment the upper ribs in particular should be carefully raised, the intercostal tissues normalized and freed because of the important bearing upon the function of lactation. About thirty days following labor a careful examination should be made to insure that the uterus is in proper position and freely movable. A careful check up at the end of thirty days postpartum should be made to insure the normality of spinal, rib and pelvic articulations. This thorough re-checking should be repeated again 60 and 90 days after delivery. The discovery and correction of osteopathic lesions in this manner is the best insurance that the new mother will be in best possible condition to make the many and varied adjustments in tissues necessary during the first three months postpartum. It is not sufficient merely to have a record of a live mother and a live baby as the result of a confinement. Rather, we must have a well mother five and ten years later as far as the results of any particular period of pregnancy and labor are concerned.

This is the ideal to which Osteopathy has pledged its service. In this discussion it is taken for granted that any repairs indicated have been promptly attended to.

—A. D. B., D. O.

Vacation Plans

Dr. and Mrs. Arthur D. Becker are taking their summer vacation during the month of July in northern Michigan. Dr. E. F. Leininger started on vacation July 1 and will have reports on his activities later.

Mrs. K. M. Robinson plans a trip to Duluth and Canada, visiting friends and relatives. Mrs. Leone Lynch of the office force is planning her vacation for the last of July. She plans to go into Chicago and spend some time in surrounding lake resorts.

Dr. John Woods started on vacation July 1st, Dr. Woods is spending his vacation period working out new floral schemes on the "South Forty." Those of you who have not seen Dr. Woods' new greenhouse in full blossom are missing something. His perennial gardens are banked row on row, resplendent with chromatic aberration.

Miss Mildred Moore of the office force spent a very delightful time in Pennsylvania, stopping off in Chicago on the way home. Dr. Owen is planning a trip to the Canadian Northwest and Pacific Coast during the first of August. Dr. and Mrs. Paul Kimberly are at the present time touring the Southwest, including Oklahoma, Texas, Arizona and New Mexico. Dr. and Mrs. Facto and sons, Louis and Lonnie, took an extended trip following the National Convention through Tennessee and Kentucky.

Dept. of Physiology

(Continued From Page Two)

vances made by the Department of Physiology stop when Dr. Owen relinquished his place in the department to work in the clinical fields. Moreover, with the present cooperative attitude of the administration toward progress in the Basic Sciences, there is little evidence that such progress will stop. The aims of the Department of Physiology are twofold. Firstly, it intends to provide for the student top-notch instruction; and secondly, it intends to make contributions to the growing fund of physiological knowledge, one of the most important building blocks of the osteopathic structure.

None of us would knowingly take his automobile to a repairman who was not thoroughly acquainted with the structure and operation of the machine. Likewise, it would seem to be little short of criminal negligence to recommend a field physician who did not understand the structure and mechanics of the human body. The Department of Physiology, therefore, considers it a moral duty to supply for the student both classical physiology and recent advances as well. This can be done in part through didactic work, but there is actually no substitute for laboratory work. There is more than a little truth in the old adage, "You don't learn by listening; you learn by doing." During the past year there was added to the laboratory equipment expensive apparatus for demonstrating many phenomena of mammalian (including human) physiology, particularly of the cardiovascular, respiratory and endocrine systems. The laboratory curriculum is designed **to allow the student to inform himself** on the physiological behavior of the various organs and organ systems of the body. He is intended to learn as completely as is practical the normal activities of the muscular, circulatory, respiratory, endocrine, excretory, digestive, reproductive and nervous system from his own observations, rather than by word of mouth or textbook, although it is understood that discussions and study supplement the laboratory work.

As soon as a physician is granted his degree, or with reservations, as soon as he starts his clinical work, he is a research specialist in the healing arts. Some may restrict the scope of their practice, but the same would apply to general practitioner or specialist. He is dependent upon his own efforts to diagnose, and treat the illnesses that come his way, and to keep abreast of the times in his various fields of interest. Consequently, the department has taken upon itself the task of familiarizing the student with library reference sources, bibliographic sources and their utilization and the use of current literature. The cooperation of the students has been excellent. May they avail themselves of library facilities as assiduously after, as they did before, their grades were recorded!

During the past year there was added to the laboratory curriculum a set of nutritional or dietetic experiments. The experiments consisted of the observation of the effects of normal and deficient diets with respect to carbohydrates, fats, proteins, minerals and the several vitamins. White rats and guinea pigs were used in the experiments.

The second goal of the Department of Physiology is quite as important as the first, though perhaps more idealistic. It is the thesis of Osteopathy that a normal, healthy body can fight its own biological battles, and it is the province of the osteopathic physician to maintain the body in a normal physiological state or to normalize the portion of the body which may be temporarily causing discord in the physiological harmony. In order to do this, the osteopathic student must avail himself of information which came to him from anatomists, chemists, physiologists, pathologists or other specialists who were in no sense osteopathic physicians or even osteopathically-minded. It would therefore seem to be the duty of the profession of osteopathy to make contributions to this community chest of information from which he has drawn, unhampered, his means of livelihood. (We neither overlook nor disregard the many practical contributions of Osteopathy by way of healing the sick. On the contrary, we are constantly amazed at the acuity of the osteopathic physician in recognizing, or even anticipating, the applicability of physiological findings.) The average physician, medical or osteopathic, is in no position to undertake original investigation (Cf. Wiggers, Publication No. 13, A.A.A.S.). To this end many medical schools provide such training for those who are so inclined. It is our belief that there should also be provided for the Des Moines Still College the necessary equipment of apparatus and finance for those of its graduates who would like to carry on original work. However, we are under no delusion that this is within the realm of possibility for a self-sustaining institution. But it well deserves the support of the alumni, either directly or through financial assistance which they can muster from interested laity.

At present the long-range program of the department includes (1) An investigation of the osteopathic lesion, independently and in conjunction with the departments of Osteopathy and Chemistry, from every point of view subject to analysis; (2) Industrial significance of prophylactic osteopathic treatment; (3) An extensive library search to determine where, and to what extent, Osteopathy has achieved literary priority in the field of medicine; and (4) Endocrines in embryonic development.

—Hugh D. Clark, Ph. D.

I. S. O P. S.

Amendment to By-Laws

The House of Delegates of the Society, at the convention on May 7 and 8, amended the By-laws by repealing the first paragraph of section one (1) of Article III and adopting in lieu thereof the following:

"The annual dues of this Society shall be $25.00 payable in advance to the Treasurer on or before May 1, the beginning of the fiscal year. For each additional member of an immediate family practicing together from the same office he or she may receive, concurrently, full membership privileges in return for an additional payment of $12.50. Dues during the first year following graduation shall be $4.00, during the second year $8.00 and during the third year $12.50."

The amendment was prepared and sponsored by the Board of Trustees of the Society, was endorsed by the legislative subcommittee, and was unanimously adopted by the House of Delegates.

Members of House of Delegates

The following members of the Society were seated and served as delegates in the House at the recent convention:

District I: Dale S. House, George C. Boston and D. H. Grau.

District II: Bernice DeConly and N. D. Weir.

District III: I. S. Lodwick and J. W. Rinabarger.

District IV: B. M. Gotshall, H. D. Meyer and J. R. Forbes.

District V: R. B. Gilmour and B. W. Jones.

District VI: Grace Nazarene, Rachel H. Woods, H. L. Gulden, N. A. Cunningham and E. F. Leininger.

Board of Examiners

The Board of Trustees unanimously voted to recommend D. E. Hannan for reappointment by Governor Wilson as a member of the Iowa Board of Osteopathic Examiners.

A. O. A. Convention—Delegates And Alternates

Delegates selected to serve in the House of Delegates at the coming convention of the A. O. A. at Atlantic City, June 23 27, are: Holcomb Jordan, Mary E. Golden and S. H. Klein. Alternates selected are: O. Edwin Owen, Lydia T. Jordan and H. L. Gulden.

Exhibitors

The following companies exhibited at the convention: The Bovinine Company, Chicago, Ill.; Mellin's Food Co., Boston, Mass.; H. G. Fischer & Co., Chicago, Ill.; The Harrower Laboratory, Inc., Glendale, Calif.; C. B. Fleet Co., Lynchburg, Va.; Anabolic Food Products, Inc., Glendale, Calif.; Therapeutic Oscillator Corp., West Des Moines, Ia.; M. H. Newgard X Ray Co., Des Moines, Ia.; Standard Chemical Co., Des Moines, Ia.; McIntosh Electrical Corp., Chicago, Ill.; The Surgical Supply Co., Omaha, Nebr.: Physicians & Hospitals Supply Co., Minneapolis, Minn.; Ottawa General Hospital & Arthritis Sanatorium, Ottawa, Ill.; Catalyn Iowa Co., Des Moines, Ia. and Ortho Products, Omaha, Nebr.

A Quarter Century of Official Service

R. B. Gilmour was extended a unanimous vote of thanks by the House of Delegates for his record of twenty-five years of continuous official service to the osteopathic profession in Iowa.

Applications for Membership

Thomas C. Mann, Estherville.
Kenneth B. Riggle, Algona.
John H. Fox, Kirksville, Mo.
John Hirschman, Cherokee.
Lester McNichols, Des Moines.
Geo. Christopher Keays, Lenox.
—Dwight S. James, Sec. Treas.

Pursuit for a Reason

The Sympathetic Nervous System and the Chromaffin cells or system are, along with the Dorsal Root Ganglion, derived from the Neural Crest. Consequently, it is reasonable that the sympathetics and the adrenal gland should function synergistically. The adrenal gland may in fact be looked upon as a sympathetic reservoir. If adrenolin is injected into a subject, sympathetic activity is produced. If the Sympathetic nerves to the Adrenals are cut, then adrenalin liberation is inhibited.

Proper synergism between the Sympathetics and the Adrenal gland is essential obviously for sympathetic reaction to the infections, trauma and trials of life. Any factor that will disturb this physiologic reaction may seriously impair or prohibit efficient resistance. Adrenalin produces an increase in blood pressure, pulse rate, increases vasomotor tonicity, causes glycogenolysis in the liver with the resultant hyperglycemia and even glycosuria, increases the coagulability of the blood, and the cutaneous blood volume is diminished, reducing the possibility of blood loss. The Gastro-intestinal tract is inhibited by the diminution of blood volume.

The post ganglionic sympathetic fibers that travel to the visceral tissues and the preganglionic that go to the Adrenal glands pursue interesting courses. Embryologically these nerves travel the shortest and most direct route. In the state of complete fetal flexion the fibers travel practically in a straight line ventrally. The more rapid growth of the somatic area and the alteration in the position of viscera in the adult necessitates the stretching of some nerves, and consequently in the adult the Sympathetic and the whole Vegetative outflow becomes a bit intricate. It is important to remember that the heart and lung buds form in the cervical area and descend through the upper Dorsal area. Naturally the heart and lungs derive innervation from the Lateral Chain Ganglia in the cervical and upper dorsal areas. Reflex expression of true pulmonary and cardiac disease will therefore be found in the Cervical and Upper Dorsal Area. If the mesothelial investments of these structures are involved, the radiation will be less limited.

The parietal pleurae, for example, are innervated by all twelve pairs of intercostal nerves. Parietal Pleuritic expression will occur over the thoracic area then, and will be segmentally expressed along the course or trajectory of the segments involved. Frequently in this expression the few nerves traveling to the muscles, skin, etc., over the site of pleurisy are not the only cells and fibres that are involved and the radiation may involve the entire spinal nerve. Consequently, it is not unusual to find cutaneous hyperesthesia, muscle spasticity and pain at McBurney's Point in pleurisy. Patients with pleurisy and pneumonia have been operated for a supposed diseased appendix due to this reflex arc expression. We tend, with time, to become provincial and symptomatically associate the appendix with McBurney's Point pain. This in spite of the fact that the appendix is very frequently found up under the Gall Bladder, occasionally at the splenic flexure and has been found incarcerated in left-sided, indirect, inguinal hernias. There are more than fifteen involvements other than appendiceal in origin that can produce pain at McBurney's Point. Drawing a diaphragm between the symtoms of a Thoracic disease and an abdominal one is sometimes difficult, and a pneumonia with pleurisy and referred pain, muscle spasticity, etc., over the right 12th Dorsal nerve can be very troublesome. There will be McBurney's Pain, occasionally psoasitis, fever, leukocytosis, increase in poly's and occasionally nausea and vomiting. Several old rules are of value. "Pain beginning at McBurney's Point is rarely acute appendicitis"; "When the Respiratory rate equals or exceeds a third of the pulse rate look to the chest." In general, we visualize that all structures above the Diaphragm are innervated from the 5th Thoracic segment and those more cephalically located mostly 1 to 5 Thoracic. Exceptions will be mentioned later.

The 5th to 9th Thoracic Segments give white rami to the 5th to the 9th Dorsal Lateral Chain Ganglia. From these ganglia the post ganglionic visceral fibres are grouped together to form a pair of nerves, the Greater Splanchnic Nerves. The Greater Splanchnic Nerves pass from the Thorax into the Abdomin and pass through the Semilunar ganglia situated around the Coeliac axis artery. The greater Splanchnics carry a few white rami from the Lateral Horn of the cord 5 to 9 Dorsals to the Semilunar ganglia for synaptic relationships. These have had no previous ganglionic interruptions. Beyond the Semilunar ganglia all the sympathetic fibers are grey post ganglionic visceral fibers. They travel with the coeliac axis artery and its branches and supply Sympathetic fibers to the artery, its branches, and the tissues deriving blood from those arteries.

Thus, the 5th to the 9th Dorsal segments are related to the area from the Diaphragm to the Umbilicus. Reflexes from this area are expressed over the thoracic area, 5th to 9th, and over the abdominal wall to the umbilicus. There is a lapping over of reflexes from this area with the areas above and below. I would like to call attention to the residual restriction in rib and vertebral mobility following an acute expression of visceral involvement. It is only to be expected that this lack of mobility impedes venous and lymphatic return and can therefore maintain symtoms, favor chronicity, and predispose to recurrence of visceral involvement. The pathology induced by such expression in the somatic area of course predisposes to the myositic and arthritic changes that are found in almost every spinal area.

—Byron E. Laycock, D. O.
Dept. of Osteopathic Principles

Corporate Meeting

The Annual Meeting of the Corporate Board was held in the college building on the evening of June 10. The financial statement was presented to the Board showing the year's income and disbursements. The Board expressed its appreciation to the officers of the college for the gratifying evidence of a successful and constructive year from the financial standpoint.

The President's Report was received with interest. He discussed many of the college problems, such as Alumni Development, Student Recruiting and Educational Standards. He told of the new laboratory equipment acquired during the year and especially emphasized the great increase in the library of pathological, histological and embryological microscopic slides.

Election of officers was held resulting in the unanimous re-election of Dr. A. D. Becker as President, Mrs. K. M. Robinson as Secretary and Dr. H. J. Marshall as Treasurer. The Board of five trustees was re-elected, consisting of Dr. J. P. Schwartz, Dr. Robert Bachman, Dr. H. J. Marshall, Dr. Howard A. Graney and Dr. J. P. Leonard. A special meeting of the Board of Trustees was held immediately after the annual meeting of the Corporate Board and Dr. J. P. Schwartz was re-elected to the office of Dean and Dr. O. E. Owen was re elected to the office of Assistant Dean.

It was the concensus of opinion that the year just passed was in many ways a high mark in the history of the institution. It is confidently expected that the college program of progress and development will be successfully continued in the coming year.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

Accepted for mailing at special rates of postage provided for in Section 1103, Act of Oct. 3rd, 1917, authorized Feb. 3rd, 1923.

PUBLISHED MONTHLY BY THE DES MOINES STILL COLLEGE OF OSTEOPATHY

Volume 19 AUGUST 15, 1941 NUMBER 8

The Differentiation Of Upper and Lower Motor Neuron Lesions

It is because the general practitioner over a period of years sees a great many cases of a neurological nature that I decided that an article of this nature would be helpful to the physician who does not limit himself to any one special field of practice.

A differentiation of upper and lower motor neuron lesions should always precede any discussions of diseases of the brain and spinal cord.

An upper motor neuron is a nerve cell that gives off an axon that passes from the cortex in the pre-rolandic area of the brain to end around cells in the cranial motor nuclei or cells in the anterior horn of the gray matter of the spinal cord. They are purely voluntary cells and their fibers make up the cortico-bulbar and cortico-spinal tracts. Neurons in the extra-cortico-spinal tracts are not a part of this system; therefore, no discussion of them will be undertaken at this time.

Over these upper motor neurons pass voluntary impulses that produce certain purposeful movements which have been gradually developed over a long period of time. Impulses that inhibit the action of the lower motor neurons also pass over these fibers, and they apparently have a slight governing effect on the nutrition of the muscles.

A lesion of the upper motor neuron produces certain signs and symptoms, depending upon what part of the upper motor neuron system is involved. If it be the cortico-bulbar part then various symptoms indicative of malfunction of certain of the motor cranial nerves would be present. If it is the cortico-spinal tract then there would be interference with the action of the arm or leg on the opposite side if above the motor decussation, and if both the bulbar and spinal portions are affected, then symptoms indicating such disturbance would be present.

The typical symptoms are hypertonia, (spasticity), incomplete loss of power, with only slight atrophy; increased reflexes; no muscle fibrillation and only mild vasomotor changes; negative reaction of degeneration; and cer-

(Continued on Page 4)

Osteopathic Educational Programs and Training Given Official Recognition

Matters of supreme importance and compelling interest to the entire osteopathic profession and their many patients and friends have materialized in the past few weeks in the official recognition of osteopathic education and of the service of osteopathic physicians and surgeons to the public.

Deferment of Osteopathic Students and Physicians

A memorandum has been sent out from the National Headquarters of the Selective Service System indicating that occupational deferment for students and other necessary men in certain specialized professional fields may be extended by the agencies of the Selective Service System to include students of osteopathy and osteopathic physicians.

This, it seems to us, is a recognition of the highest order of the fact that the osteopathic profession has a contribution to make in the health, safety, and interest of the American people which deserves to be insured against any factors which might impair its value. The entire osteopathic profession has gone on record in wholehearted support of the defense program and this ruling of the National Headquarters of the Selective Service System is an evidence of their full appreciation of the useful and worthwhile service of our profession.

Osteopathic Physicians Recognized By United States Congress

A further matter of great importance and interest to the entire osteopathic profession was the recognition of the integrity of osteopathic educational programs by the United States Congress. In the Military Establishment Appropriations Bill of 1942 which passed Congress and was signed by the President, there is authorization for the army to employ graduates of medical or osteopathic schools for army interne training at not to exceed $720 a year each. Here, again, is the evidence on the part of the United States Congress of their appreciation of the valuable service available through osteopathic channels, not only to the civil population but to the disabled soldiers in army hospitals.

These two acts of official recognition are indicative of the rapid strides osteopathy as a profession is making in official circles as well as in public consciousness. They come as the result of many years of serious effort and planning on the part of osteopathic educators and osteopathic officials. Des Moines Still College of Osteopathy, along with all the recognized colleges of osteopathy, will continue to be alert to increasingly deserve these tributes to osteopathic progress.

Annual Homecoming October 17

Conferences between alumni and college officials have set the date for the Annual Homecoming of Des Moines Still College of Osteopathy as October 17. Experience of the past two years has made everyone connected with this Homecoming Day enthusiastic for its repetition. Members of our large alumni groups should begin planning now to take advantage of this annual get-together for the renewal of friendship, for a visitation and inspection of the college, and for a royal good time—A feast of reason and a flow of soul.

In a letter to our State Alumni Chairman, Dr. Paul Park, our National Alumni President, Dr. Frank F. Jones of Macon, Georgia, has assured us of his attendance. We plan to make full use of Dr. Jones' time and ability. There will be a general assembly at 10:30 in the morning at the college auditorium, an afternoon of scientific program, and a banquet, entertainment and dancing party in the evening. A more detailed report of the program will be available for the next issue of the Log Book.

Join the gang! Renew and revitalize your acquaintance with the progress being made throughout your college. We anticipate a bang-up good time and we do not want any of our members to miss out.

Pursuit for a Reason

"The pathology induced by decreased mobility, impaired venous and lymphatic return in the somatic area, of course predisposes to the myositic and arthritic changes that are found in almost every spinal area." This final remark of the previous portion of this paper is of course not to be interpreted to mean that in every part of every spine such changes are found. It does mean, however, that by the time we reach maturity most of us have at least one or more (usually more) segments involved in this chronic pathology.

It was the effect of this chronic fibrosis, low grade arthritic and myositic involvement that Beadle and Schmorl noted to be so inexplicably frequent in their unusual spinal research. They remarked that frequently in young spines there occurred areas whose discs and periarticular tissues could not be differentiated histologically from those ordinarily found in spines of the upper age brackets from 60 years on ward. Beadle and Schmorl wondered what local inflammatory process could produce so frequently these definite changes and suggested research measures be instituted to determine the cause. Of course, it was established years and years before Beadle and Schmorl started their work that these spinal changes are the evidence of chronic Osteopathic lesion pathology.

These lesions are etiologically related to either primary or secondary factors and it is not possible to detect histologically, pathologically or symptomatically in most instances whether the local involvement is primary or secondary in the living, and no more easily at the autopsy table. It is deplorable that such a mass of research has been illy spent upon effect and none paid to the cause. What a wealth of information could have been produced if the viscera related to those spinal segments had been examined in every way possible during the routine autopsies. Certainly, many contributing causes of death and debility hitherto unsuspected by the ordinary medical profession would have been discovered.

While we are in the mid-dorsal area it is necessary to remember that at least 50% of the lesions encountered are secondary due

(Continued on Page Two)

HOMECOMING DAY OCTOBER 17

Pursuit for a Reason

(Continued From Page One)

to compensation, and possibly another 45% due to reflex arc disturbance or so-called symptom expression. Many or even most of the compensation lesions may have accentuated somatic and visceral effect due to viscerosomatic reflex disturbance. The compensation factor must be removed before there can be any possible permanency in lesion correction. We should print that on our charts.

The 5th to the 9th Thoracic segments are related to the 5th to 9th intercostal areas, the abdominal wall to the umbilicus and the contents beneath this wall—roughly. This spinal area viscerally contributes nerve supply to the parietal and diaphragmatic pleurae, diaphragm, diaphragmatic peritoneum, liver, gallbladder, bile ducts, Sphincter of Oddi, stomach and its sphincters, pancreas, upper duodenum, spleen, adrenal glands, some fibers to kidneys, and the peritoneum reflected over these structures. Any factor, physiological or pathological, causing an increased number of impulses along these sympathetic fibers will cause vaso-constriction, diminution of blood volume through those tissues, constriction of the sphincters, relaxation of the walls, decreased secretion, decreased nutrition, decreased function to any one or several of the structures named. The only exception being one that heightens these effects and that being the increased impulses to the adrenals resulting in an accentuated sympathetic effect.

Maintained sympathetic stimulation established the vegetative imbalance and physiological discord that invariably precedes and predisposes to, if not actually causing definite pathologic changes; though this in time will be definitely accomplished.

The effect of an increased tension of somatic tissues and the coincident inflammatory reaction, the induced segmental hyperirritability and maintained bombardment of and by the Sympathetics is of course one of the most serious and ubiquitous etiologic factors. Another factor worthy of thought is the general or systemic impairment to nutrition, metabolism or the defense mechanism occasioned by perverted reflex arc control of structures vital to those processes. The essential splenic activity in infections taken for example. The reticulo-endothelial tissue in the spleen, cannot function normally in an infection due to the disturbance to the vasomotor supply to the Lienal artery and the supply to the smooth muscle in the spleen. Then it is very obvious that a mid-dorsal lesion can have an inhibiting effect upon a defensive mechanism essential for life to continue. The same lesion area may pervert the blood supply and splanchnic nerve supply to the liver or kidneys and impair the function of those structures. In an infection, or a disease of those structures themselves, this lesion effect may be ominous and even fatal in effect. Hence, my frequently reiterated statement, **"Every patient needs some type of Osteopathic Manipulative Therapy."** This does not imply at all, that that treatment be one of force or rolling the bones and hoping that they'll come home.

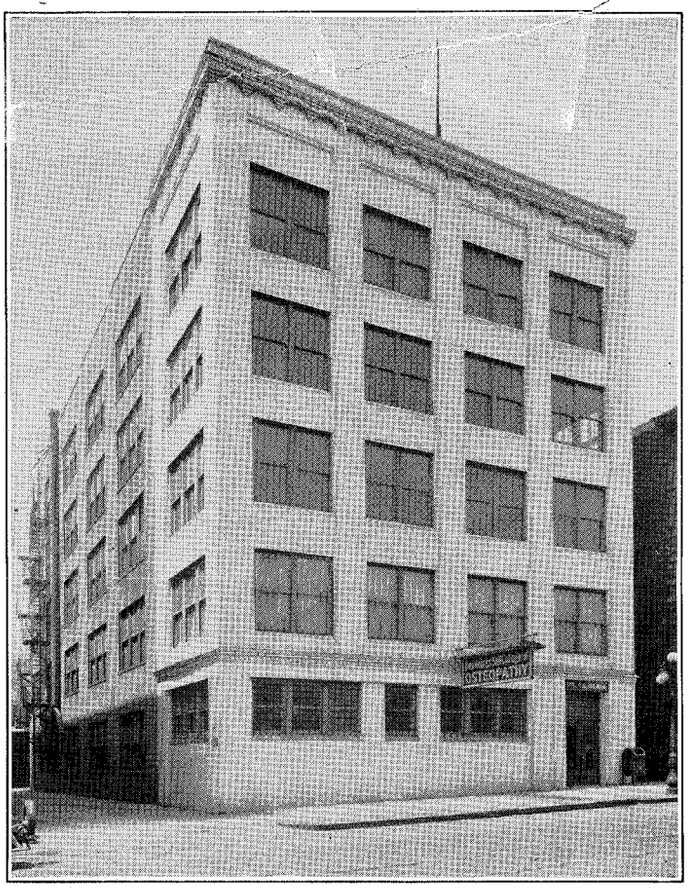
Lesion pathology is also produced in the somatic area into which symtoms are expressed by the very reflex arc disturbance and segmental hyperirritability that is the mechanism of symptom expression. The pathology may have already been present, instituted by some early trauma or compensation factor. Regardless of how or when the lesion pathology developed, its alleviation through manipulative treatment to prevent the detrimental effect of the lesion reflexly upon those structures vital to the recovery and life of the patient is absolutely necessary. To neglect this is to deprive the patient of the full force of the hand of therapy and the strongest fingers on that hand in particular.

In this regard the mid-dorsal area must never be overlooked for the liver, spleen and adrenals so very important in reaction to infections and trauma related to this spinal area.

It is the current opinion that a patient confined to bed with any infection or toxemia should receive at least three mild and short manipulative treatments in each twenty-four hours. In some institutions and in some conditions this routine is increased, sometimes markedly. Occasionally there are contra-indications to some types of manipulation that are just as stringent as are the indications in the other and usual instances.

We have the facilities in our structure to produce the antibodies necessary to overcome any of our infections that stimulate our reticulo-endothelial tissues, but we can only accomplish this to greatest efficiency when unencumbered by the detrimental effects of lesion pathology. We have the power in our hands to remove that pathology and we should never deprive any patient of proper treatment.

—Byron E. Laycock, D. O.



Des Moines Still College Building.

VACATIONS

Mrs. K. M. Robinson, our efficient secretary, left August 10 for a two-weeks' well earned vacation. She plans to visit in Duluth, Minnesota and nearby points.

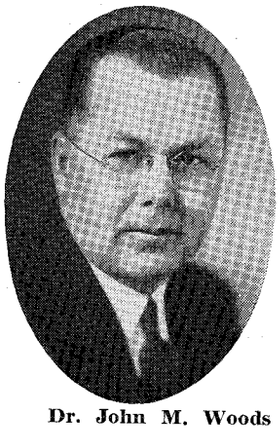
Dr. O. Edwin Owen, assistant dean of the college, is spending his vacation on a motor trip to Glacier National Park. He plans to go to Banff and Lake Louise if his time permits.

Dr. and Mrs. Laycock are spending their vacation on a motor trip. Their destination was somewhat indefinite, but they planned to visit various places in Northern Minnesota.

Dr. and Mrs. Arthur D. Becker returned from their vacation on August 1st, reporting that they had had a fine rest after a somewhat strenuous year. Dr. Becker is sporting a fine coat of tan and states that the sun shines bright on the golf courses in Michigan.

Addition to Obstetrical Staff

The college is pleased to announce that Dr. John M. Woods



Dr. John M. Woods

has accepted the position as lecturer in the Department of Obstetrics. Dr. Woods has for many years been associated with the faculty group of the college and has a reputation as a teacher and instructor that has given him a high place in osteopathic educational circles. He has been much in demand on convention programs and has the happy faculty of organization in his work so that his presentations are of greatest value to student groups. Dr. Woods brings to this department more than 18 years experience in the practical field of Obstetrics and we feel fortunate in the opportunity to capitalize this fine background. The Obstetrical Department in Des Moines Still College of Osteopathy is a very large and important one and is the result of more than 25 years of careful, conscientious and constructive endeavor.

Dr. Leininger to Join Hospital Staff

Dr. E. F. Leininger has resigned his position with the college and has become affiliated as a member of the staff of Des Moines General Hospital. He is to be associated with the work in the Surgical Department. Dr. Leininger for the past three years has been an active member of the college faculty and has made a contribution of high character in his work here. Our sincere best wishes go with him for continued success in his new association.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....Robt. Drew

Osteopathy Without Limitation

Des Moines General Hospital.

Osteopathic Therapeutics

TREATMENT
(Number 31 in Series)

Perhaps one of the most profound observations and statements of Dr. A. T. Still was his recognition of the self-sufficiency of the animal organism. The body contains within itself the necessary substances and powers to function adequately under normal conditions and to instigate and effect repairs. The body contains within itself the capacity to combat infections, as has been explained in detail in the articles under the heading, "Pursuit For a Reason," which have been running in the Log Book as presented by Dr. Byron E. Laycock.

There is contained within the cells and tissues of the body an inherited rhythm of function which tends to persist and in which there is evidenced a resourcefulness of functional capacity over and above the average requirements. These important and far-reaching considerations are the factors which give rise to the statement, "We tend to the normal"—a statement that has been so many times repeated that it has become almost trite. Given the requirements of adequate and suitable food, oxygen, fluid intake, suitable temperatures, exercise, and light, a healthy condition is normal. Health is automatic.

Departures from the healthful condition of the animal body imply that there is a biological discord which prevents the normal functioning capacity of the organism and lessens the inherent resourcefulness of cells, tissues and organs in making an optimum response to the problems presenting. This disturbing influence may be found in some of the requirements as designated above. Osteopathy's profound and far-reaching contribution to therapeutics lies in the discovery of the fact that structural perversion which has been designated as "osteopathic lesion pathology" is a common and a most important cause of disturbed functional capacity and lessened resourcefulness of those cells, tissues and organs anatomically and physiologically associated with such lesion pathology.

Cells, tissues and organs are interdependent. Through the mechanism of the nervous system and the circulatory system they are normally, constantly and intimately aware (if we may be pardoned for using the expression) of the activities and demands of other cells, tissues and organs. Normally there is a fine, controlled and balanced functional reaction between various parts of the body mechanism. This finely adjusted balance, this ready and adequate response, this action and interaction between cells, tissues and organs is the answer in the normal, healthful functioning of the body mechanism and is an essential part of optimum, normal, healthful functioning capacity and adequate resourcefulness.

It is not the plan or the intention here to include a discussion of the pathology of the osteopathic lesion or of the exactly similar pathology of tissues whose innervation is anatomically and physiologically associated with the osteopathic lesion area. Researchers have shown beyond question that a constant and profoundly-disturbing factor in such lesion pathology is a chemical change in the tissue fluids in which there is a definite lowering of alkalinity. This disturbance in the hydrogen ion concentration has been referred to as a localized relative acidosis. Such chemical change is a profoundly disturbing mechanism inducing edema and profound alterations in cellular and tissue functioning capacity. This chemical change in tissues is closely associated with a loss of integrity of the vascular tissues predicated upon the disturbed functioning capacity of the vasomotor innervation.

The ultimate, fundamental and basic objective in effective treatment to be of real therapeutic value must consist, first, in restoration of the normal alkaline balance in the involved tissues. Osteopathic treatment meets this need. The restoration of anatomical integrity in the area of lesion pathology, which includes articular normalizations, is important and necessary, but is incidental. It is the means by which we accomplish a normalization of tissue chemistry. The methods of osteopathic treatment are mechanical in application. The objectives of osteopathic treatment are primarily and essentially and basically chemical.

—A. D. B., D. O.

Osteopathic Opportunity

Applications for the September class indicate that we will have a fine class of new students associated with the college this fall. These applications have come from widely - scattered parts of the country and include many with qualifications far in excess of those required. Our fine large class of 50 graduating last May leaves a large gap, and it is important that these numbers be replaced if we are to effectually maintain adequate student man-power and make it possible for us to capitalize our abundant clinical opportunities.

There has never been a better time for qualified young men and women to begin their professional training than at this time. Almost daily in our mail we have requests telling of the need and desire for competent osteopathic physicians and surgeons. The public is increasingly aware of the high type of service made possible by members of our profession. To those to whom the work of a physician and surgeon has an appeal and who are looking for an opportunity of service second to none, we recommend the careful consideration and evaluation of opportunities offered in an uncrowded and growing profession.

Births

To Dr. and Mrs. W. C. Andreen of Wyandotte, Michigan a daughter, Judy Lou, on July 10.

To Mr. and Mrs. A. J. Davidson of Detroit, a son, Arthur John III on August 1st. Mrs. Davidson was formerly Margaret Woofenden, daughter of Dr. and Mrs. Lloyd Woofenden of Detroit.

To Dr. and Mrs. Hugh Clark of Des Moines, a baby girl, Nancy Jane, on July 23.

To Dr. and Mrs. R. Dale Bennett of Williamsburg, Virginia, a son, Richard Dale, on July 30.

To Dr. and Mrs. B. A. Storey of Thornton, Iowa, a daughter, Sue Bennett, on August 7.

"God grants liberty only to those who love it, and are always ready to guard and defend it," said Daniel Webster. Freedom of choice of physician is included in that broad term, LIBERTY, and any health program devised by government should embody this fundamental concept.

—Osteopathic Health

The health of our people is really the foundation upon which all their happiness and all their powers as a state depend.—Disraeli.

—Osteopathic Health

Osteopathy may be the means of solving most lame back problems. For years osteopathic physicians have been relieving backache by skillfully executed manipulative procedures aimed at restoring normal body mechanics.

—Osteopathic Health

I. S. O. P. S.

Board of Trustees

The second meeting of the Board of Trustees for the present fiscal year was held at the Savery Hotel, Des Moines, on Sunday, August 10. Many important problems confronting the profession were considered and determined.

Nebraska

Your Society secretary-attorney was the principal speaker at a special meeting of the Nebraska Osteopathic Association held at Central City, Nebraska, on Sunday, July 20, 1941.

The Nebraska association voted unanimously to adopt the Iowa plan of employing a lay secretary-attorney at that meeting. Applications for the position are now being considered by the association's officials.

Attorney General's Opinion

On July 3, 1941, the Iowa Attorney General issued an opinion holding that osteopathic physicians have the legal right to refract eyes.

Dr. S. H. Klein, Chairman of the Legislative Committee has mailed a copy of the opinion to all osteopathic practitioners in Iowa. Additional copies will be mailed upon request.

Membership Committee

Dr. H. L. Gulden, Chairman of your Membership Committee, is making plans for a state-wide membership drive. He urges all those who have not paid this year's dues to do so at once, thereby eliminating solicitation by the membership team assigned to your particular area.

Department of Professional Affairs

Dr. J. K. Johnson, Jr., Chairman of your Department of Professional Affairs, is hereby engaged in stimulating his committee chairmen into construction action. Each such chairman is presenting a comprehensive coordination. Committee meetings will then be held with Dr. Johnson and the respective plans set in motion.

District Meetings

Plans and preparations for the October District Circuit meetings are now being developed by President Jordan.

Board of Examiners

Dr. D. E. Hannan of Perry, Ia., has been reappointed by Governor George A. Wilson to a three year term as a member of the Iowa Board of Osteopathic Examiners.

Membership Application

Dr. McVerhey, Pella, Iowa.

—Dwight S. James, Sec.-Treas.

We were pleased to have Dr. and Mrs. Harry E. Skinner of Detroit stop at the college on July 25 on their way to Yellowstone National Park.

Dr. Walter S. Maddux of the class of January, 1902 died on June 19, 1941 at his home in Pueblo, Colorado. Dr. Maddux has been in poor health for a number of years past.

The Differentiation Of Upper and Lower Motor Neuron Lesions

(Continued from Page One)

tain pathological reflexes of which Babinski's toe sign is the most characteristic.

The most common causes of such a condition are cerebral vascular accidents; as in apoplexy; and may be due to hemorrhage, thrombosis or embolism. These conditions may occur when the blood pressure reading is normal. Therefore, do not let a normal blood pressure reading mislead you.

The lower motor neuron consists of a cell located in a nuclear mass of a cranial nerve or in the anterior horn of the gray matter of the spinal cord and its axon which passes to voluntary muscle.

It serves as the final common path for all impulses coming from the higher centers and from the peripheral parts of the body. This cell not only excites muscle fibers to reflex, voluntary, and postural or tension contraction, but also exerts a trophic influence upon muscle fibers. Destruction of the cranial nuclear cells or anterior horn cells causes flaccid paralysis of the muscles that they supply. The muscles rapidly undergo atrophy and are replaced by connective tissue. Since the cranial nuclear cell or the anterior horn cell is the motor part of the reflex arc, diminution or loss of the deep and tonus reflexes follows disease or destruction of this cell.

The outstanding symptoms of the lower motor lesion are flaccid paralysis with complete loss of power limited to certain segments; marked atrophy with diminished or absence of reflexes; muscle fibrillation is often present and vasomotor phenomena may be marked; and partial or complete reaction of degeneration in the involved muscles.

In the discussion of the diagnosis of a lower motor lesion, involvement of the nerve, or primary changes in the musculature may have to be differentiated. It should not be confusing if we remember that in a typical lower motor neuron lesion only the muscles supplied by the cells in the anterior horn are involved, whereas in neuritis the sensory fibers as well as the motor fibers are affected. In the primary myopathies the atrophy is usually bilateral; the deep reflexes gradually grow weaker and are ultimately lost. As the disease progresses, quantitative electrical disturbances appear; but as long as there are any muscle fibers left an electrical response can be elicited.

The most common cause of lower motor lesions in the spinal cord is anterior poliomyelitis and for those of the cranial nerves, vascular accidents. Other causes such as tumors, toxic poisoning, and sclerosis occur less frequently.

It is fairly common to have an upper motor and a lower motor lesion present at the same time when a vascular accident occurs. Paralysis of the third, or seventh cranial nerve as a lower motor on one side with the paralysis of the arm and leg on the opposite side as a typical upper motor neuron lesion are the most frequent.

One of the most difficult lesions to differentiate for the average physician is that involving the seventh cranial nerve. Is it an upper motor or lower motor? It simplifies it if you recall that the upper part of the face is bilaterally innervated while the lower part is not supplied in a like manner. In a supranuclear or upper motor lesion the upper part of the face is not completely paralyzed, although the musculature is weakened, so the patient can close the eye on the affected side. When the lower motor lesion is present the patient cannot close the eye or wrinkle the forehead on the involved side. Another point often overlooked is that in an upper motor lesion stimulation through the emotional centers, such as laughing, will cause the muscles of the lower part of the face on the paralyzed side to contract which is not true in the case of a lower motor lesion.

—L. L. Facto, D. O.

Looking Around

As is quite usual during the summer months, the college officials take the opportunity to carefully go over the college building and equipment to see that everything is in good order for the coming year. This summer rather extensive activities are underway in refinishing several of the larger laboratories. The Dissecting Room has been entirely redecorated and put in first-class condition as the result of a paint job and the refinishing of all of the equipment. The Preparation Room as a part of the anatomical laboratory has also come in for its share of the renewal process. A generous supply of dissecting material has been received during the summer and this important department is already to step into full swing with the beginning of the college year. The large chemical laboratory is resplendent in a new coat of paint and the refinishing of desks, benches and stands. This laboratory is a very large and commodious one and is a busy place throughout the school year.

Particular interest has attached this summer to the various clinics associated with the college. We have been agreeably surprised at the large number of patients available in all the various clinics, and were more than fortunate in the fact that an unusually large number of students elected to remain for clinic work during the summer. The General Clinic has been heavier than for many years previous and has been limited only by the amount of student man-power available to take care of the number of patients seeking treatment and care. The Specialty Clinics have also been large during the summer and we have gone out of our way to make these specialized services available to the clinic patients.

Of outstanding interest has been the Obstetrical Clinic. Here too, in keeping with the other clinic services in the college, we have had a very busy summer. This clinic has at times seriously taxed the entire resources of the student groups available for this work.

There has always been some discussion as to whether or not it is advisable to maintain the clinic throughout the summer months, and it has been suggested at various times that perhaps it would be wise to discontinue the clinic for the summer. Our policy, however, has been along quite opposite lines. We have felt that it is wise and of advantage to maintain the various clinics throughout the summer months without interruption. There are several reasons for this opinion.

First, it is of great value to the hundreds of patients who need the services of the clinic. The Des Moines Still College clinic in its various services and departments supplies a vital need and demand for the large, and worthwhile group of people who take advantage of its many services.

Secondly, it gives an opportunity for those students who would like to take advantage of their summer vacation to work off a portion of their clinical services.

And, third, it preserves the integrity of the clinic as such so that with the opening of the new college year all of the various clinical services—general clinics, specialty clinics and obstetrical clinics—are in full swing and well organized. In this way there is no delay in starting off the new year's work with an abundance of clinical patients. For these several reasons it has seemed best to maintain our clinics throughout the summer months.

The Laboratory in Microtechnic maintained during the past five years in its new location and its enlarged capacity has proved to be a very valuable addition to the college. Full sets of microscopic slides in histological, pathological and embryological departments have been prepared and are available as loan libraries to the students working in these several departments. We were ourselves somewhat amazed to find on careful and conservative inventory that the total value of these mounted slides was in excess of $11,000 as gauged by current wholesale prices for the same material. This collection of mounted slides is an asset of great value to the institution and serves a useful purpose to all students who are doing any work whatever in the microscopy laboratories.

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THE LOG BOOK

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Volume 19 SEPTEMBER, 15, 1941 NUMBER 9

Embryology

Organization and Competence in Embryonic Development

Baldly defined, embryology is the study of the development of an individual from the origin of the germ cells to adulthood. The most significant elements of the definition are contained in the connotations of "individual" and "development."

From the instant when sperm and egg unite there occurs a ceaseless series of changes: growth, cell division and differentiation until the body assumes its final form. Through millions of years of experimentation nature has produced a coordinated series of chemical reactions, beginning with fertilization and continuing throughout embryonic history, which is constant Only rarely are innovations in the developmental pattern permitted, and when they occur the variations from the standard must be slight, else the embryo cannot continue its development. By and large, it is these slight deviations which have produced the diversity of animal life; it is the sameness which guarantees that life will persist.

In spite of a universal community of plan which necessitates that the union of human egg and sperm will become a human adult, each zygote possesses an individuality from the first. As soon as the sperm has made its hereditary contribution to the egg the fate of individuality is irrevocably sealed. The new individual and its developmental processes will be a composite of its ancestors, even back to the first bit of protoplasm on earth. Each individual is the same as every other to the point beyond which difference would cause death; each one is different from all others to the extent of the heterogeneity of its ancestry.

At all times during the embryonic transformations there is an indissoluble interdependence between form and function which is retained throughout life. Embryonic anatomy and physiology are no more discrete than the same phases of the adult. It is not possible, therefore, to conceive of embryology as a series of anatomical stages for such a concept closes to the mind the more dynamic phases of the science. Details of descriptive embryology are still being added to the literature, but recently more attention has been paid to the functional aspects of development.

This viewpoint may quite properly be said to date from the work of Wilhelm Roux, whose

(Continued on Page 2)

Osteopathy Given Primacy

The business of an osteopathic educational institution is to prepare qualified students to become competent osteopathic physicians and surgeons. It is needless here to discuss the rapid and comprehensive strides that osteopathic education has made in the years since the first osteopathic college was opened. Today, osteopathic educational programs are at a high peak, and this prominence has been obtained as the result of much thought and the expenditure of tireless energy by many gifted individuals in our profession.

Here in Des Moines Still College of Osteopathy we feel that it is vitally important that the Department of Osteopathy, as such, shall be maintained in its rightful prominence in the curriculum. It seems entirely obvious that an osteopathic college should give osteopathic principles, osteopathic diagnosis and osteopathic treatment the first place in consideration. We believe that we are doing just that. While we speak of the Department of Osteopathy, as a matter of fact it is not possible to contain osteopathic instruction in any one department. We believe that the golden thread of osteopathic thinking and of osteopathic application must run through each department and in all discussions, from the basic sciences to the last clinical application. If students are to become competent osteopathic physicians and surgeons, we feel that it is necessary to present the suggestion not only in the Department of Osteopathy as such, but from every logical angle in each of the many departments of the curriculum.

During the freshman year a series of lectures are given on the History of Osteopathy. During the sophomore year the students are given a course of 90 hours on Osteopathic Principles. It is this course that furnishes the background for osteopathic thinking and osteopathic reasoning. It is in this course that the scientific background for osteopathic understanding and osteopathic reasoning is laid. It is here that the known and accepted facts in the basic sciences of Anatomy, Physiology, Pathology and Chemistry are interpreted and applied in the light of osteopathic discoveries.

During this same sophomore year a course in Osteopathic Technic of 90 hours is given, with lectures, quizzes, demonstrations and actual practice in application. This course of Osteopathic Technic I, as we designate it, is particularly designed to enable the student to become familiar with the diagnostic methods required for the detection of osteopathic lesions.

In the junior year an advance course in Osteopathic Technic is given, with particular emphasis upon the mechanics and methods of lesion correction. This course is given in lectures, demonstrations and actual practice in technic manipulative procedures. This work in osteopathic corrective technic is given in small groups and under careful and personal supervision of competent instructors, and comprises 126 hours.

After having become intimately acquainted with the osteopathic principles and osteopathic technic, the students then in the last half of the junior year and throughout the senior year go into the clinic where their knowledge is put into practical application on the many patients available. Emphasis is continually placed upon the discovery, evaluation and normalization of osteopathic lesions in each case. This work is guided and checked by competent staff physicians and the results of correction of lesions are carefully noted and recorded.

During the last semester of the senior year a course in Osteopathic Technic III is presented. This course is planned to serve the purpose of a clearing house for the technical problems which the students may have encountered and which up to this time have not been fully clarified or solved. This course in Technic III consists of 36 hours entirely devoted to practical technic.

We are rightfully proud of our method of presentation of the peculiarly osteopathic side of therapeutics. It has reached its present state of prominence as the result of experience, and there seems to be every reason to believe that it is a carefully-contrived, comp ehensive and effective plan of instilling into the students' minds the principles and the mechanisms of the osteopathic concept.

Pursuit for a Reason

The Thoracic area of the spine and ribs house most of our vital organs. Of as much or more importance, is the Thoracic origin of the Thoraco-lumbar outflow or the Sympathetic Nervous System. Spinal lesions from the 1st Dorsal to the 1st Lumbar vertebral segments can produce somatico-visceral reflex arc effect in practically any structure of the body, and definitely and quickly in any having Sympathetic nerves traveling to it or to its blood vessels. This list is, of course, fairly complete.

The effect may be one of vegetative imbalance—sympathetic stimulation or inhibition, prolonged to a pathologic state. It is usually a matter of sympathetic stimulation, however. The mechanism of the production of this imbalance will be discussed later from the standpoint of physiology of nerve tissue, and from the biochemical aspect following that.

In visualizing Sympathetic effect upon a structure or determining what symptoms or signs are due to sympathetic stimulation or inhibition, it is well to observe in a general way Sympathetic stimulation, Sympatheticotonia and Parasympatheticontonia or Vagotonia.

We can visualize in ourselves during our, of course, few periods of anger, or in any other animal that is aroused, the effect on the organism of general sympathetic stimulation.

Sympathetic stimulation causes dilation of the pupils by contracting the radiating fibers of the pupil the Dilator pupillae muscle, making the eye more receptive to light. An exophthalmos is induced by sympathetic stimulation to the muscle of Muller bridging over the inferior orbital fissure. The pilomotor muscles contract causing the hair to "stand on end" and "gooseflesh." The erect hair gives a thicker pad of hair and air for protection against cold weather and trauma. It, along with the exophthalmos, makes the organism appear larger and more ferocious. The somatic musculature is increased in tonicity, preparing the animal for fight or flight. The tensed muscle tissue gives a protective armor plate and this along with constriction of the cutaneous blood vessels reduces the possibility of trauma and blood loss. There is also an increase in the coagulability of the blood. All

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Embryology

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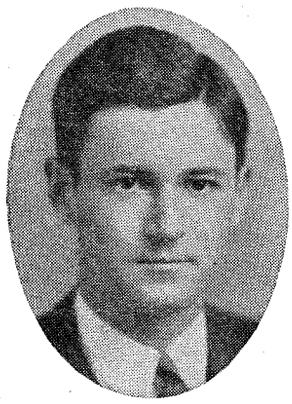
curiosity regarding the causes of development (Entwicklungsmemechanik) began the new science of experimental embryology. Among the many important discoveries in this field which have come from the laboratories of America, England and Germany



Hugh D. Clark, M. S. Ph. D.

probably none is more significant than the concept of the organizer. For his contributions to the subject of organizer activity Hans Spemann was recently awarded the Noble Prize of Medicine.

The precise chemical identity of organizer substances is a controversial subject, but workers are agreed that organized activity is essentially analogous to a series of chemical reactions. The master organizer, appearing early in development, governs the formation of the germ layers. In so doing, it has consequently immutably decreed which tissues shall become digestive and respiratory systems (entoderm); which, integumentary and nervous (ectoderm); and which, excretory, circulatory, reproductive, muscular and skeletal (mesoderm). (The endocrine system will form the basis of a separate article).

As soon as the germ layers are formed there is a new anatomical substrate on which the organizers must exert their effects. New changes will be initiated, therefore, just as different reactions take place between different chemical reagents. The new changes become manifest as new anatomical details, each one being more like the adult structure than its predecessor. Differentiation and increasing specificity of struture continue simultaneously in all systems, but not at the same rate. Ectoderm, the oldest of the germ layers ontogenetically and phylogenetically, is the first to differentiate. The outer layer is functionally skin from the beginning; out of this embryonic "skin" is formed the neural plate, which gives rise to the spinal cord, brain and special senses.

The development of the eye is an excellent example of the activity of secondary organizers. The sensory portion of the eye is derived from central nervous tissue by evagination from the brain and by actual migration of cells from a point more distant. As soon as the optic vesicle has touched the head ectoderm two changes take place: firstly, the contact **induces** invagination of the head ectoderm to form the lens, and secondly the contact induces the invagination of the optic vesicle to receive the lens vesicle, now growing mesially. This inductive action is not artifactitious since the optic vesicle will cause similar changes even in ectoderm transplanted to the head from the belly wall, providing differentiation of the skin tissue has not proceeded too far. Likewise, the optic vesicle will induce lens formation in the belly wall, when it is transplanted to that position.

Any tissue is subject to the activity of any organizer up to a certain point, as lens formation from tissue in the belly wall indicates. However, with increasing age of the embryo the capabilities for differentiation or **competence** are progressively lost. The loss of embryonic competence is carried to an extreme in the case of nervous tissues which retains the power of regeneration of cell parts, but has lost the power to reproduce its cells. Extreme specialization of this tissue has caused the sacrifice of the most important physiological prerogative of cells: that of reproduction. By way of contrast, the reverse situation is observing in the egg. Normally the egg will produce one individual, but the climax of embryonic competence is inferred by the occasional development of identical twins. In this event, the egg shows the ability to form not one, but two complete individuals, in each of which all of the processes mentioned above proceed simultaneously.

—Hugh Clark, Ph. D.

(This is the first of a series of articles on embryology which will attempt to show the position of embryology in the osteopathic curriculum, by indicating some of the facts regarding embryology as a science and its relation to Anatomy, Chemistry, Physiology, Pathology and Obstetrics).

Pursuit for a Reason

(Continued From Page One)

of these factors are protective or defensive to the animal.

From the point of view of the Gastro-Intestinal tract and the associated glands, we can say broadly they are inhibited. The lachrymal, salivary and mucous secretions are inhibited. The secretion is reduced in amount and is concentrated temporarily. Should the stimulation of the sympathetic continue, there falls a decrease in the organic constituents of the secretion, as well as a decrease in total volume. The mechanism of the inhibitory effect is doubtlessly that of sympathetic stimulation to the blood vessels

The Gastric blood vessels are constricted in the generalized sympathetic response resulting in decreased secretion, dilation of the stomach walls through relaxation of the mural musculature. Peristalsis is stopped and the sphincters contract. The gastro-intestinal functions of the liver and pancreas are inhibited by the sympathetic response. The sphincter of Oddi contracts and the small intestine is at rest. The ileocecal valve does not pass intestinal content as the circular muscle there is contracted and the muscle in the rest of the small and large intestines, excluding the sphincters, is relaxed. The Gastro-intestinal tract has its blood vessels contracted, is at rest, and its sphincters contracted.

One function of the sympathetic nerve supply to the spleen is to contract the smooth muscle there. This forces, along with constriction of the blood vessels to the Gastro-intestinal tract, all available blood volume into the somatic area. In the dog the spleen holds 20 per cent of its total blood volume at rest. This storage function is not so well preserved in the human, but the reticuloendothelial tissue in the spleen still is the most important mechanism for the production of antibodies that are our only definite method of overcoming most infectious processes The spleen in infections dilates and contracts with slow rhythm, forcing out, in addition to the normal venous and lymphatic return, large quantities of blood rich in antibody content. We can readily see that should a reflex arc disturbance disrupt this splenic function the results in an infection may be disastrous.

The sphincters of the lower bowel and the bladder are constricted. The walls of the viscera ae relaxed due to vasoconstriction and possibly the inhibitory effect of sympathetic stimulation. I say "possibly" because it is not established as a physiologic fact as yet.

Sympathetic response increases the pulse rate and usually

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DESERT-ATIONS

Los Angeles in 1942

A couple of letters from friends in California forced me to make a change in my plans for the month of August and I spent the early part of the month there instead of in Mexico as originally planned. After visiting in the southern part of the state for a while I finally landed in Los Angeles. Having known about the famous Breakfast Club for several years my curiosity was satisfied through an invitation given by Curtis Brigham and the usual California abjectives of size and glamour apply. From 8:00 A. M. until 8:30 there is not a dull moment and it has been some time since I have seen over 400 people so thoroughly enjoy themselves. I wish it were possible for each of you when you visit Los Angeles next year, to attend one of these meetings. They are spots of inspiration each week that cannot be equaled.

You will be glad to know that preparations are well under way for your meeting in Los Angeles next year. Dr. Hatfield is already proving an able leader and it was my privilege to sit in a meeting of those who will have the major responsibility for your instruction and entertainment next July. You need have no fears for any part of the program. When you go to California you will find it even more so than you thought. I am almost in favor of including it in the region I call God's Country and after the convention I may do so. The sensible thing for you to do is to watch carefully the plans as they unfold and check off the items that you will try to cover. I know from what was said at the meeting that you will be busier than the proverbial one-eyed man at the five ring circus for you are to have too many enjoyable things offered both on the program and in the way of entertainment. Plan to take a month off for you will want to see the many interesting features along the way both going and returning and California has too many wonderful things to be seen to cut your visit to a few days.

I was astounded at the work being done by Dr. John Hiss. John is an old friend of mine beginning away back in our school days. I have followed through with him and have read his book from cover to cover. I have also read the medical text that followed it two years later and it is very much inferior. The thing that impressed me more than anything else during my visit to Dr. Hiss' Clinic was the many evidences of the use of Osteopathy both in name and in practice. Osteopathic lesions are called such and are diagnosed and treated as such and are not confined to the feet. Patients who need lesions corrected from the feet on up are taken care of either in one of the offices for that purpose or are sent back to their home physician for continued osteopathic care. I watched Dr. Hiss in his clinic for the full hour and saw 43 patients happy in the privilege of being able to gain his personal attention if only for a minute. I talked to these patients and heard nothing but favorable comment and it was not a picked crowd but the regular run on that clinic day. I saw and talked to and examined several cases who had been through the bunion operation and they were each very much pleased over the results obtained in comfort and in the reduction of the deformity. All of these patients knew what osteopathy was and what it could do for them not only for their feet but for other complaints When you go to the Los Angeles Convention and plan to visit the many fine osteopathic institutions there put the Dr. Hiss Clinic on your list too for it will strengthen your belief in Osteopathy.

—H. V. H.

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor .....Robt. Drew

Osteopathy Without Limitation

Osteopathic Therapeutics

TREATMENT (Cont'd.)

(Number 32 in Series)

It is generally recognized that among the most important duties of the osteopathic physician in planning treatment is first the discovery, and second the normalization of osteopathic spinal lesions. It is the wish of the writer at this point to call attention to the fact that such procedures, important as they are, do not fully discharge his obligation. In the preceding article in the August number of the Log Book we called particular attention to the fact that the basic objective in normalization of osteopathic lesion pathology is of a chemical nature secured through articular normalization. It is obvious, even to superficial observation, that there are problems of a mechanical nature requiring solution. In any mechanism as complex as the human body with its many inter-related activities the possibility of mechanical derangement and obstruction is ever present. Dr. A. T. Still in his early writings regarding osteopathic therapeutics repeatedly made the statement, "The rule of the artery is supreme." I think one might be warranted in paraphrasing that important statement by saying, "Normal and free circulation of all body fluids is imperative if health and normal functioning is to be the result."

There is no intention here to minimize the great importance of normal, unrestricted and unimpeded vasomotor control by way of the autonomic nervous system. The circulatory integrity is dependent to a very large degree upon these nervous mechanisms. The maintenance of normal blood pressure as a result of cardiac force, elasticity of arterial walls and arteriolar peripheral resistance is largely a matter of nerve control, and is an integral part of the integrity of the circulation.

It becomes necessary, however, in many cases for the osteopathic physician to make careful examination to discover mechanical obstruction involving chiefly venous and lymphatic return. Such examination involves the soft tissues and is rendered most effective by the knowledge on the part of the physician of those areas where obstruction tends to occur. Muscular and fascial contractures may play an important part in preventing normal venous and lymphatic drainage. Obviously, this is most likely to occur in the appendicular portions of the body (arms and legs) and in the neck affecting the head. The organs contained within the body cavity, however, in the thorax, the abdomen and the pelvis by no means escape, due to lack of normal tone in body walls, bad posture and the never-ceasing pull of gravity. Organs in malposition develop stasis of tissue fluids as a result of mechanical interference with drainage. Stasis spells death. Stasis in tissue fluids marks the beginning of many pathologies, both functinal and structural. These many factors are part and parcel of osteopathic thinking and osteopathic treatment

Man was intended by nature to be a creature of great physical activity. Primitive man had to fight or flee from his enemies. He had to scour the country in search of food. He had to contrive shelter from the elements. He had to move with the seasons. His very existence depended upon heroic physical activities. As a consequence he breathed deeply and maintained a high type of tonicity in his musculature, and particularly important, in the musculature forming the body walls.

It is an old saying and an important observation that "The tone of the abdominal contents pretty much take their cue from the tone of the belly wall." When we exercise we think of exercising the muscles of the arms and legs. It is of much greater importance that we contrive exercises which put tone in the body walls. All return circulation, venous and lymphatic, is dependent upon the integrity of the body wall. The efficiency of the excursion of the diaphragm as a mechanism maintaining venous and lymphatic return is dependent upon the tone of the body wall. The diaphragm may be likened to a piston in a cylinder composed of the body cavities and its effectiveness is dependent upon the throw of the piston and the integrity of the cylinder walls.

We hear a good deal today of the fact that as individuals we have become soft. Many of us do not work hard enough to maintain adequate muscular tone, and we do not breathe deeply because of lack of necessity produced by muscular effort.

It becomes the province of the osteopathic physician to give such soft tissue treatments as to insure the removal of mechanical interference. The thorough stretching and freeing of the deep fascias of the neck and their extensions into the thorax is an important factor favoring reparative processes in many diseased conditions of the head, neck and thorax. A careful and thorough stretching out of the axillary fossa, the bicipital fossa, the fascias on the inner-side of the arm, and the interosseous membrane between the bones of the forearm are important in relation to disabilities of the arm and hand. I have seen persistent and intractable eczema of the hands clear up readily under such treatment, securing normal venous and lymphatic return.

Dr. A. T. Still in conversation with me pointed out the pertinent fact that lymphatic drainage of the pleura was largely by way of the axillary space, and called attention to the fact of the importance of free lymphatic drainage in conditions affecting the pleura. It is interesting in this light to note that many conditions of acute asthmatic seizure are promptly relieved by stretching and freeing the deep axillary tissues.

Careful, deep and thorough stretching of the fascias in Scarpa's triangle, along Hunter's canal and in the popliteal space is important in many conditions affecting the legs and feet. The interosseous membrane between the fibula and tibia should be thoroughly stretched. Such soft tissue treatments may be firm and thorough without any bruising of the important structures in these areas.

It is well recognized and accepted that such conditions as athlete's foot are due to fungus infections and the proper treatment is the application of a fungicide. In spite of such treat-

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Homecoming Day October 17

What an inspiration it is to be a part, if even a small part, in a really big and worthwhile project. It makes one feel humble, and at the same time enthused, to realize that our activities are making a real contribution in moving, challenging and worthwhile programs. Homecoming Day, as most of the readers of the Log Book know, was instituted and is sponsored by the loyal and enthusiastic alumni of Des Moines Still College of Osteopathy. The immediate management is under the direction of the Executive Secretary of the National Alumni Association, Dr. Paul Park, who is also President of the Iowa State Alumni Organization.

Dr. Park has kindly consented to continue as chairman of Homecoming Day this year after having made such a great success of the program a year ago. His plans this year are supported by the active cooperation of not only the college authorities but by several active osteopathic organizations. Among them we find the Inter-fraternity Council, the Student Council, the Osteopathic Women's College Club (an organization composed of the wives of students), the local chapter of the National Women's Auxiliary to the A. O. A., and the Polk County Osteopathic Association. The success of Homecoming Day in the past has been in large part due to the genuine interest and enthusiasm of these groups who plan to make October 17, 1941, a real day in osteopathic history. As we told you a month ago, Dr. Frank Jones, National President of the alumni of Des Moines Still College of Osteopathy, will be present for the entire day and this fact in itself is more than enough to insure the success of the occasion.

We plan to make one innovation in the program that seems to have been crowded out on previous occasions. We want every visiting alumnus and their friends to take advantage of the occasion and sufficient time to go through the entire five floors of the college building. We want you to see everything from the Bacteriology Laboratory on the fifth floor to the Dissecting Room on the first floor. We want you to see the new laboratory equipment. We want you to see the new laboratory rooms. We want you to note the redecoration and the many improvements throughout the college building. We shall plan to have student guides available to escort the various groups throughout the tour of inspection. If you are going to actually realize the progress made in your Alma Mater you must do so as the result of having actually seen the many additions and improvements evident throughout the institution.

The first meeting of Homecoming Day will be the general assembly in the college auditorium at 10:30 a. m., at which time Dr. Frank F. Jones will make the principal address. From two to five in the afternoon there will be the presentation of a technical program for the visiting physicians. This will consist of clinics, technical talks and demonstrations in osteopathic diagnosis and technic.

The evening program, as usual, will prove to be the piece de resistance of the day, starting off with a banquet at 6:30 at the Savery Hotel with some excellent entertainment provided, and with Dr. Frank F. Jones again as principal speaker. The Local Chapter of the Women's Auxiliary to the A. O. A. have decided to incorporate their Founder's Day program with Homecoming Day. The grand finale will be the dancing party until the wee small hours.

We want every alumnus who can possibly arrange to do so to plan to come for this annual get-together. It is entirely unnecessary to urge those who have attended previous Homecomings. You will meet many of your acquaintances. You will be inspired and enthused. You will be given a new insight into osteopathic education. We believe you will go away saying that it was a most worthwhile occasion and many times worth the effort made in coming. Put on your "Old Gray Bonnet" and plan to spend the day with us on October 17!

I. S. O P. S.

Dr. Hannan Honored

Dr. D. E. Hannan, of Perry, Secretary of the Iowa Board of Osteopathic Examiners, was elected President of the American Association of Osteopathic Examiners at that organization's recent meeting at Atlantic City.

Fall District Meetings

The fall District Circuit meetings will be held as follows:

District I, October 5, Manchester.

District II, October 8, Red Oak.

District III, October 10, Ottumwa.

District IV, October 6, Algona.

District V, October 7, Sioux City.

District VI, October 9, Nevada.

President Jordan has arranged a most timely and interesting program.

Annual Society Convention

Dr. Mary E. Golden, Vice President and Chairman of the Convention Program Committee, reports that the Annual Society Convention will be held at the Savery Hotel, Des Moines, on Wednesday and Thursday, May 6 and 7. 1942.

Smallpox-Diphtheria Campaign

Dr. D. E. Hannan, Chairman of the Department of Public Affairs, has again submitted to the Iowa State Department of Health his Society's plan for participation of osteopathic physicians in the Department's state-wide smallpox vaccination and diphtheria immunization program, and official approval by the Department has been issued. The campaign will be held during the week of November 3.

Complete information and material will soon be mailed to all members of the Society pertaining to the program.

Professional Affairs

Dr. J. K. Johnson, Jr., Chairman of the Department of Professional Affairs, held a meeting for his Committee Chairmen at Jefferson, Sunday, August 24. The following attended in addition to Dr. Johnson, Jr.: Dr. H. L. Gulden, Dr. John Q. A. Mattern, Dr. Ruth Paul, Dr. Theo. H. Tueckes, Dr. J. R. Forbes and Dr. Lester P. Fagen. Dwight S. James, Secretary-Treasurer and Attorney for the Society was also present.

Problems of the various Committee Chairmen were considered and plans adopted for a constructive, vigorous and correlated campaign of professional and public service.

After the meeting those in attendance enjoyed a delicious buffet dinner at the residence of Dr. Johnson, Jr.

Nebraska Convention

Dr. S. H. Klein, Chairman of the Legislative Committee, Dr. R. B. Gilmour, Trustee, and Dwight S. James will appear on the convention program of the Nebraska Osteopathic Association, Monday, September 22, 1941, Hotel Lincoln, Lincoln, Nebraska.

Dr. Chandler Joins Johnson Clinic

Dr. W. P. Chandler a recent graduate of Des Moines Still College of Osteopathy and Surgery, moved to Jefferson on Monday, August 25, and is now associated with Dr. J. K. Johnson, Sr. and Jr., of the Johnson Clinic.

Dr. and Mrs. Chandler and their two children are residing at 204 West Lincolnway, Jefferson.

Membership Committee

....Dr. H. L. Gulden, Chairman of the Membership Committee, has laid tentative plans for a concerted membership drive beginning September 21 and ending September 27. He reports that approximately fifty members of the Society will participate in the campaign.

Applications for Membership

W. P. Chandler, D. O. Jefferson, Iowa.

—Dwight S. James, Sec.-Treas.

Pursuit for a Reason

(Continued From Page Two)

the blood pressure. Most sympathetic fibers increase both findings. A few only increase the pulse rates and not the blood pressure. If these fibers and their synapses are canalized in a disease we can understand how the blood pressure may be low when in most other instances it is increased. Hence in an infection at least the pulse rate is a better criterion than the blood pressure.

The bronchial musculature is relaxed due to probably again both vasoconstriction and inhibition. The mucus secretion is inhibited. Although this in itself does not increase the respiratory rate it does favor the free excursion of air and there is a coincident increase in the respiratory rate—usually in proportion to the pulse.

The sympathetic response increases the activity of some of our glands entirely and certain functions of others. The Thyroid increases the output of Thyroxin which in infections seems to act as the vital opsoninic substance. Other effects which we will not mention are increased also. The adrenal glands part of the sympathetic system, are accentuated to increased secretion normally in the sympathetic response. The adrenal medulla is derived from the parent tissue of the sympathetic system, the Neural Crest and is with possibly one exception the only visceral or somatic tissue that receives White Rami Communicantes directly from the lateral horn of the spinal cord. The full effect and action of adrenolin will constitute a paper in itself. The biliary action of the liver is inhibited but certain endocrine and enzymic ac tion is increased. For instance glycogenolysis is greatly stimulated and the blood sugar mounts so high in the sympathetic response that frequently glycosuria is found. This is true with or without coincident physical activity. The fibrinogen production is quite likely increased and many other functions we can presume to be accentuated though there has been no physiologic substantiation of it to warrant our stating them as fact.

In this brief and sketchy survey we see the sympathetic response is the production of a somatic individual. His Gastrointestinal functions are inhibited and he is ready to resist physical forces infections trauma strain. He is in condition to preserve himself. If the sympathetic response is overly inhibited and does not occur any or these forces may terminate the life of the patient. Treatment of children is so interesting because they are so uninhibited and respond sympathetically with startling rapidity. They recover quickly and get ill with equal speed. Many elderly individuals have so inhibited their sympathetic response that almost any infection or trauma is met with weak and protracted resistance. Hence the importance of understanding sympathetic response as much as is established.

—Byron E. Laycock D. O.

One Minute Sermon

By W. B. Millard

The Greater Fool

"Young gentlemen," said the professor to the incoming freshman class, "let us suppose that, by paying a modest sum in advance, you could get a permit to go into the largest department store and help yourself to everything—diamonds, precious stones, platinum watches, gold cigarette cases, fishing tackle, hunting outfits, monogrammed shirts, silk underwear imported suits, great coats, hats, shoes, everything; the only limit being what you could carry away. How many kinds of a fool would you call the fellow who, having paid the price, were to say, 'Guess I'll take a paper of pins and one shoe-string'?

"But the folly of such an one is as the wisdom of Solomon compared to the abysmal imbecility of the youth who pays in advance for a college education, which entitles him, to the limit of his capacity, to absorb the accumulated wisdom of the ages, to intimate acquaintance with the geniuses of all time to a knowledge of the universe in which he lives, and to the development of a trained mind which will make him a leader of men; and who then says, 'Guess I'll take a squash course, ride a pony over the hard places, and be content to keep an eyelash above the flunking point.'"

—Advance

Osteopathic Therapeutics

(Continued From Page Three)

ment many of these cases are, to state it mildly, extremely persistent. The response to topical treatment is greatly enhanced by the freeing of venous and lymphatic drainage to the legs as indicated above.

In the treatment designed to favorably affect the drainage, particularly of the hands and feet, it is beneficial to thoroughly articulate the bones comprising the carpus and tarsus to stretch the interosseous tissues of the meta carpal and metatarsal areas, and to thoroughly stretch the palmar and plantar fascias.

It was Dr. Carl McConnell who so persistently called the attention of the osteopathic profession to the great importance of what he chose to designate as "ventral technic" in the treatment of organs of the abdomen and pelvis. In many conditions of ptosis such treatment plays an important and useful part in addition to the normalization of spinal lesion pathology. Place the patient in the knee-elbow position with the thighs vertical, the head resting in the hands, the abdominal wall relaxed. Carefully, gently, but deeply, lift the abdominal structures and organs upward and forward toward the diaphragm. Have the patient follow this treatment up by taking this same position at bedtime, and take some deep abdominal breathing exercises contracting the belly wall muscles as much as possible on expiration and allowing them to distend on inspiration. This can be done for two to five minutes with many advantages in therapeutics of this area.

It is hardly necessary here to call attention to the **definite contraindication** of abdominal manipulation in any condition of acute abdomen.

—A. D. B., D O.

Birth

Born to Dr. and Mrs. William R. Marlow of Elgin, Illinois, a son, William Robert, on August 17.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

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Diagnostic Procedures

Perhaps there is no field of practice that is more abused and used as an alibi than Laboratory Diagnosis. The announcement of new procedures falls upon us so rapidly that we either disregard their significance or appropriate their use without proper consideration of their inherent value. It is true that much of the progress in treatment has been due to the continual and unfailing work of clinical laboratories which makes it possible to more accurately diagnose cases and extend a more truthful prognosis.

Those of you who have been in practice for a number of years have seen diagnostic procedures come and go, with old procedures discarded for new ones. You have seen gallant promises made for a given procedure, only to find it proven to exceed the inherent limits of accuracy. Seldom does laboratory procedure alone diagnose a case without interpreting it in the light of the history of the patient, physical findings, symtoms, etc. Students in our colleges today and young physicians find it difficult to realize that all of the procedures that we have at our command have not always been with us. They do not remember when a blood-pressure apparatus and a stethoscope were "new-fangled gadgets" and the use of a microscope a novelty.

Perhaps it is due to the fact that this is a mechanical age in which we live, that in recent years physicians have come to rely upon laboratory procedures without giving credence to the entire picture. How often a student asks an older physician how he knows a given patient is anemic when a blood count has not yet been performed! We are at a stage in the development of diagnostic procedures where we must learn to give each method its proper evaluation. On the one hand we must intelligently use and interpret modern laboratory procedures, and on the other hand we must know the art of taking a good case history, interpret the symptoms and physical signs.

There are two phases of the problem of laboratory diagnosis confronting the physician. First, the capacity of the laboratory technician to perform tests properly and accurately. This does not mean that technicians are knowingly dishonest, for they are

(Continued on Page 2)

Osteopathy Given Primacy

(Continued From September)

It is always difficult to say which leg of a three-legged stool is most important. There have been many contributions made to the healing art in the last two thousand years and it might be a matter of controversey as to which one was the most important. We may mention as examples the discovery of the microscope, the discovery of the circulation of the blood, and the development of antisepsis and anesthetics.

Without any doubt, one of the outstanding contributions in the world of therapeutics was the discovery of the basic and fundamental principles of osteopathy by Dr. A. T. Still. These osteopathic principles were revolutionary, they were profound, they were logical, they were inherently scientific. Osteopathic principles may be well defined as the application in diagnosis and treatment of the known and accepted facts in anatomy, physiology, chemistry and pathology. When I say accepted, I mean accepted by the scientific world. It is noticeable and of great interest that the new discoveries and new appreciations in these four fundamental sciences have not in any least particular changed the basic and underlying principles of the osteopathic concept. This fact alone should make any thoughtful individual consider seriously the claims of such a system of theorapeutics.

The result of the application of these principles in practice for many years has attracted wide and growing interest and continues to attract attention and increasing respect in the scientific world. The Osteopathic principle is scientific it is logical, it is sane, and it can be applied to an increasingly wide scope of human disabilities. The principles have not changed, but the scope of the application of these principles in therapeutics is by no means a closed book. One must remember that the osteopathic school of practice earned its place in the sun by curing or greatly relieving thousands and tens of thousands of the so-called incurable cases that had been the rounds, cases in which all treatment had been a failure and that a sufficiently large percentage of these cast-off cases were either partially or completely relieved by osteopathic diagnosis and treatment so as to finally establish the osteopathic concept and its application in treatment. Osteopathy is a disinctive school of practice and has made an outstanding contribution to therapeutics.

Now I think there is only one real excuse for osteopathic educational institutions and that is to teach osteopathy. Such teaching need not conflict with the policy of the many osteopathic educators who have determined that osteopathic education shall be sound and inclusive, that the standards in osteopathy education must be high, and that osteopathic physicians must be competent, modern physicians and surgeons, carefully trained to care for the wide range of human needs in matters of health and disease. I have had the honor for more than 25 years to be included in such educational councils and have endeavored to make my contributions to increasingly higher standards in osteopathic educational programs. I heartily approve of the policy that osteopathic physicians and surgeons shall have a broad gauge education, second to none.

To those of us who are giving our time to osteopathic educational institutions there has come the inquiry from some of the older members of our own profession, asking whether or not it is true that osteopathic colleges are giving less time, with loss of effectiveness, in teaching the principles of osteopathy and in emphasizing the wide spread ramifications of the application of these principles throughout the entire field of theraueutics. The fact that such an inquiry should be made is in itself a cause for concern. Anyone can recognize that with the growth of the osteopathic school of medicine, with the increase in the time and scholastic standards of its curriculum, if extreme watchfulness is not constantiy exercised, it might be possible that the germ of the wheat could be lost in the threshing. Personally I do not believe that this is true. Never in the history of the osteopathic profession, from its very foundation, has the soundness and worthwhileness of the osteopathic principle in application been so well established and so well fortified by scientific research as it is today in our colleges. The fact that osteopathic principles have been borrowed, purloined, imi-

(Continued on Page Four)

Embryology

The Biogenetic Law

Embryology is oftentimes referred to as developmental anatomy. This allusion reflects the fact that for many years after interest had been aroused in the subject only anatomical methods were available. Moreover, details of embryological physiology were not available until comparatively recent times. In addition, from the practical point of view, both the animal material and scientific equipment necessary to study embryology from the physiological point of view forbid the routine study of this aspect of embryology. In consequence of these factors, the term "embryology" generally has the implication of a series of anatomical stages from the egg to the adult organism. This is, of course, an extremely important phase of embryonic development, and some of its major features are to be reviewed.

Within the egg exist the potentialities for forming a complete individual. The sperm cell at the time of fertilization provides the stimulus for realization of these potentialities, and to some extent, modifies them by bringing to the egg paternal genetic influences. With this stimulation the egg, now called the zygote, begins a series of changes which are essential to the development of the individual. The changes which occur between the zygotic and the adult phase of the life of an individual constitute the study of embroyology; the history of events from the formation of the zygote until death of the individual comprises the ontogeny of that individual. The story of such transformations, leading inevitably to the formation of an organized human being makes a fascinating study. But the story does not end here, for the steps in the formation of an individual incorporate the more important aspects of the ancestry of that individual. In the protoplasm of the egg is bound up its past. Man is "a part of all I have seen" perhaps to a far greater extent than most realize.

Biologically this viewpoint is known as the Biogenetic Law or the Theory of Recapitulation. It is said that "ontogeny recapitulates phylogeny," or more loosely, "man, in the course of his development climbs his own family tree." This correlation was first

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MID YEAR CLASS ENROLLS JAN. 24, 1942

ΛΟΓ

The new semester finds the fraternity in status quo. We are all happy to be back despite enjoyable vacations spent in our respective homes.

The opening banquet of the year was held Monday evening, October 6. Everyone was in high spirits throughout the evening. Guests of honor were Dr. A. D. Becker, Dr. L. L. Facto, and Rabbi Monroe S. Levens. The very interesting speeches delivered by these able men were met with deep and consuming interest. Osteopathy, as one of the topics of the discussion, shone brightly. We all hope to ascend proportionately the new mountains of success that come into the horizon each succeeding year.

Homecoming being just a few days off, we take this opportunity to invite all alumni to their alma mater for a gala celebration.

To our new pledges, Monte Goose of Detroit, Michigan, and Ted Isaacson of Denver, Colorado, we extend greetings, and we are sure that they will come through with flying colors.

To Dr. and Mrs. Martin Friedenberg—congratulations!

Officers for the new semester are as follows:

Cerebrum—D. Feinstein
Cerebellum—I. J. Ansfield
Calamus Scriptorius—L. Radetsky
Pons—N. Kurzer
Calvarium—P. Green
Neurlogia—A. Abramsohn

ΠΤΣ

The I. T. S. is looking forward to a very busy year. The fraternity is growing like the new born and every member is working enthusastically.

Four meetings have been held, so far, this semester. At our meetings we plan to have special technique demonstrations, problems of practice etc., given by practicing physicians of Des Moines, with the second meeting of each month set aside for purely social purposes.

The freshman smoker was held at Babes' Cafe this year with forty attending. A fine steak dinner was served and several short speeches were made by the graduated brothers in the field. Among these were Dr Cash, Dr. Laycock, and Dr. Fisher of our faculty. Other doctors present were Drs. Sloan, Englund, Kale, and Kelsey.

Jack Lilly, our president, attended the last National Convention and had innumerable experiences of interest which he passed on to us at our first meeting which was held at his home.

We regret to say brothers Ralph Morgridge and Major Anderson failed to return this semester. We hope they are able to be with us in the near future. It is also with deep regret that we inform you of the illness of our brother, Dr. Jess Varner. Jess was established in practice when his health broke and he was unable to continue We are all hoping for his speedy recovery.

Osteopathically,
Corresponding Seck.

ATLAS CLUB

The coming of fall and the new school year has always been heralded by great activity and anticipation out "Arlington Way"; but this year a new all-time high was reached upon the return to school and to the fraternity of twenty-three men from the east, west, north, and south, each with the socalled unquenchable thirst for knowledge and to renew their efforts to emulate the "Old Doctor."

A good deal of this long-stored exuberance was given vent to in the form of a party last Friday night, October 3, at the Atlas Club. The entire organization was present to enjoy games, dancing, a midnight supper, and the social companionship and fraternalism that is so characteristic of Atlas.

We were honored at this, our first party of the year, by the presence of Doctors Tom A. Hewetson, Tom Griffith, and Robert Berger. These men are always a welcome sight around the club and add a very distinctive touch to any party. We regret that Dr. James Clapperton of the Grosse Point hospital, Grosse Point, Michigan, was unable to arrive in time for the party. Jim did spend a very busy week with us however, and there are many in Des Moines who hated to see Jim leave.

The annual Atlas Smoker was held on September 30, in honor of the freshman class and the unanimous concensus of opinion is that a finer group of men cannot be found. They should contribute much to the fraternity and the profession as a whole.

The Atlas Club would like to take this opportunity of extending to the Alumni of the school and of the club a most hearty Welcome Back. We sincerely hope that you include a visit to the Atlas Club as part of your Homecoming activity.

—V. Stoner, Stylus.

ΔΩ

The Deltas have begun another year as an active organization at D.M.S.C.O. Already two meetings have served to reacquaint and reunite us, though we missed one of our members who was ill. Rachel Payne, who so ably wrote these reports a year ago, is back with us now, and again in full number we look forward to an interesting year. Those of our alumnae who make use of the opportunities of Homecoming, we shall be happy to greet them and show them the school of 1941 of which we are proud.

—Mary Klesner, Corr Sec.

ΦΣΓ

At this time the members of P.S.G. would like to extend their greetings to all the members of the new freshman class from a successful stay at D.M.S.C.O.

The new men that have become affiliated with P.S.G. Fraternity through their pledging are Herb Harris, Jim Crane, Vic Zima, Gus Peterson, Frank Baker, Pat Lombari, Bill Grotty and Dick Snyder.

The first work-nite of the 1941-42 school year was held Sept. 17 and proved very successful with Dr. John Mattern being the main speaker of the evening; also he gave a demonstration in Osteopathic Technic. Thanks to Dr. Mattern for his fine cooperation.

Many new plans for improvements of the house are now underway and in the near future we hope to have these plans completed.

Friday, Nov. 7, 1941, has been set as the date for the Annual Fall Dance. Under the competant leadership of Phil Reames, the chairman of the dance committee, this should prove to be a colorful affair.

Mr. Robt. Blakely, a research man on foreign affairs for the Des Moines Register and Tribune, gave an interesting talk on the present war conditions, at the recent P.S.G. Smoker. Also proving very interesting were the entertainers imported from the Club 100.

We are glad to see Dave Heflin back in school after a year's absence. He seems to have made quite a hit already, especially across the street from the P.S.G. house.

Congratulations to Jerry Brower, who was recently married. His absence from the house will be greatly missed.

—D. W. F., Sec'y

Diagnostic Procedure

(Continued From Page One)

not, but they may be overworked or lacking in experience. Rather, it is the responsibility of the physician to secure the services of an experienced technician or oversee the work himself. A common example of this situation and its consequences may be illustrated by stamping the diagnosis of diabetes mellitus on a case just because sugar appears in the urine, without considering the presence of acetone in the urine and determining the blood-sugar level. Other examples are, faulty apparatus, improper dilution of blood, incorrect identification of blood cells in leukemia.

The second phase of the problem deals with the physician's ability to interpret the test and make use of it in outlining treatment and in making a reliable prognosis. For example, qualitative sugar in the urine, may simply indicate excessive carbohydrates in the diet, or it might indicate diabetes mellitus. This is just the beginning of a sequence of procedures which must be carefully directed by the physician.

These remarks in regard to laboratory diagnostic procedures are offered for your meditation and to serve as a preface to a series of brief articles on specific tests and their interpretation, to appear in subsequent issues of the Log Book.

—O. Edwin Owen, D. O.
Dept. of Clinical Pathology

Pursuit For a Reason

The Parasympathetic Nervous System or the Cranio-bulbar and sacral outflow of the Vegetative nervous system is not as widely distributed as the Sympathetic. It is usual that symtoms of visceral dysfunction expressed by the sympathetics are referred to the somatic area and produce there pain or hyper-esthesia, muscle contracture and restriction of articular motion. This segmental reflex arc expression may be acute or chronic, transient or long lived depending upon the degree of reflex arc disturbance, the period of its existence, the degree of resultant inflammation in the tissues segmentally innervated, and whether treatment is Osteopathic or Allopathic.

The Parasympathetic's express symptoms of any visceral irritation by producing reflex arc disturbances in the nerve supply to some other viscus—usually first the one or ones most closely related anatomically and physiologically and with progressively less frequency and slighter disturbance to those more distant. There are a few exceptions to each of these manners of expression that are important enough to at least mention.

The pathways over which any reflex arc expression occurs must be over one of the following, Viscero-Visceral, Viscero-Somatic, Somatico-Visceral, and Somatico-Somatic reflex pathways. Differentiating the visceral symptoms produced by the viscero-visceral, from the Somatico-visceral reflex arc disturbances is not frequently possible. We permit our knowledge of anatomy to dictate to what is known of physiology in making the foregoing statement as to the area of expression of each of the positions of the Vegetative nervous system. Consequently we will turn to the Anatomy and Physiology of the Parasympathetic portions of the Vegetative Nervous System and then consider with similar brevity the matter of expression by that system.

The Parasympathetic Nervous System is divided by the Medulla Spinalis into two portions, the Cranio-bulbar outflow that arises in the Medulla Oblongata and above, and the Sacral outflow that arises in the Sacral cord.

The Cranio-bulbar outflow has its cells of origin in the Nuclei of origin of the third, 7th, 9th, and 10th cranial nerves. The axis cylinders leaving these cells pass with the corresponding cranial nerve and with others with some blood vessels, and independently, and it is characteristic that these white, myelinated nerves are long pre-ganglimic fibers that

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The Log Book

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Editor .....Arthur D. Becker

Co-editor .....Robt. Drew

Osteopathy Without Limitation

Osteopathic Therapeutics

TREATMENT
(Number 33 in Series)

Endocrine Imbalance

Perhaps no phase of diagnosis and treatment of human illlness is commanding more attention at this time than are the disabilities associated with disturbance of the so-called ductless glands. Extensive studies and research projects are being pursued in many independent and widely separated groups. Many products prepared from endocrine glands or their secretions have been put upon the market and widely prescribed and used for well nigh limitless numbers of disabilities ranging from allergies to psychoneurosis. There has been much of unsupported theory and far flung conjecture in this interesting and relatively new field of endocrinological investigation with many blind alleys and many reverses. It has been particularly noticeable that a considerable part of endocrine prescription of two or three years ago has been discarded today as being either worthless or actually contraindicated. There is still much confusion and conjecture in the diagnosis and treatment of disturbances associated with endocrine dysfunction.

This does not mean of course, that research and investigation are not warranted and that certain facts have not become established with a fair degree of accuracy and understanding. It seems to be true, that there is a remarkable inter-relationship in the function of the various glands making up the endocrine system. There is evidently a high degree of interdependency and correlated activity between the thyroid and the adrenals between the thyroid and the pituitary, between the pituitary and the gonads and many other associations. There is no question, I th nk, in any ones mind but that the endocrines have a profound influence on body functions probably in large part affected through the autonomic nervous system. Certain endocrine clinical pictures have become definitely established such as toxic goiter, cretinism, acromegaly, giantism, certain types of obesity and a considerable number of other conditions.

It has become evident to many osteopathic physicians and surgeons as a result of many years experience and observation in these cases of so designated endocrine imbalance that osteopathy through normalization of lesion pathology has a real contribution to make in endocrine dysfunction that is useful and effective. When we remember that these ductless glands (as all other glands) have a blood supply and that that blood supply is nerve controlled and that at least in large part the secretory function of these glands is dependent upon secretory nerve fibers and that both vaso-motor nerves and secretory nerves are supplied by the autonomic nerve system, we cannot avoid the conclusion that osteopathic lesion pathology may profoundly disturb the functional capacity of these widely separated collections of glandular tissues.

There is no reasonable doubt but that a considerable element in the outstanding success of osteopathic treatment in many widely diversified diseases and conditions is to a very considerable extent, the result of the effect of such treatment upon the endocrine glands and their associated and integrated function. The brilliant results through osteopathic treatments achieved in numerous cases of isolated endocrine dysfunction is but an indicator of the still greater scope in application for osteopathic diagnosis and treatment in many conditions of endocrine imbalance. Areas of lesion pathology acting as causes of impaired function and responsiveness may be found in any or all portions of the spine from the sacrum to the occiput. These osteopathic lesion areas must be discovered, evaluated, and normalized throughout the entire spine, in order that integration in the functional capacities and resources of the entire endocrine system shall be made available and maintained.

—A. D. B., D. O.

MID-YEAR CLASS

We are already laying plans in anticipation of the coming January class. There is good reason to believe that it will be a substantial increase over previous mid year classes. This is the last class to be enrolled in which two years of collegiate work in liberal arts and science without specifications of subject matter is adequate qualification. Entrance qualification for the September 1942 class while not higher (still requiring two years of collegiate work), includes specification in subject matter contained in those two years pre-osteopathic preparation.

There are without doubt hundreds of young men and women who would welcome information regarding the opportunities for a life time of useful service, open to osteopathic physicians and surgeons. The recent recognition by United States Congress and by high officials of the government of the integrity and worthwhileness of osteopathic education and osteopathic service, should speak in plain words to young men and young women who are looking for a challenging, compelling opportunity to capitalize their abilities. Osteopathy needs recruits as does every growing professional group. The demand for osteopathic physicians greatly exceeds the visible supply. Des Moines Still College of Osteopathy will be glad to send literature to those interested.

Birth

Born to Dr. and Mrs. Kenneth Wooliscroft, of Castle Rock, Colo., a baby boy on August 25, 1941.

Pursuit for a Reason

(Continued From Page Two)

terminate by synaptic relationship around a number of cells in terminal ganglia situated on and within the walls of the structures supplied From these secondary cells fibers pass on to or through the structure to their end organs in the tissues. It is probable that Acetyl-choline is secreted at the endings of both the pre and post ganglionic fibers of the Parasympathetic.

The 3rd or Oculomotor nerve carries Parasympathetic fibers that arise in the Nucleus of Edinger and Westfall a part of the cranial nucleus of the 3rd nerve and also a few fibers from the Nucleus Salivatorius that pass with the 7th nerve and thence to the 3rd. These pass to the orbit where they supply the ciliaris muscle, a few fibers to the levator Palpebrae Superioris, motor nerve to the Sphincter pupillae, and secretory to the lachrymal gland.

The 7th Cranial or Facial Nerve carries Parasympathetic fibers that arise principally in the Nucleus Salivatorius. The fibers pass to the lachrymal gland, the mucosa of the head, the salivary glands excepting the parotid and are secretory to all these tissues.

The 9th cranial or Glossopharyngeal carries parasympathetic fibers to the Parotid and the Pharyngeal mucosa that are secretory.

The 10th cranial or Vagus carries Parasympathetic fibers that arise also in the Nucleus Dorsalis the Visceral Nucleus of the Vagus. The distribution of these fibers via the Vagus is great and complicated and control a great diversity of functions in a number of different structures—mostly stimulatory.

The vagus supplies secretory fibers to the mucosa of the larynx and respiratory tract, to the mucosa of the gastro-intestinal tract from the lower pharynx down to the middle of the transverse colon including the glands associated with the G.I. tract i.e. liver, pancreas. Reflex stimulation causes elaboration of secretions. These fibers are thought to be concerned with the volume of secretion by some authorities and with the organic constituents by others. It is not unreasonable considering the physiology of the Vagus that they do both. Vagus fibers pass also to the smooth muscle in the respiratory and gastro-intestinal tracts to those areas mentioned and they are motor to this muscle tissue. The Vagus has been called "The Motor and Secretory Nerve of the G.I. tract" and the Pelvic nerve or the Sacral outflow "The Emptying Nerve."

Parasympathetic vagal fibers pass to the Ludwig, Bidder, and Remak ganglia and the pathway continued by short post-ganglionic fibers to the heart. The effect upon the heart of inhibition. An interesting nerve, the Depressor nerve has sensory end plates in the wall of the aortic arch and passes centrally to terminate by synapse around cells in the Tractus Solitarius, associational fibers pass to the Nucleus Dorsalis to the cells that contribute efferent and inhibitory fibers to the heart. A reflex mechanism is thus established, one of several, to regulate heart rate and blood pressure. With each distention of the aorta due to ventricular systole these end organs are stimulated and result over the reflex pathway described above, in inhibition to the heart. Acetyl-Choline is secreted at the end organs of the Parasympathetics in the heart and Acetyl-Choline inhibits cardiac activity just as Sympathin liberated at the end organs of the post-ganglionic fibers of the Sympathetics increase it.

The vagus Parasypathetic fibers reflexly produce peristalsis and inhibit the sphincters of the G.I. tract. Mild or physiologic Vagal stimulation causes secretion of bile and pancreatic ferments, emptying of the Gall Bladder, and relaxation of the Sphincter of Oddi. Intense stimulation of the same nerves causes spasm of the Sphincter with resultant impedance to flow of fluid. This is doubtlessly etiologic to the physiologic discord that precedes certain pathologic involvements of these associated glands and ducts.

The Vagus carries Parasympathetic fibers to the Spleen, Kidneys, Adrenal glands, Thyroid glands and some other tissues but in all these the effect is not clearly demonstrated.

(To Be Continued)

I. S. O. P. S.

Membership Committee

Dr. H. L. Gulden, Chairman of the Membership Committee, conducted a state-wide membership campaign during the week of September 21 to September 28. Approximately fifty members of the Society participated in the campaign. Membership Committee subchairmen who aided in formulating plans and directing the activity in the various Districts are: DistrictI, Dr. George C. Boston; District II, Dr. Bernice DeConly; District III, Dr. James O. Ewing; District IV, Dr. W. L. Tindall; District V, Dr. C. N. Stryker; District VI, Dr. Beryl Freeman.

Many reports of membership teams had not been received by the end of the month, but those who did report within that time were able to show very satisfactory results. The teams not only solicited new members but called on those who were delinquent in paying this year's dues.

Radio Committee

Through the efforts of Dr. J. K. Johnson, Jr., Chairman of the Department of Professional Affairs, and Dr. O. Edwin Owen, Chairman of the Radio Committee, Mr. Harry E. Caylor, counselor of the Division of Public anad Professional Welfare of the American Osteopathic Association, came to Des Moines on September 9, and conferred with the officials of the Iowa Broadcasting Company on September 10. The purpose of this conference was to seek the elimination of the so-called talent charge required by that Company for presentation of all public service radio broadcasts by osteopathic physicians. The conference proved to be successful, and a talent charge will no longer be required for presenting public service features by the Iowa Osteopathic profession.

Public service radio programs will be featured over the stations of the Iowa Broadcasting Company once each month, beginning in the near future.

Dr. Owen now intends due to the newly established precedent, to confer in the near future with officials of all other broadcasting companies in Iowa in an attempt to secure adoption of a like policy, thereby enabling such public service programs to be presented to the general public in all sections of the State.

Nebraska

Mr. Lyman M. Stuckey, attorney, practiciing at Lexington, Nebraska, has been employed as lay secretary-treasurer and attorney by the Nebraska Osteopathic Association.

Board of Trustees

President Jordan has called a meeting of the Board of Trustees of the Society for Sunday, October 19. The meeting will be held at the Savery Hotel, Des Moines. Many important problems confronting the profession will be considered and acted upon at that time.

Legislative Committee

The Legislative Committee of the Society held a meeting at the office of Dr. S. H. Klein, 1212 Equitable Building, Des Moines, on Sunday, September 7, 1941. Dr. Klein was reelected Chairman of the Committee and Dr. H. L. Gulden, Ames, was elected Secretary.

Press Relations Committee

Dr. J. R. Forbes, Swea City, Chairman of the Press Relations Committee, supplied news stories pertaining to the district circuit meetings to all newspapers located in each district. His first release announcing the meetings and the nature of the program was followed by a second release setting forth the important events which transpired at the respective meetings including announcement of the newly elected officers and trustees.

Industrial and Institutional Service

Dr. Dale S. House, Chairman of the Industrial and Institutional Service Committee, successfully disposed of compensation claims for three members of the Society during the month of September by obtaining "payment in full" in each instance.

Applications for Membership

L. W. Jamieson, Wayne, Neb.
George F. Ingledue, Sioux City
Lawrence M. Nixon, Sioux City
R. M. Bahnson, Terril
Lloyd Hocman, Sibley
Theodore J. Schloff, Palmer
B. E. Poundstone, Plover
Euince A. Hall, Independence

—Dwight S. James

Embryology

(Continued From Page One)

expressed by the great embryologist von Baer, but has been misinterpreted in many ways since his time. Ernst von Haeckel, whose name is most frequently associated with the Biogenetic Law, leaves the impression that a human in his development will pass through a coelenterate stage, a fish stage, an amphibian stage, etc. Many students never correct this misconception, although it was not the original understanding as proposed in the Laws of von Baer. He believed and correctlyy so, that in the process of development of a human being, certain phases of his development would resemble similar phases of the embryonic development of various lower animals, but not the adult phases of these lower animals. For example, our gill structures bear only a very slight resemblance to those of an adult fish, but they resemble quite closely the early stages in the formation of a fish gill. The gill of a fish is an extremely specialized structure; the derivatives of the human embryonic gill arches and gill slits are extremely specialized structures, but they have become specialized in vastly different directions. It is the same type of error that is expressed in the conception that our ancestors are monkeys; we are specialized in one direction, the monkeys in another. We have had a common ancestor with the monkeys, but to say that monkeys are our ancestors is an anthropological absurdity. Likewise, it is embryological nonsense to state that we pass through a ".fish stage" in the course of development.

In spite of the aforementioned biological banalities there are certain apparent truths in regard to von Baer's correlation of embryological stages with the structure of lower animals. Certain analogies are too blatantly obvious to overlook, and our knowledge of genetic forces in evolution too secure to declare them coincidental. Protozoa are by definition unicellular animals; some of the protozoans apparently found benefit in an evolutionary accident which permitted similar cells to exist in close association with each other: these new associations constitute the colonial protozoa. In due time some of the cells of these colonial protozoa became specialized for one purpose, namely, reproduction. The other cells merely carried on the ordinary physiological duties of living. Gradually the number of cells modified for reproduction became more numerous, relatively; concurrently, the total number of cells in the aggregation increased. When this number of cells became so great, the aggregation assumed the form of a sphere for sound physical and physiological reasons. Later this ball of cells was to give rise to a hollow sphere. The last step was important, for otherwise, the cells at the center of the sphere would not have access to oxygen from without or egress for its own metabolic waste. We now picture an animal (**Volvox**) consisting of a layer of cells surrounding a vesicle filled with fluid some of whose cells were specially modified for reproduction. Then followed a revolutionary change in structure. The **Volvox** type of animal became modified by invagination so that a double walled cavity was formed. This is the hydroid type of structure, characteristic of the coelenterates. Next, a new layer grew between the outer layer (ectoderm) and the inner layer (endoderm); because of its position it is called **mesoglea.** With an inner layer for digestion, an outer layer for protection and sensory activity and a middle layer for support this type of animal had remarkable evolutionary possibilities. It is questionable just what path was taken to arrive at the vertebrate structure as we recognize it, and many theories have been proposed to account for the changes. Regardless of which of these may be correct the vertebrates show certain common characteristics. Among these we may mention)1 metamerism; 2) a dorsal, tubular nervous system; ;3) a segmented axial support; 4 a notochord at some time in development; 5) a closed circulatory system carrying a respiratory pigment; 6) an endoskeleton. These are the major common features. They are the characters which we, as humans, display together with all other animals having a back bone; these common possessions reflect a common donor—those unspecialized animals which were capable of becoming modified in such ways as to produce fish, frogs, snakes, birds and mammals, yet whose basic structure included such anatomically sterling qualities that it has been preserved in some form in all of these superficially diversified types.

The process of embryological development in the human necessarily hits only the high spots of the changes mentioned above. We all start as one cell, like the Protozoa. This cell divides into two, four and eight, thus resembling the colonial protozoa. Just as we find a ball of free-living cells in fresh water, we likewise have a morula stage in embryonic development. As **Volvox** found physiological expediency in forming a hollow sphere of cells, so embryologically we repeat the process to form a blastula. When hydra invaginated to form a doublewalled sac it set a phylogenetic pattern from which the blastula could not escape, and it therefore, becomes transformed into a gastrula. The hydroid mesoglea is paralleled in the embryo by the formation of the mesoderm. From these basic germ layers, now completed, develops the rest of the body. The endoderm lines the digestive and respiratory tracts, the latter being an outgrowth of the former; the ectoderm covers the outside of the body and consequently acts as a protector and source of sensory perception for the rest of the body; the mesoderm the last layer to arise, possesses embryologically the anatomical and genetic malleability which characterized the mesoglea of the hydroids, and it forms the rest of the body, with the exception of the endocrine system which has a composite origin. Some of the details of differentiation of the primary germ layers will be reviewed in the next issue.

—Hugh Clark, Ph. D.

Osteopathy Given Primacy

(Continued from Page One)

tated, and appropriated by other schools of therapeutics, without mentioning the word osteopathy or giving credit for priority of its principles, should profoundly impress every member of the osteopathic profession. Osteopathic education and osteopathic physicians and surgeons have a contribution to make that must not be lost to sight or have its brilliance diminshed. The world is full of colleges and institutions teaching therapeutics. Again I say there is but one excuse for an osteopathic educational institution and that is that it maintains clear-cut, distinct, and in place of first importance, throughout its entire curriculum, the osteopathic principles and their application in practice. If we fail to do this, oblivion will be the result of our school of practice. We must not fail.

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THE LOG BOOK

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Diagnostic Procedures

Number II

Hemoglobin Determination

As announced in the last issue of the LOG BOOK, there is to appear a series of brief articles on laboratory procedures, setting forth their present day use and application.

The determination of the amount of hemoglobin in the circulating blood is the first and basic procedure to be carried out in a blood examination. Hemoglobin is the respiratory pigment found in the red blood cells responsible for transporting oxygen from the lungs, through the blood-stream, to the body tissues. The efficiency of hemoglobin as an oxygen carrier is realized when we consider that 100 cc. of water at body temperature and at an oxygen pressure of 100 mm. of mercury stores only 0.33 cc. of oxygen gas, while the same amount of blood under the same conditions will carry 20 cc. of oxygen. This is 60 times as much. Thus, if the vascular system were filled with water, it would take 350 liters to carry the same amount of oxygen that is now carried by the 6 liters of blood in the average individual.

Human blood contains about 15.0 grams of hemoglobin per 100 cc. Our problem is to secure a reliable procedure for accurate determination, since the amount of hemoglobin in the blood is the basic factor upon which other hematological findings are based.

The most widely used and the **least accurate** procedure is the TALLQVIST METHOD, in which a fresh drop of blood on absorbent paper is matched against a graded series of color charts. The chart is arranged for 15.8 grams of hemoglobin to equal 100 per cent. This test can be used **only** to determine gross hemoglobin changes. The average error is at least 20 per cent. It should be used only as a preliminary check to reveal a possible anemic state, and **not** to calculate other data such as the Color Index. The **only** merit of this method is it's simplicity.

The SAHLI HEMOGLOBINOMETER is a much more reliable and accurate instrument. Blood is drawn from a skin puncture into a special pipette and transferred to the SAHLI tube containing a given amount of N/10 hydrochloric acid, mixed and diluted with distilled water until the brown color of the mixture matches the amber rods of the matching box when held to the

(Continued on Page Three)

"OF REAL INTEREST TO MANY"

The osteopathic profession and the osteopathic educational institutions find themselves today in a rather unique position. In a day when many professions are overcrowded, the osteopathic profession is confronted with the interesting situation that there is need and demand for osteopathic physicians and surgeons far in excess of the visible supply. This need and demand is an increasing one as an enlightened and educated public becomes more and more aware of the useful and constructive service made available by osteopathic physicians.

Next year, in 1942, the osteopathic profession will celebrate its 50th anniversary of the beginning of osteopathic education. There are six fully accredited osteopathic colleges:

They are the Chicago College of Osteopathy, Chicago, Illinois; College of Osteopathic Physicians & Surgeons, Los Angeles, California; Des Moines Still College of Osteopathy, Des Moines, Iowa; Kansas City College of Osteopathy & Surgery, Kansas City, Missouri; Kirksville College of Osteopathy & Surgery, Kirksville, Missouri, and the Philadelphia College of Osteopathy, Philadelphia, Pennsylvania.

The osteopathic profession has a right to feel proud of its educational institutions.

These osteopathic educational institutions have strong faculties, up-to-date and adequate equipment, and first-class hospitalization facilities. Osteopathic hospitals associated with our osteopathic educational institutions are completely staffed by osteopathic physicians and surgeons. They are giving a high type of service which brings credit to themselves and to the osteopathic profession. Osteopathic educational institutions have accomplished much and have earned and received official recognition from the United States Congress, the office of Production Management and the National Headquarters of the Selective Service System. They are serving an important part in the defense program.

The osteopathic profession has made remarkable progress and growth during these 49 years since the first osteopathic college was established. This growth has not been rapid but has rather been steady, conservative and continued. There has been no mushroom growth in the osteopathic profession. It has made its development and progress against well organized and persistent opposition and finds itself today in the unique position of having its basic and fundamental principles, at one time openly derided and scoffed at, now being adopted, borrowed and appropriated by all leading schools of therapeutics.

To be ultra conservative there are more than ten thousand capable, alert and well qualified young men and young women in the United States today who would be interested in the consideration of osteopathy as a vocation, if they were fully acquainted with the opportunities offered. These young men and women are seeking an outlet for their abilities. Osteopathy offers just such an outlet with opportunities for service second to none. The fact that osteopathic physicians and surgeons do well economically is important, but is of secondary importance. First and of greater importance is the opportunity of making a worth-while contribution to the well being of the people of the community where they may locate. To become capable and competent to relieve pain, to restore health, to banish sorrow and suffering, to give a new courage and a brighter outlook to those who come within the province of our professional care is an opportunity for humanitarian service which comes to those who have chosen to follow the work of an osteopathic physician and surgeon.

Des Moines Still College of Osteopathy is proud to be an affiliate of the American Association of Osteopathic Colleges. We are proud of our member colleges. We will be glad to correspond with qualified young men and women who may be interested in the opportunities offered in osteopathic education. We invite investigation and inspection of our facilites, our faculty, our laboratories and of our large and diversified clinics. Our recent catalogue is available upon request.

—A. D. B., D. O.

EMBRYOLOGY

The Primary Germ Layers

The primary embryonic germ layers,—ectoderm, mesoderm and entoderm—constitute important embryonic landmarks. A great deal of attention has been accorded their significance as distinct, morphalagical entities. In a previous issue (Log Book, October, 1941) the organ systems derived from the several germ layers were listed.

As organogenesis proceeds, however, it becomes increasingly difficult to state their importance individually, for most organs possess combinations of derivatives of separate germ layers structurally co-ordinated to make a functional unit. Consequently, although many structures can be traced in a direct line from an individual germ layer, the association of derivatives from two or more germ layers is an urgent embryological demand, and in the finished product the germ layers lose their individual significance. For, example, entoderm and ectoderm are epithelia, but there are no purely epithelial structures in the body which can carry on their functions without the physiological cooperation of other types of tissue, as for example blood. Prof. A. J. Carlson recently expressed this view point with the words, "We do not think with our blood, nor do we think without it."

It will be recalled that these mutually interdependent tissues of the adult took their origin from one cell, the fertilized ovum.

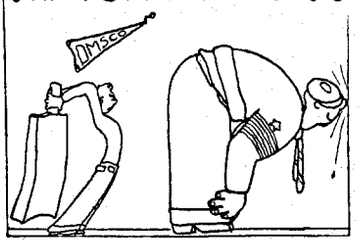
(Continued on Page 3)

Undergraduate Essay Prize Contest

For the sixth consecutive year, Dr. R. H. Singleton of Cleveland is sponsoring an Undergraduate Essay Prize Contest. The contest is open to Junior and Senior students. A prize of $25.00 is offered for the best essay on the subject **"Diabetes"** submitted from this college. A similar prize is offered for the best essay submitted by any of the colleges. This grand prize is to be awarded at the meetings of the A. O. A. in Los Angeles in July, 1942. Further details of the contest are available from the members of the committee.

—Hugh Clark, Chmn.
O. Edwin Owen
Lonnie Facto

FRATERNITY NOTES



ΛΟΓ

The biweekly meeting was held Monday night at the Cranial Vault. The business discussion was consummated in good fashion, and the rest of the evening was spent in planning for future work nights. It was decided that the next work night would be devoted to suturing. This project will be conducted by Edward Kanter, and should prove very interesting. By such lectures, we hope to correlate the theoretical with the practical. Surgical films have been negotiated for, and we take this opportunity to invite any student of the college to attend these work nights.

Sessions in Osteopathic Technic are also to be included on these work nights. We hope to apply, categorically, the Osteopathic complex to each infectious disease.

Reports from our alumni in the field show that the recent graduates are starting out in their respective Osteopathic careers in good fashion. We know that success is but a foregone conclusion to those who adhere to the Osteopathic Concept.

The cold wintry breezes find our two Senior "A" 's, Ed Kanter and Dave Adelman studying with ardor for the qualifying exams. More power to you, fellows!

ΙΤΣ

The Iota Tau Sigma was recently administered a transfusion. This rejuvenating factor was in the form of an election. An entire new board was elected on their past showing of fraternal enthusiasm which runs exceptionally high this year. The new officers are as follows: President, Robert Hatchitt, Vice President, Robert Bennington, Secretary, Jack Shafer, Treasurer, Charles Shultz, Corresponding Secretary, Bertrand Adams, Chapter Editor, Edward Mossman, Chapter Historian, Frank Nasso.

We wish to take this opportunity to thank the retiring officers for their splendid showing of fraternalism and we hope we can continue this example of fine leadership.

We also take this opportunity to congratulate the following members of the ITS who were lately installed into the honorary fraternities of the school. Bertrand Adams into the Phi Sigma Alpha and the following into Sigma Sigma Phi, Loyola Baudet, Cyrill Des Lauriers, and Robert Hatchitt.

It is of interest to note that opproximately half of our members are affiliated with one or the other of the honorary fraternities, and half of our members are not eligable because of underclass rating.

In closing we wish to congratulate the newly elected officers and we assure them that they have the entire support of each and every member.

—E. M.

ATLAS CLUB

Once again the time has rolled around when we are all looking forward to the Annual Atlas Hay Ride. The time has rolled on past the last two week-ends due to the inconsistancy of the weather man. Last week-end we were rained right out of the hay and into the house where we made the best of a bad stormy night by enjoying a "hard times" party. We haven't given up hope however, and it is with even greater anticipation that the club is looking forward to our annual hayrack, cider and doughnut party.

This year we plan to drive out to Adel to the farm of Paul Emmens, one of our new Freshman. From here we will go by hay-rack to the Coon River to enjoy the cider and doughnuts around the campfire. These plans of course are subject to change depending upon the weather man. In case of rain, we will wait two weeks and make the same trip by sleigh.

ΔΩ

This past month has been a busy one for all of us, but we found time to have a very nice evening at Mildred Weygandt's apartment where we enjoyed the Hallowe'en decorations, the cider and the doughnuts. Important business included in this meeting was the arrangement for a pledging dinner to be held at King Ying Low's Chinese restaurant this month. Two ladies whom we have asked to join us as honorary members are Mrs Kimberly and Mrs. Laycock, wives of our faculty physicians. They will be pledged at this special dinner, and we hope very much that they will enjoy their association with us.

Word is occasionally received from our alumnae, and sometimes they came back to the college for a litle chat or some special information. At the Homecoming festivities we saw Dr. Beryl Freeman, Dr. Lillie Dunlop, and others of our former classmates present for the instruction and good time that went with the celebration. We are always glad to hear from those in the field and to receive suggestions from them concerning the college or sorority.

—M. K.

ΦΣΓ

The members and pledges of Phi Sigma Gamma extend their best wishes to everyone for a happy Thanksgiving Holiday.

We of Phi Sigma Gamma were very fortunate in securing one of Des Moines' most prominent Psychiatrists, Dr. Welch, for our last Work Night. Dr. Welch gave a very interesting talk, followed by a discussion on Psychiatry from the Osteopathic standpoint.

The Annual Fall Dance, honoring our new pledges, proved to be a very colorful affair. It was held at the Chapter House on the evening of November 7th. The music was adaptly taken care of by Harold Morgan and his band. The usual spirit prevailing around the house, along with the many alumni present, lent an air of activity that was enjoyed by all.

On the evening of November 6th, Pledges Heflin and Wentling underwent their first degree of initiation. The last degree and Formal Inititiation were given these men on November 9th. We extend our congratulations to these men and are happy to now be able to call them Brothers.

Also on November 9th, the degree of Honorary Membership into Delta Chapter of Phi Sigma Gamma was bestowed upon Dr. Hugh Clark. We all know of his excellent work as Professor of Physiology at Still College. Congratulations to you, Dr Clark.

An interesting evening of technique followed by refreshments, was presented to the members by Dr. Humphries on November 10.

We are glad to have Brothers Clausing and Miller living in the house again after a brief absence. Brother Miller was recently elected House Manager.

—D. W. F., Pronatarius.

ΨΣΑ

Alan Becker, New National President of Psi Sigma Alpha

The local chapter of the national scholastic honorary society takes pleasure in announcing the addition of five new men , namely: Hal Beals, Harry Livingston, Bert Adams, George Lewis and Dick Bayne.

A banquet meeting was held honoring the members of the sophomore and junior class who maintained the highest grade average during their freshman year and during their freshman and sophomore years.

Carl Waterbury, Bob Patton and James Booth of the sophomore class and Lou Radetsky, Harry Livingston and Mary Williams of the junior class were the respective eligibles.

Dr. Fred Campbell was the speaker of the evening, giving a very interesting discourse on the symptoms and treatment of pneumonia.

The chapter recently held a meeting with Dr. Allan Becker, the new national president of Psi Sigma Alpha.

DESERT-ATIONS

About four years ago the D. M. S. C. O. Alumni Association started an educational drive to bring to your attention the need for more thot on the subject of student recruiting. I very clearly remember that when we planned some of the literature that we smoothed out the corners and made it sound a little less ominous than it was. This was not done to conceal the real need for we made it quite plain that unless something was done that the profession would suffer. We could not bring on this suffering but we could and did mention it. We read articles about this same situation coming from every angle and from a number of different sources and in the Fall of 1938 published a series of articles in the Log Book that were definitely to the point. In spite of these being written in very plain language very little has been done to keep us from losing what we have worked for, for many years and that is to bring up to realization the present acceptable standard of osteopathic education.

I am not the least bit optomistic about the present situation. The Alumni Association worked a good many hours overtime and put into letters and many meetings a considerable sum of personal money all of which was given gladly and freely but has fallen on barren ground for the most part. If we impair the efficiency of any one of our colleges because of lack of students the fault will not lie with the college but with the profession. Every alert osteopathic physician in active practice has an interest in each college of osteopathy. The loss of any part of our strength is serious with us for we have never at any time had an excess of quantity. With the lessened number of students entering our colleges this Fall we will be fortunate if we can, four years from now, replace those lost by death and retirement. This situation was predicted four years ago with the remedy given at the same time. This could have been made much less serious by concerted and sincere effort by the profession at that time. I hope it is not too late now but like our own Federal program of defense, it is going to cost a great deal more now than four years ago.

I like to talk to my old students who have been out in practic for twenty years. They furnish me with a lot of osteopathic enthusiasm. Nearly every one has been thru the fire in several ways. They have at times been sold down the river by the detail men and other glib salesmen. Some of them have felt at times that they did not get very much in school but almost without exception they have retained the major principles of osteopathy and in spite of temporary weaknesses they returned to osteopathic thinking with greater faith after each backslide. I have heard this a good many times during this past year while loaf-

(Continued on Page Four)

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor Richard F. Snyder, B.S.

Osteopathy Without Limitation

Osteopathic Therapeutics

TREATMENT

(Number 34 in Series)

It has been a matter of pleasure for me to prepare these brief articles which have appeared in the Log Book during the past three years under the heading "Osteopathic Therapeutics." It is my sincere hope that they may have proved helpful and valuable to many of our readers. I have enjoyed very much, the many letters that have been sent to me from time to time by osteopathic physicians and surgeons in appreciation. I have not deluded myself that these abbreviated articles were complete or exhaustive I have referred to them as "thumb nail" sketches and have tried to make them at least indicative of osteopathic thinking and osteopathic reasoning regarding a limited number of disabilities commonly found in general practice. I think one might go on indefinitely along similar lines but I recognize also that there might be an error in continuing them over long.

Just a final paragraph regarding osteopathic treatment which may involve the danger of some repetition. Occasionally I hear a discussion regarding what some one is pleased to designate as the standardized general osteopathic treatment. It is my profound conviction after nearly 40 years in osteopathy, that osteopathic treatment is not and cannot be standardized. Every osteopathic treatment must be contrived as the result of careful and searching osteopathic examination and osteopathic diagnosis. The discovery of lesion pathology and its evaluation is a necessary prerequisite for the administration of any osteopathic treatment. Osteopathic treatment must be as accurately prescribed, as carefully dosed and as skillfully administered as any drug in the pharmacopeia. There is a specificity in osteopathic treatment far and away beyond any other type of therapeutic application. Osteopathic treatment must be suited to the patient at the time. The prescription of treatment for each patient is not only individual to that patient but it is different each time and a new prescription of treatment is necessary whenever the patient is treated. The scope of application of osteopathic treatment in practice is co-extensive with human disabilities. Treatment may be suited to the new born babe, to the acutely ill, to those with chronic disease and to those of extreme age. Osteopathic treatment implies diagnostic skill of the first order. It requires years of careful preparation to become technically capable in administration. Judgment as to dosage and time intervals between treatments are matters of opinion requiring keen analysis and thoughtful experience. The basic, fundamental, underlying principles of osteopathy have not changed, but the scope of application of these principles in practice is an ever widening and developing one. To be a competent and skillful osteopathic physician and surgeon demands all that any scientifically trained individual can bring to it. It is a rare privilege and a great responsibility to be the representative of the osteopathic profession in any community.

—A. D. B., D. O.

Birth

To Dr. and Mrs. Russell M. Wright of Farrad Park,a daughter Kathrine Sue was born November 1 at the Detroit Osteopathic Hospital.

Mrs. Wright was formerly Dorothy Gay of Des Moines, Iowa. Dr. Wright was graduated with the class of 1929 at the Des Moines Still College of Osteopathy.

Diagnostic Procedures

(Continued From Page One)

light. Read the scale on the tube at the fluid level for the amount of hemoglobin in grams per 100 cc. or percentage. By the SAHLI METHOD 13.8 grams is equivalent to 100 per cent. Until recently, 17.3 grams was used as a standard for 100 per cent hemoglobin. (By any method, grams of hemoglobin per 100 cc. of blood may be converted to percentage by multiplying the amount in grams by 100 and dividing by the number of grams of hemoglobin which has been adopted as representing normal in the method used. i. e. 8.5 grams X 100=850÷13.8=61.5 per cent). The SAHLI instrument is accurate, inexpensive and easy to operate.

The NEWCOMER METHOD is equally good but requires expensive equipment. By this procedure, 16.96 grams of hemoglobin represents the normal level, or 100 per cent.

There are now available, photoelectric instruments which remove the human factor in the matching of color standards, (this being accomplished by a photoelectric cell) however, they are quite expensive and are practical only in clinics and hospitals.

It is becoming customary to report hemoblobin level in grams per 100 cc. of blood, rather than in per centage of normal because the amount of hemoglobin varies according to the type of procedure used.

In the next article features of the red blood-cell count will be discussed, along with it's relationship to the hemoglobin level.

O. Edwin Owen, D. O.

Embryology

(Continued from Page One)

The embryonic processes then followed a course which made recognizable an outside, a middle and an inside layer. Although these layers can be discerned as such by their position, this is not to state that they are either structurally or functionally independent. We again make the point that the germ layers are important landmarks, but beyond this statement the importance of the germ layers probably is subject to sharp limitations. They are important for establishing a system for the developmental anatomy, for observation of the steps followed in establishment of an increasingly close interrelationship between tissues, but all of the time that we refer to the "extremely important" germ layers, we must remember that this is from the point of view of the student, rather than the embryo. The same processes which formed "germ layers" out of the cytoplasm of the ovum are continuing; they will form adult tissues, organs and systems out of the germ layers. From the point of view of the embryo, the germ layers are no more important than any other individual stage. Embryological literature is so filled with reference to them however, that it has become a habit to refer to germ layers, and there are many advantages in their use for the study of histogenesis.

From the above discussion it is clear that no organ is composed of only one germ layer derivative; an attempt will therefore be made to outline the association of tissues with their germ layer origin. Entoderm gives rise to the epithelial lining of the digestive tract, primarily. It follows therefore that the important digestive glands will also have this origin, since they are evaginations from the primordial intestinal lining. The epithelium of the pancreas, liver and Brunner's glands are entodermal products. Because of embryonic association of the excretory system with the digestive tract, the distal portion of the urinary ducts are said also to take their origin from entoderm. The endocrine derivatives of the pharynx-thymus, thyroid and parathyroid glands—complete the list of structures arising from the embryonic gut, with the exception of the respiratory system. The lining of trachea, bronchi and lungs are elaborations of the laryngotracheal groove of the early embryo. It will be noticed that stratified squamous, simple columnar, pseudo-stratified columnar with and without cilia, glandular and non-glandular epithelium, exocrine and endocrine epithelia, cuboidal and simple squamous epithelia all take origin from the same embryonic tissue. Such a variety of structure and function from a single germ-layer would tend to cast some doubt on the simplicity of entoderm as a morphological entity.

The ectodermal layer gives rise primarily to two types of tissues, namely, epithelium and nervous tissue. Although these two types of tissue are structurally discrete in the adult there is a close functional association between them. The ectodermally derived epithelium forms a protective covering for the body and also provides a means of transmission of external stimuli to the nervous system by way of contributing the sensory portion of the organs of special sense, as for example, the retina of the eye (as well as other parts), the sensory portion of the inner ear, including that of the semicircular canals and the olfactory epithelium. Not only does the ectoderm form the outer protective covering of the body and the receptors of the special senses but further provides the nervous mechanism for reference of the impulses set up in the receptors to the part of the body where they will be of the greatest physiological benefit. The spinal cord, brain and nerves, as well as connective tissue of the nervous system are of ectodermal origin. Not only are the sympathetic ganglia formed out of ectodermal cells, but also some of the cells which, in another region might have formed sympathetic ganglia, are transformed by their position into the important medullary part of the adrenal gland. Likewise the pituitary gland is entirely of ectodermal origin, a part coming from the mouth cavity by evagination (Rathke's pouch) and a second part growing ventrally from the tweenbrain (infundibulum). A third gland of questionable endocrine function arises as an outgrowth from the tweenbrain. This organ, the pineal body, is photosensitive in lower animals, but its function in humans is problematical.

The mesoderm forms all muscle, connective tissues (except those of the central nervous system), blood and reproductipe tissues. In addition it forms excretory and reproductive epithelia, as well as the epithelial lining of the heart and blood vessels (endothelium) and of the serous cavities (mesothelium). It is obvious that many organs (bone, muscle, heart, blood vessels etc.) are formed out of mesoderm entirely; those organs which are not formed entirely of mesoderm are necessarily partly derived from mesoderm, for a blood supply is essential to all structures. Moreover, the hollow viscera are supplied with smooth muscle, which is, of course, of mesodermal origin also. Considering the extreme diversity of structures produced by the different germ layers and their intimate and essentially exact association in the adult tissues, it is remarkable that a starting point such as that following gastrulation with the establishment of the germ layers, could have been identified. It will also be clear that, although convenient from a pedagogical point of view, the germ layer theory leaves much to be desired from the point of view of development itself.

—Hugh Clark, Ph. D.

I. S. O P. S.

District Officers

The following are the new district society officers, elected at the October district meetings:

District I: Dr. L. A. Nowlin, Lane Bldg., Davenport, President; Dr. Byron A. Waylan, 827 Third Ave., S. E., Cedar Rapids, Vice President; Dr. G. A. Whetstine, Wilton Junction, Secretary-Treasurer.

District II: Dr. Clive R. Ayers, Grant, President; Dr. J. A. Kline, Malvern, Vice President; Dr. Bernice Worth DeConly, 301 Park Building, Council Bluffs, Secretary-Treasurer.

District III: Dr. J. O. Ewing, Bonaparte, President; Dr. H. L. Cloyed, Blakesburg, Vice President; Dr. G. W. Loerke, 206 South Market Street, Ottumwa, Secretary-Treasurer.

District IV:: Dr. J. R. Forbes, Swea City, President; Dr. P. E. Walley, Corwith, Vice President; Dr. W. L. Tindall, Woden, Secretary-Treasurer.

District V: Dr. Marvin E. Green, Storm Lake, President; Dr. Alice R. Paulsen, 21½ Central Ave., S. W., LeMars, Vice President; Dr. E. D. Parry, Moville, Secretary-Treasurer.

District VI. Dr. J. K. Johnson, Jr., Jefferson, President; Dr. John Q. A. Mattern, 806 Southern Surety Bldg., Des Moines, Vice President; Dr. N. A. Cunningham, 16 North Center Street, Marshalltown, Secretary-Treasurer.

Smallpox-Diphtheria Campaign

The following physicians served as County Chairmen in this year's smallpox-diphtheria immunization program sponsored by the Society in co-operation with the Iowa State Department of Health during the week of November 3.

District I: Dr. C. O. Stookey, Vinton, Benton County; Dr. W. M. Furnish, Tipton, Cedar County; Dr. R. F. Herrick, Clinton, Clinton County; Dr. H. B. Willard, Manchester, Delaware County; Dr. D. S. House, Dubuque, Dubuque County; Dr. Margaret Bates, Marengo, Iowa County; Dr. C. A. Reeves, Anamosa, Jones County; Dr. C. K. Risser, Maquoketa, Jackson County; Dr. W. Craig Tenney, Central City, Linn County; Dr. D. H. Grau, Muscatine, Muscatine County; Dr. L. A. Nowlin, Davenport, Scott County; Dr. J. J. Henderson, Toledo, Tama County; Dr. W. C. Enderby, Iowa City, Johnson County, Dr. C. A. Wyman, Grinnell, Poweshiek County.

District II: Dr. Bernice W. DeConly, Council Bluffs, Pottawattamie County; Dr. J. A. Kline, Malvern, Mills County; Dr. C. G. Johnson, Elliott, Montgomery County; Dr. Martha B. Morrison, Shenandoah, Page County; Dr. T. A. Kapfer, Greenfield, Adair County; Dr. N. D. Weir, Woodbine, Harrison County; Dr. G. W. Marston, Lewis, Cass County; Dr. Sherman Opp, Creston, Union County; Dr. Mark Sluss, Lenox, Taylor County; Dr. W. L. Gardiner, Corning, Adams County; Dr. Walter G. Nelson, Sidney, Fremont County; Dr. Phil McQuirk, Audubon, Audubon County; Dr. C. N. Maughan, Leon, Decatur County.

District III: Dr. Charles Wheeler, Centerville, Appanoose County; Dr. T. A. Steffan, Bloomfield, Davis County; Dr. A. F. Sulick, Burlington, Des Moines County; Dr. E. V. Chance, Winfield, Henry County; Dr. C. R. Reynolds, Fairveld, Jefferson County; Dr. R. E. Shaver, Sigourney, Keokuk County; Dr. M. G. Tincher, Ft. Madison, Lee County; Dr. E. W. McWilliams, Columbus Junction, Louisa County; Dr. J. G. Garton, Chariton, Lucas County; Dr. B. D Elliott, Oskaloosa, Mahaska County; Dr. J. O. Ewing, Bonaparte, Van Buren County; Dr. I. S. Lodwick, Ottumwa, Wapello County; Dr. P. L. Etter, Washington, Washington County; Dr. D. H. Wire, Corydon, Wayne County.

District IV: Dr. B. K. Bahnson, Burt, Kossuth County; Dr. T. S Clark, Bradgate, Humboldt County; Dr. E. H. Phillips, Garner, Hancock County; Dr. H. Lachmiller, Clarion, Wright County; Dr. E. E. Light, Ellsworth, Hamilton County; Dr. W. F. Moore, Grafton, Worth County; Dr. J. R. Shaffer, Mason City, Cerro Gordo County; Dr. L A. Doyle, Osage, Mitchell County; Dr. B. M. Hudson, Charles City, Floyd County; Dr. J. L. Craig, Cresco, Howard County; Dr. George Millenbaugh, New Hampton, Chickasaw County; Dr. B. M. Gotshall, Waterloo, Black Hawk County; Dr. Fritz Benz, Quasqueton, Buchanan County.

District V: Dr. J. C. Bishop, Rock Rapids, Lyon County; Dr. Marvin E. Green, Storm Lake, Buena Vista County; Dr. B. W. Jones, Spirit Lake, Dickinson County; Dr. W. C. Gordon, Sioux City, Woodbury County; Dr. T. E. Hart, Ida Grove, Ida County; Dr. John A. Hirschman, Cherokee County; Dr. Alice R. Paulsen, Le Mars, Plymouth County; Dr. C. N. Stryker, Sheldon, O'Brien County; Dr. H. A. Somers, Hawarden, Sioux County; Dr. A. M. McBurney, Mapleton, Monona County; Dr. Sara Miller, Sibley, Osceola County.

District VI: Dr. J. K. Johnson, Jr., Jefferson, Green County; Dr. Ralph Jack, Ogden, Boone County; Dr. H. L. Gulden, Ames, Story County; Dr. Donald R. Hickey, Bayard, Guthrie County; Dr. Laura Miller, Adel, Dallas County; Dr. Grace Nazarene, Dallas Center, Dallas County; Dr. Geryl Freeman, Des Moines, Polk County; Dr. James E. Gray, Newton, Jasper County; Dr. M. R. Anderson, Adair, Adair County; Dr. Paul Eggleston, Winterset, Madison County; Dr. Nellie O. Kramer, Pella, Marion County.

Reports received from Dr. J. M. Hayek, Director of the Division of Maternal and Child Health of the Iowa State Department of Health reveal that the members of the osteopathic profession handled more cases during this year's campaign than in any previous year.

Boone County Osteopathic Society

The Osteopathic physicians of Boone County met Monday evening, October 20, 1941, at the office of Dr. R. P. Westfall and formed the Boone County Osteopathic Society. The members elected Dr. R. P. Westfall, President and Dr. Arley Edgerton, Secretary-Treasurer.

Vocational Guidance

Dr. John Q. A. Mattern, Chairman of the Vocational Guidance Committee, announces that he has completed arrangements to have Dr. Arthur D. Becker, President of Des Moines Still College of Osteopathy speak to the students of Simpson College, Indianola, on Monday, November 17, 1941, on the subject "Osteopathy As a Career."

Membership Committee

Dr. H. L. Gulden, Chairman of the Membership Committee, reports that his membership teams during the present membership campaign reinstated forty-four delinquent members and obtained twelve new members.

Due to the outstanding work of Dr. Gulden, the present membership status of the Society substantially exceeds this year's **estimated** membership which had been based upon the increase in dues.

Applications for Membership

Joseph Dykstra, Des Moines.
Scott Fisher, Des Moines.
Estelle A. Wise, Cherokee.
Leo C. Harrison, Cherokee.

—Dwight S. James, Sec.-Treas.

Marriages

Halladay-Jorgenson

Maurice A. Halladay, son of Dr. H. V. Halladay of Las Cruces, New Mexico, married Miss Marjorie Jorgenson of Des Moines, Iowa, October 18, 1941.

DESERT-ATIONS

(Continued From Page Two)

ing around and thru letters. Not long ago I visited a former classmate who studied medicine following his course in osteopathy. He is now practicing Surgery. I asked him what his idea was of the ideal therapy. He is a man of 25 years experience in the field and has practiced osteopathy, medicine and surgery finally doing nothing but the latter. "There is so little to medicine that it is not worth fooling with from a true therapeutic standpoint. I started out with the idea that I had to know at least 100 perscriptions and when I quit writing them I had cut the list to four or five, none of which has any therapeutic value. The chemical crutches are valuable only as such for they do not cure. I send as many patients to osteopathic physicians as I can for I know that osteopathy is effective and safe and that is more than I can say for the drugs that are being used at the present."

Think it over truthfully and seriously and it can only come out one way and that is that our colleges are offering something that is "effective and safe." As osteopathic physicians we have something that the other fellow does not have and if we have the proper enthusiasm and method of presentation, our colleges will soon be filled beyond capacity.

—H. V. H.

Homecoming Day

It is with the feeling of greatest pleasure that we tell of the success of Homecoming Day on October 17th. It is a source of extreme satisfaction when a group of people cooperate together in a worthwhile enterprise and have it result in complete success. While the crowd was not quite as large as it was a year ago, there was a fine representation from out of town, and from out of the state, a number of physicians coming several hundred miles.

The program of the day went off on schedule and as planned. Dr. Frank F. Jones of Macon, Georgia, National President of the DMSCO Alumni Association, was an inspiration and a joy to all those who had the pleasure of hearing him both in the general assembly in the forenoon in the college and at the banquet in the evening. The music for the dancing party following the banquet was the best ever. An interesting comment is to be made in the fact that there were five past presidents of the AOA at the evening session.

Sincere congratulations and thanks go to those who made the event a happy one, Dr. Paul L. Park, secretary of the National Alumni Association and president of the Iowa State Alumni Association, and his committee and the active participation of the Interfraternity Council, the Osteopathic Women's College Club, the Student Council, the Local Chapter of the Auxiliary of the AOA and the Polk County Osteopathic Association. It was a genuine pleasure to have the visiting alumni of the college as well as the many who attended who were not alumni of the college, but its loyal supporters and well wishers. We were happy and proud to have the opportunity of showing these many visitors the various improvements about the college and the modern, fully equipped laboratories which were all open and in session. We look forward with pleasure to these Homecoming programs and have the privilege of looking back upon them with much satisfaction.

Dr. Arthur D. Becker, President of the college will be away for three or four weeks on business of the college. He left on October 27th and attended the Michigan State Osteopathic Association at Grand Rapids. Other appointments will carry him into various Michigan points, to several stops in Ohio and later into Wisconsin and Minnesota.

Dr.. Frederick Long, chairman of the research committee of the American Association of Osteopathic Colleges, spent a day at Still College last week. In addition to speaking to the student body in the auditorium, Dr. Long spent considerable time in conference with Dr. O. E. Owen who is research director of the college. Dr. Long is making a tour of each of the osteopathic colleges gathering research material.

Entered as second class matter, February 3rd, 1923, at the post office at Des Moines, Iowa, under the act of August 24th, 1912.

THE LOG BOOK

Accepted for mailing at special rates of postage provided for in Section 1103, Act of Oct. 3rd, 1917, authorized Feb. 3rd, 1923.

PUBLISHED MONTHLY BY THE DES MOINES STILL COLLEGE OF OSTEOPATHY

Volume 19 | DECEMBER 15, 1941 | NUMBER 12

Merry Christmas

Diagnostic Procedure

Department of Pathology
Number III
The Erythrocyte Count

How often we hear the statement or use it ourselves, "you are a little anemic." Perhaps we arrive at the conclusion from the patient's presenting symptoms and then verify it by subsequent blood-counts and hemoglobin determination. If we are to intelligently prescribe treatment it is necessary that we look into the situation farther and determine as nearly as possible the nature of the anemia. Anemia implies a qualitative or a quantitative deficiency in the erythrocytes. A normal adult should present 90 to 100% hemoglobin (13.0 to 17.0 grams of hemoglobin per 100 cc. of blood depending upon the method) and 5,000,000 erythrocytes per cubic mm. in the male or 4,500,000 in the

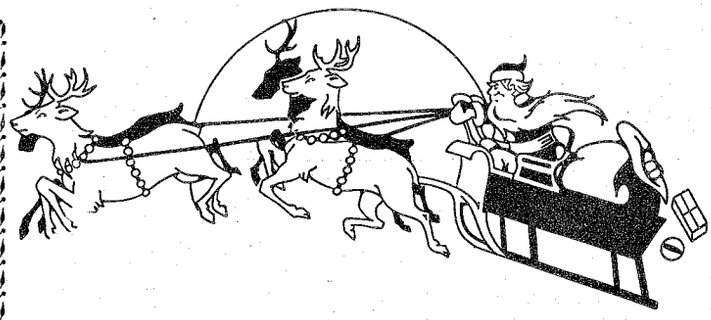
(Continued on Page Four)

National Board Examination

On December 4th and 5th there was given at Des Moines Still College of Osteopathy as well as at the other recognized osteopathic colleges throughout the country the first and second paths of the National Osteopathic Board Examination. This examination is somewhat new to the profession and is as yet recognized in only three states: Arizona, Rhode Island and Vermont. Other states should be quick to follow in their footsteps by granting licenses upon successful completion of the National Board.

Those taking the first part of the examination covering basic science were Roger Anderson, Bob Drews, Marvin Ford, Dr. Paul Kimberly and Richard Rogers. The latter three also took the second part of the examination covering the last two years of school work. The final section of the national board will be presented this summer at the National Osteopathic convention in Los Angeles.

It is too early for the results of the examination to be known at this time but we feel sure that the D.M.S.C.O. examinees will be rated among the top entrants when the scores are posted.



The Des Moines Still College family wishes to extend its heartiest best wishes and Season's Greetings to all of its friends, alumni and members of the Osteopathic profession. With our country at war it is of vital necessity that we preserve the spirit of Christmas and what it stands for. Let us hope that the New Year of 1942 will once again bring the peace and good will to men that we all hold so dear.

Osteopathically Yours,

R. B. Bachman
H. A. Barquist
Arthur D. Becker
B. L. Cash
Hugh Clark
L. L. Facto
Mary E. Golden
H. A. Graney
P. E. Kimberly
B. E. Laycock
H. J. Marshall
O. E. Owen
Katherine M. Robinson
R. C. Rogers
R. L. Powers
J. P. Schwartz
J. L. Schwartz
J. B. Shumaker
J. M. Woods

CALENDAR

CHRISTMAS VACATION	December 19 to January 5
GRADUATION	January 23
REGISTRATION	January 24
ROLL CALL	January 26
EASTER RECESS	April 3 to April 7
GRADUATION	May 29

EMBRYOLOGY

Endoctrine Glands

The physiological importance and multiplicity of functions of the ductless glands, the peculiar anatomical locations and their diverse histological structure continue to be both an inspiration and challenge to the best scientific minds of the world. Many of the amazing qualities of the endocrine glands can be explained by the heterogeneity of origin, but even this approach leaves many unsolved problems.

All the germ layers contribute to the formation of the endocrine system, and each in a variety of ways. The ectodermally derived glands include the pituitary body, pineal gland and adrenal medulla; entoderm gives rise to the thyroid, parathyroid, thymus, islets of Langerhans and duodenal mucosa; the remaining units of the system—adrenal cortex, ovary, testis and placenta—are of mesodermal origin. A statement of the germ layer origin of a structure is, however, a most inadequate, and perhaps even a misleading, designation of the development of an organ (Cf.

(Continued on Page 3)

Dr. Becker's Activities

During the last month and a half Dr. Becker has been on a tour of eight states on business of the college. He has been contacting members of the profession and speaking before students of various colleges and other groups. He was received with enthusiasm from all sides. On December 4th Dr. Becker spoke at the Park Hotel in Richland Center, Wisconsin on the subject, "The Diagnosis and Treatment of Hypertension."

Dr. Becker gave glowing reports of the annual state meeting of the Michigan Osteopathic Society at Grand Rapids in the last of October. More than five hundred registered. The program was of exceptional interest.

Our president found that due to the full appointment calendars of many of the Osteopaths, his conferences had to be made in the evenings and on Sundays. We will have a more detailed report of Dr. Becker's tour upon his return.

Pursuit for a Reason

(Continued From October)

Parasympathetic fibers pass to the remainder of the large gut and most pelvic structures by way of the sacral outflow of the Vegetative Nervous System. The sacral origin is in the upper four segments of the sacral cord, the fibers passing out with the 2nd and 3rd sacral nerves, then group themselves together to form the "Pelvic Nerve" which procedes to the different structures and terminate there in the ganglia on or in the viscera. The pathway continues by a great many more post gangionic fibers. The "Pelvic Nerve" supplies the kidneys, lower one-half of the large intestine and its internal sphincter, Urinary bladder and its sphincter, prostate, internal os of uterus and others. Stimulation of the sacral outflow to the kidneys, internal os of the uterus is not explained by physiology at present but to the other structures it causes secretion, emptying and inhibition to the sphincters.

The mullerian and Wolffian duct derivitives i.e. the ureters, Fallopian tubes, vas deferens, uterus (except the internal Os) and Vagina have no parasympathetic nerve supply. Both activating and inhibiting fibers must be distributed by the sympathetics therefore. (Best & Taylor)

Parasympathetic reflex arc expression of a visceral irritation is by way of the Viscero-visceral pathway only, except in two and possibly three instances where viscero-somatic pathways are involved also.

The first of these obviously is in the Sacral outflow. Here, by a number of processes to be considered later, the stream of impulses from a diseased or irritated pelvic structure creates a degree of segmental hyper-irritability sufficient to cause the production of vaso motor, trophic and other reflex changes that the tissue involvement of reflex or somatic expression, that we call secondary reflex lesion pathology, develops. In addition to this somatic expression there are also symptoms of dysfunction relative to other pelvic tissues via the viscero-visceral and somatico-visceral paths.

The second example of somatic disturbance via the parasympathetics is the possible or probable one, the other two being definite. In the upper Cervical area we find a communication between the upper two Cervical spinal nerves, the Superior Cervical Ganglia of the Sympathetics, and branches from the Vagus. Anatomists describe this communication but physiology as yet has not explained the function. Lesion pathology in the upper two or three Cervical segments develops so frequently in presence of Vagal irritation due to Visceral dysfunction or disease that it is obvious there is some mechanism in this area for symptom expression. Congestive headache is caused by these lesions and is one of the most frequently encountered symptoms, just as upper Cervical lesions are the rule in diseased individuals for this and several other reasons. It will certainly pay us well to think more of this area from the viewpoint of etiology, diagnosis, treatment, and research.

The 3rd area of somatic expression is of course by way of afferent Parasympathetic fibers and efferent nerves coursing with all cranial nerves as well as possibly with the upper two Cervical nerves. The nuclei of origin of the cranial nerves being connected by associational fibers just as the segments of the cord are connected by segmental associational fibers serves as another medium for reflex expression. Certain of these pathways are of sufficient similarity with regard to synaptic resistance that involvement of the pathway is most frequent. The referred pain and induced inflammatory reaction in the tissues superficial to an infected sinus is an example. The 7th supplies the muscles and the 5th the skin yet the inflammation involves both tissues. The nausea and vomiting associated with ocular and aural defects or irritations are notorious for directing our attention from the site of original involvement frequently rendering treatment incorrect. These pathways from the 3rd, 5th and 8th to the 10th Cranial being canalized. The supra-orbital pain or brow ache experienced upon the too rapid injestion of cold substances, beer included, is naturally known to all of us. In esophageal ulcer and carcinoma this reflexly induced pain can be very intractable. This pathway of course being probably afferent over the Vagus and subsequent involvement of the cells whose fibers course with the 5th Cranial, Ophthalmic division to the Supra-orbital area. With prolonged disturbance inflammation is induced there over the 7th and 5th cranial nerves. Others are the diplopia, vertigo, etc. associated with irritation to the Vagus in the G.I. tract. In most people these reflexes are possible, but in a few the synaptic resistance level is so high that canalization is not probable short of strychninization. Therefore in some, these symptoms will not occur at all and in some more only late.

In not a few the synaptic levels are so similar that only a slight irritation is needed to cause a great amount of pain and reflex inflammation. These patients are probably found lacking in detectable pathology and subsequently are dumped into that group of cryptogenic cases commonly called "Neurotic" or "Constitutionally inadequate." We find science has little to offer these patients at present but as we investigate and learn a bit about synaptic resistance and reflex patterns, it is likely some definite therapeutic application will be visualized. Probably 40% of ambulant patients are afflicted with some similar developed or acsuired synaptic level disturbance that renders them problem patients. Many of them are greatly benefited by the so-called general treatment. We and the patients do not know the reason except by deduction or inference. This pursuit for a reason will some day be productive.

More frequently than not the gradation of synaptic resistances screens out most aberrant impulses and not until an irritation has been present for a few hours or longer will the overflow or radiation phenomenon become operative enough for there to result reflex arc disturbance to either viscera or somatic tissue. The time element, the chronaxie of nerve tissue, the synaptic level of resistance, and the degree of toxicity local and general are consistant enough in most instances that diagnosis based on these factors is possible. Reflex involvement will occur usually to definite areas (Head's zones) and symptoms will occur in sequence viscero-visceral and viscero-somatic. Observation of and interrogation into the sequence and area patterns of reflex expression greatly favor accuracy in diagnosis. It has been said (J. B. Murphy) that when we encounter general belly pain, followed by nausea and vomiting, then localized pain at McBurneys point, with fever and leukocytosis, in that order and sequence, we have an acutely inflammed appendix in 299 cases out of 300. There may be other pathologic changes also but we will at least have the appendiceal inflammation. Hypochondriac pain followed by jaundice means obstruction to bile flow from an intraductal origin. Jaundice without pain can fade completely when gangrene of the viscus develops. Hense it is obvious why 70% of our diagnosis is history taking and 90% history and physical examination. It is equally obvious that the more we realize and understand the sequential development of a syndrome of symptoms the more reasonable diagnosis becomes and the more inexplicable it seems that we should expect the laboratory 5 or 10% to make a diagnosis for us. Certainly the history and the palpating hand to localize the segmental expression are the most potent forces in our pursuit for the reason for our patients illness.

—Byron E. Laycock, D. O.

O.W.C.C.

During the last month the Osteopathic Women's College Club held three most noteworthy meetings. On November 18th we met at June Anderson's to hear Dr. Mary Golden speak on "The Greatest Art in the World, the Art of Living."

On December 2nd, we took our husbands along to a meeting at th college to hear Dr. H. J. Marshall. The task we will face in our job as a doctor's wife was brought to our attention most amply by Dr. Marshall. Credit for this splendid program goes to Dorothy Bone, chairman of the committee.

The annual Christmas party held in connection with the auxiliary at the J. P. Schwartz home on December 9th, was a rousing success with a large attendance and throughly enjoyed by all.

—P. S.

DESERT-ATIONS

I returned from California with more enthusiasm than I have had for some time. A month with Dr. Hiss convinced me that I should open an office here in Las Cruces for the treatment of feet the osteopathic way and after a month of waiting have everything ready for the line of patients. So far it has been gratifying and the results are speaking for themselves. It looks now as if Las Cruces will be my permanent home for the climate and the reception so far in the office agree with me mentally and physically.

A letter the other day reminded me of a most pleasant visit and a miraculous work being done by my old classmate, Jean Claverie. Some of you who knew Jean 26 years ago and his history since will be happy to know that he is in excellent health and enjoying a really big practice in Los Angeles. Jean is combining osteopathy and eye treatment by the Bates method and it was a real thrill to talk with him for an hour recently. Every patient is treated osteopathically and Jean claims that his remarkable success is due to his basic osteopathic work. He is one that has used osteopathy and not found it wanting at any time.

The calendar reminds me that a class will soon graduate and another will be inducted into the study of osteopathy. I hope that many of you have found the time to do a little missionary work for osteopathy and have been able to send a student to one of our colleges lately. Our quantity needs to be increased. We have taken care of quality, so we think, by raising the standards, but unless our classes are increased our cause will suffer for lack of strength. We will soon know whether it is best to sift before entering or after graduation. There is one thing certain and it is that we must not let one chance slip past us to put osteopathic opportunities before those eligible to study.

Christmas promises to be very jolly here. Morrie and his new wife, Frances with her husband and two children will join me for a real family reunion. I hope each of you will have as happy a Christmas as is anticipated here in the desert country. Also, may the New Year bring you the answer to all of your little problems that have not been solved by the passing of 1941.

—Virg Halladay

The Log Book

The Official Publication of
DES MOINES STILL COLLEGE
OF OSTEOPATHY

Editor .....Arthur D. Becker

Co-editor Richard F. Snyder, B.S.

Osteopathy Without Limitation

Spine and Pelvis As a Unit

It is becoming increasingly evident to osteopathic physicians and particularly to those who

ARTHUR D. BECKER, D. O.

have made intensive and exhaustive study of problems of technique, that it is necessary to consider the spine and the pelvic girdle as a physiological unit. Individualized lesions in any part of the spine or pelvic do not, for the most part, exist by themselves but are rather localized evidences of loss of integrity of the balance and functional resourcefulness of the entire spine and pelvic girdle. The modern view is to look upon the pelvis as the foundation of the spine. Its supports must be equal and its articulations moveable so that it may adapt itself to the stresses and strains incident to locomotion and to the support of the superincumbent weight which it must carry. It is an adaptable structure and must have the full normal capacity for making such adaptations to the strains and leverage brought to bear upon it.

The spine consists of twenty-four moveable vertebrae, upon the upper most one of which rests the occiput. Twenty-five per cent of the length of the spine from the upper surface of the sacrum to the occiput consists of intervertebral discs. The integrity of the spine is dependent upon a series of guy ropes, made up of muscles, ligaments and facial planes. There is nothing in the structure in the vertebra bones that would be effective in maintaining the integrity of the spine in the erect position. Such integrity is due to the normal tenacity of the guy ropes which not only maintain normal relative position of vertebrae but by way of the muscular guy ropes act to move the spine in various desired movements and positions. If the foundation of the spine is disturbed and thrown out of balance, stress patterns form throughout the entire length of the spine. These stress patterns or postural stresses tend to localize at many possible and various points in the production of what are often times thought of as localized individual osteopathic spinal lesions. The normalization of such localized lesion areas and their maintenance in normal condition can only be accomplished as the result of the careful consideration and evaluation and normalization of the entire spine and pelvis as a physiological unit. Mediocre and unsatisfactory results in osteopathic treatment are in large part due to failure to recognize the importance of this physiological unity. Such a vision of osteopathic manipulative procedures brings a world of interesting problems, the solution of which will bring increasing satisfaction to careful, conscientious osteopathic physicians and surgeons.

A. D. B., D. O.

CHRISTMAS GREETINGS

The Christmas holidays have come this year to a war torn and sadly stricken world, with grief and blood shed, misery and suffering. I think no one who is at all sensitive to the pulse beat of the world can be truly happy or carefree. Even here in our own United States, we feel the horror and the savage back-lash of the almost world wide catastrophe. Man's greed and unrestrained ambition and lack of mutual understanding have plunged the world into a mad vortex of carnage and destruction.

While all of this is true, we here in this beloved country of ours, have much for which to be thankful and grateful. The fine spirit of brotherly love and kindly neighborly interest still permeates and directs our individual actions and our national policies. The Christ-like spirit of loving one another still directs our thinking and our actions. We are sincerely desirous of doing those things which will bring peace on earth and good will toward men.

The world has become increasingly small. Europe one hundred years ago, separated from us by weeks of dangerous ocean voyage, has now been placed upon our very doorstep by modern means of travel. Even the mighty reaches of the great Pacific have been shrunk to insignificant distance because of the almost unbelievable advances in modern transportation. There is no more isolation. We are near neighbors to the far corners of the earth and the political, economic and social satus of each is the immediate and intimate concern of all.

It behooves each thoughtful individual to do away with wishful thinking and idle dreaming in the world such as we face today. Each must prepare himself or herself with strength of character and mental development to take their place in a world that demands much of bravery, fortitude and intellectual vision. We must be useful citizens. We must gird ourselves with competance and skill. We must prepare ourselves for a useful service.

Osteopathy offers such a field for qualified young men and women. The opportunities that offer in ways of humanitarian service by osteopathic physicians and surgeons are numerous and of vital importance to the well-being and happiness of those who come within their care. Osteopathic education institutions have moved forward in rapid strides and offer thorough scientific and practical training to qualified young men and women who would be interested in the work of the modern physician and surgeon. Des Moines Still College of Osteopathy will be glad to correspond with such interested young men and women and to supply them with catalogs and literature for their information.

—A. D. B ., D. O.

Embryology

(Continued from Page One)

LOG BOOK, November, 1941, **The Germ Layers.)**

The pituitary body, composed of two distinct histological units, takes origin from two sources. The roof of the embryomic mouth evaginates upward as Rathke's pocket and takes its position beside a ventral evagination from the tween-brain, called the infundibulum. The two units form a composite gland, situated in the sella turcica of the sphenoid bone. The anterior lobe of the pituitary gland has been assigned so many functions that it has frequently been called the "master gland" of the body; the posterior lobe, less pretentious, produces but two well recognized hormones, an oxytocic factor and a vasoconstrictor factor.

The pineal gland arises as an outgrowth from the dorsal side of the tween-brain. It is believed to be the remnant of the parietal eye of many extinct vertebrates and is, indeed, photosensitive even in modern lizards. Its function in humans, however, is problematical.

As the neural tube is formed in the embryo, groups of segmentally paired cells fail to become associated with either the neural tube or skin. These are the neural crest cells, and ultimately they give rise to the dorsal root ganglia, sensory nerves and neurilemma sheaths, to the sympathetic ganglia and sympathetic motor nerves and to another series of structures called the chromaffin bodies. Of this group the carotid body and adrenal medulla are the most conspicuous. Perhaps it is the identity of origin of the adrenal medulla and sympathetic nerves that forms the basis of the sympathomimetic action of adrenalin.

Three glands—thyroid, parathyroid arises from the floor of the pharynx between the first pair of gill pouches, the parathyroids from the dorsal side of the third and fourth pairs of gill pouches, and the thymus from the ventral portions of the same pouches. It is frequently stated that these glands are "leftovers" from the respiratory system which were necessitated by the transformations accompanying terrestrial life. This can hardly be true, however, in light of the fact that all of the glands, with the exception of the parathyroids, are found even in fishes.

Secretin, a hormone responsible for pancreatic and hepatic secretions, was the first of the endocrine secretions to be identified. It is produced by the cells of the duodenal mucosa, perhaps the least respected of the endocrine glands. A duodenal evagination, the pancreas, has achieved greater prominence by virtue of the isolated apical portions of its duct system, the islets of Langerhans, whose duties in conjunction with carbohydrate metabolism are manifold.

The embryonic lining of the peritoneal cavity is responsible for the other glands of internal secretion. The neural crest which migrate to a position above the kidneys become encapsulated by a peritoneal fold which persists as the adrenal cortex. Still another portion of the urinogenital fold gives rise to the gonads. It would therefore be responsible for the production of the follicular and luteal hormones. The placental hormone (A. P. L.) is produced by the chorionic villi of the developing embryo and hence would be of ectodermal origin.

The interstitial cells of the testis presumably are not produced from the embryonic peritoneal epithelium, but would be regarded as derivatives of the underlying mesenchyme. Both the secretory epithelial and the interstitial cells of the testis are of mesodermal origin.

—Hugh Clark, Ph. D

I. S. O P. S.

Civilian Defense

Dr. Theresa Burns Honored

Theresa Burns, D. O , 216 West Montgomery Street, Creston, has been appointed by Governor George A. Wilson as a member of the Union County Civilian Defense Council.

County Chairman Appointed

President Jordan reports that he has appointed the following physicians to serve as County Chairmen representing the Society's Council on Defense and Preparedness in their respective Counties:

T. A. Kapfer, Greenfield Adair County; Warren L. Gardiner, Corning, Adams County; Charles Boyden, Waukon, Allamakee County; Charles A. Wheeler, Centerville, Appanoose County; Phil S. MrQuirk, Audubon, Audubon County; C. O. Stookey, Vinton, Benton County; J. W. Peterson, Waterloo, Black Hawk County; R. F. Westfall, Boone, Boone County; M. E. Green, Storm Lake, Buena Vista County; Marion R. Hunt, Greene, Butler County; Geo. A. Purdie, Rockwell City, Calhoun County; Lester McNichols, Carroll Carroll County; H. M. Sash, Atlantic, Cass County; W. M. Furnish, Tipton, Cedar County; H. H. Jennings, Mason City Cerro Gordo County; J. A. Hirschman, Cherokee, Cherokee County; George Millenbaugh, New Hampton, Chickasaw County; F. A. Martin, Murray, Clarke County; B. O. Hoard, Spencer, Clay County; Robert F. Herrick, Clinton, Clinton County; Anna E. Gelander, Manilla, Crawford County; A. F. Steffan, Bloomfield, Davis County; Bessie Nudd, Burlington, Des Moines County; B. W. Jones, Spirit Lake, Dickinson County; Clyde N. Maughan, Leon, Decatur County; D. S. House, Dubuque, Dubuque County; Thomas C. Mann Estherville, Emmet County; Stacy M. Andrews, Oelwein, Fayette County; B. M. Hudson, Charles City, Floyd County; H.D. Wright, Hampton, Franklin County; Walter G. Nelson, Sidney, Fremont County; J. K. Johnson, Jr., Jefferson, Greene County; Laura D. Hermann, Reinbeck, Grundy County; Don R. Hickey, Bayard, Guthrie County; Ernest E. Light Ellsworth, Hamilton County; W. L. Tindall, Woden, Hancock County; L. E. Gordon, Iowa Falls, Hardin County; N. D. Weir, Woobdine, Harrison County; E. V. Chance, Winfield, Henry County; T. S. Clark, Bradgate, Humboldt County; T E. Hart, Ida Grove, Ida County; J. E. Gray, Newton, Jasper County; C. K. Risser, Maquoketa, Jackson County; C. R. Reynolds, Fairfield, Jefferson County; Frances C. Nerby, Iowa City, Johnson County; Clayton A. Reeves, Anamosa, Jones County; R. E. Shaver, Sigourney, Keokuk County; W. D. Andrews, Algona, Kossuth County; M. G. Tincher, Ft. Madison, Lee County; E. W. McWilliams, Columbus Junction, Louisa County; B. A. Wayland, Cedar Rapids, Linn County; J. G. Garton, Chariton, Lucas County; J. C. Bishop, Rock Rapids, Lyon County; Paul E. Eggleston, Winterest, Madison County; B. D. Elliott, Oskaloosa, Mahaska County; D. H. Stone, Knoxville, Marion County; F. A. Gordon, Marshalltown, Marshall County; J. A. Kline, Malvern, Mills County; Matie R Kitson, Osage, Mitchell County; Rex Martin, Onawa, Monona County; W. S. Edmund, Red Oak Montgomery County; D. H. Grau, Muscatine, Muscatine County; C. N. Stryker, Sheldon, O'Brien County; Sara Miller, Sibley, Osceola County; Leo Sturmer, Shenandoah, Page County; Alice R. Paulsen, LeMars, Plymouth County; C. E. Worster, Laurens, Pocahontas County; R. G. Trimble, Montezuma, Poweshiek County; Leigh S. Beamer, Tingley, Ringgold County; Loren Green, Sac City, Sac County; L. A. Nowlin, Davenport, Scott County; Harold Somers, Hawarden, Sioux County; H. L. Gulden, Ames, Story County; J. J. Henderson, Toledo, Tama County; M. J. Sluss, Lenox, Taylor County; Sherman Opp, Creston, Union County; J. W. Rinabarger, Keosauqua, Van Buren County; I. S. Lodwick, Ottumwa, Wapello County; M. C. Day, Indianola, Warren County; Preston L. Etter, Washington, Washington County; B. D. Howland, Decorah, Winneshiek County; W. C. Gordon, Sioux City, Woodbury County; C. W. Peterson, Fertile, Worth County; H. Lachmiller, Clarion, Wright County.

It is the duty and responsibility of each such County Chairman to represent the osteopathic profession in his area, in co-operation with the officials of the State Society, by making available to the Civilian Defense Council of his County the services of the local osteopathic physicians, their institutions and resources for use in all phases of public health activity which may be initiated and sponsored by any such Council.

The members of the State Society's Council on Defense and Preparedness are Dr. S. H. Klein, Chairman, Dr. H. D. Wright and Dr. Phil McQuirk. It is the duty of this Council, under the direction and supervision of President Jordan, to advise and assist all County Chairmen in this most important undertaking.

Child Health Clinic

Dr. Mary E. Golden, Vice-President and Chairman of the Maternal and Child Health Committee of the Society, reports that four osteopathic physicians conducted the Four County Fair Child Health Clinic at Ackley, Iowa, on Monday, November 24, 1941. The four physicians who gave up their practice for the entire day in order to devote uninterrupted service to the child health project are: Dr. R. W. Baird, Ackley; Dr. Beryl Freeman, Des Moines; Dr. J. J. Henderson, Toledo, and Dr. Mary E Golden, Des Moines.

Professional Affairs

A meeting of the Committee Chairmen of the Department of Professional Affairs, was held on call of Department Chairman Dr. J. K. Johnson, Jr., at the office of Dr. H. L. Gulden, Ames, on Sunday, November 30, at 2:00 p. m. The following attended, in addition to Dr. Johnson, Jr., who presided: Dr. H. L. Gulden, Ames, Chairman Membership Committee; Dr. Mary E. Golden, Des Moines, Chairman Convention Program Committee; Dr. H. A Graney, Des Moines, Chairman Hospitals Committee; Dr. J. W. Rinabarger, Keosauqua, Chairman Ethics and Censorship Committee; Dr. John Q. A. Mattern, Des Moines, Chairman Vocational Guidance Committee; Dr. Ruth Paul, Des Moines, Chairman Convention Arrangements Committee; Dr. H. J. Marshall, Des Moines, Chairman Ophthalmology Committee; Dr. Theo. M. Tueckes, Davenport, Chairman Public and Professional Welfare Committee; Dr. Lester P. Fagen, Des Moines, Chairman Public Education Committee; Dr. O. Edwin Owen, Des Moines, Chairman Radio Committee; and Dwight S. James, lay secretary and attorney for the Society. The only Committee Chairman absent was Dr. J. R. Forbes, Swea City, who was unable to be present because of illness.

Committee reports were made followed by general discussion, considerat on and adoption of plans for future activity of all Committee Chairmen.

Following the meeting a most inviting and excellent buffet dinner was served to the members present at the home of Dr. and Mrs. Gulden.

Lions Club Elects Dr. Woods

Dr. John M. Woods has been elected to the Board of Directors of the Lions Club of Des Moines.

Dwight S. James, Sec.-Treas.

Diagnostic Procedures

(Continued From Page One)

female. If there is a deficiency in the amount of hemoglobin in the red-cell without an appreciable decrease in the number of cells we call it an hypochromic anemia. There may be either a decrease in the amount of hemoglobin in the individual red blood-cell or there may be reduction in the total number of cells. The size of the red cells varies with the amount of hemoglobin continued. If they are of average size (7.5 m) the term normocyte is applied, if smaller than normal they are microcytes, if larger than normal-macrocytes. The **Color Index** is used to express the amount of hemoglobin contained in each cell. This is determined by dividing the percentage of hemoglobin by the percentage of erythrocytes. (The percentage of erythrocytes is determined by multiplying the first two figures of the red-cell count by 2.) Therefore, if the percentage of hemoglobin is 100% and the total red count is 5,000,000 (100%) the **Color Index** is 1.0, a normal reading. If the Color Index is below 1.0 the indication is that there is **less** than the normal amount of hemoglobin in the individual red blood-cell. In many cases the total count will also be reduced, adding to the anemic picture. We find this situation chiefly in the iron deficiency anemias when the bone-marrow has not been supplied sufficient raw materials from which to manufacture hemoglobin, hence a smaller amount of hemoglobin is placed in each cell. Thus we have arrived at the patient's symtoms of dyspnea on exertion, easy fatigue and pallor, which are an expression of anoxemia. Keep in mind that all of the symptoms of anemia are due to **oxygen starvation** by the cells of the body. If the deficiency is in the early stages, the total red-cell count will be practically normal—an hypochromic normacytic anemia. If the condition has been present for a considerable time, the cells will be reduced in total number as well as in amount of hemogobin, an hypochromic microcytic anemia.

The Color Index in pernicious anemia is different. The total count will be very low, perhaps down to 2,000,000 or lower, but in order to transport as much oxygen as possible each cell is literally packed with hemoglobin and will be larger than normal. Therefore we call it an hyperchromic macrocytic anemia.

With these simple computations made we are able to more intelligently proceed with treatment. In the next article the classification of anemias will be discussed. It is an interesting fact that anemia is one form or another is very prevalent at the present time and deserves careful consideration by the physician.

—O. Edwin Owen, D. O.

An Unusual Case

A most interesting experience was recently related by Dr. R. J. Haas of Crescent, Oklahoma. In his own words:

"On August 2, 1940 I delivered triplets to a woman of our local community, one boy and two girls weighing 4½, 4¼ and 4 lbs. On November 14, 1941, I was again called to attend this same mother and ushered into the world my first set of quadruplets. There were two boys and two girls, weighing 5, 4, 4 and 3¾ lbs. I'm looking forward to next year for quintuplets.

"In my six years of practice I have made 312 deliveries with only one still born and no maternal deaths and am enjoying obstetrics better every day."

Dr. Haas gives Osteopathy a good deal of credit for his commendable record. We would appreciate comments and unusual cases from other alumni and members of the Osteopathic profession.

We Regret

Space this month prohibits us from reporting the fine work of our organizations of which we are justly proud. Each one, however, wishes you a very Merry Christmas and Prosperous New Year. We list them below and assure you that we will return their space to them in the next issue.

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ATLAS CLUB

Dr. and Mrs. Wm. F. Costello of Monroe, Michigan, wish to announce the arrival of William Francis Costello III, November 26, 1941.

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