

Physico-Clinical Medicine

AND

CLINICS OF DR. ALBERT ABRAMS

Vol. 9

MARCH, 1925

No. 1

Founded by
ALBERT ABRAMS, A. M., M. D., LL.D., F. R. M. S.

Editor
HARRY W. WIRKLICH, Ph. G., Ph. C., M. D.
(Columbia University)

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Blanche and Jeanne R. Abrams Memorial Foundation
DR. FRED E. MOORE, President
2151 SACRAMENTO STREET
San Francisco, California

PHYSICO-CLINICAL MEDICINE

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**Albert Abrams, A. M., LL. D., M. D. (University of Heidelberg), F.R.M.S.
Distinguished for His Discoveries in Medical Science**

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All the subject-matter of Dr. Abrams in this Journal refers to his original research work. Citations from other sources will be duly accredited. The motive of this Journal is to replace the cell doctrine by the Electron theory. Vital phenomena are dynamic and the actions of organisms should be regarded as processes and not structures. Exclusivism is excluded inasmuch as all sciences are embraced in practical medicine and diagnosis must invoke physical, biological, and chemical methods. All problems in medicine not in accord with the progress made in physical science are doomed to perish.

We invite and encourage articles on ERA but do not necessarily hold ourselves responsible for the ideas contained therein.

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2151 SACRAMENTO ST.

SAN FRANCISCO, CAL.

MARCH, 1925

SIR JAMES BARR

This distinguished Britain, formerly President of the British Medical Association, is held in exalted regard by all those physicians who have been trained in the College of Electronic Medicine and its Branch Colleges. He was in close touch with Doctor Abrams for a number of years, and his understanding and comprehension of the work, associated with his investigating mind, have been outstanding features in the progress of ERA.

It would seem that Sir James Barr, Dr. Mather Thomson, Dr. Eric Perkins, and other leading physicians who were first in carrying the message of the Electronic Reactions of Abrams to the English public should have been accorded due recognition along with that rendered to Doctor Abrams' discovery by the Scientific Committee of Investigation which gave its report to the Royal Society of Medicine on January 17, 1925.

On account of the reports of the Board of Trustees and the affairs surrounding the College litigation in our January JOURNAL, and the extensive space devoted in the February JOURNAL to the newspaper and periodical articles from London regarding the investigation of the above Committee, this is our first opportunity of publishing the splendid address by Sir James Barr to the South West of London Post-Graduate Medical Association.

COLLEGE AFFAIRS, LEGISLATION AND E R A

By Dr. Fred E. Moore, President

Tentative Date of Board Meeting—

The uncertainty as to the date of the Board of Trustees' Meeting, owing to the various details of the final settlement of the compromise over litigation, seems to be at a near end. On account of the attention required from the eight or ten attorneys associated with the case, the delay seems to have been unavoidable. The tentative date for this meeting is April 9, and as the Board will have numerous things to work over and will have to reorganize plans in general, it will probably take at least a couple of weeks' sitting to accomplish this. As soon thereafter as possible the April JOURNAL will appear with a general report on all matters in which the graduates in ERA are interested.

Spirit of Toleration—

I wish to call attention to the article by Dr. C. W. Young appearing in this JOURNAL. Although Doctor Young has never taken up the study of ERA and I have no reason for thinking that he has any intention in this regard, he shows by this paper discussing "Scientific Evidence" such a rare spirit of toleration that I felt it was especially suitable for our JOURNAL. If the mind of the medical world was pervaded by such a spirit, progress would rarely be retarded.

Doctor Burnett's Research Laboratories—

Those physicians who use ERA in their practice have read so many knocks and rebuffs in the columns of the Press and periodicals during the past two years that I feel constrained to present in this number a copy of the review of work being done in Dr. J. C. Burnett's Research Laboratories at Alpine, New Jersey, which appeared in the New York World, September 18, 1924. Mrs. Burnett's rare spirit of devotion to a great cause will go down in ERA history as one of the greatest factors in the development of Albert Abrams' discovery. Doctor Burnett's unselfishness in working for universal welfare and without the slightest element of self-advancement can bring about results of only the most significant value to ERA. Doctor Burnett and his skilled Assistant Laboratory Scientist, Mr. J. H. Hallberg, are working in the spirit of true investigators in a patient and exhaustive manner, rarely mentioning the steps in their work.

A Modern Miracle—

The public mind is ripe for the grasping of the ERA principle. It is only natural that the remarkable things now under daily observation should lead into the channels of ERA thought. I am printing herein a short editorial from the San Francisco Examiner of March 5. We listened over an inexpensive crystal radio set to President Coolidge's Address and could easily imagine we were sitting within a few feet of him. Three or four hours after his Address, appeared

pictures in the San Francisco papers of him as he stood there before the inaugural audience. These came over the telephone, and within an hour the prints had been made and were ready for the Press. We can only wonder at the stubbornness of the medical mind in grasping the significance of ERA in view of the present achievements of science.

Convention of Middle States Society—

The Convention of the Middle States Society is to take place in Des Moines, Iowa, at the Savery Hotel, May 19, 20 and 21, and we urge every Electronic physician who can possibly do so to attend. So much is transpiring in the way of progress in the work that one can scarcely keep abreast unless he attends these conventions. A message from the Middle States Society will be found in this JOURNAL.

Legislative Activities in Utah—

Legislative activities in some of the states have required considerable attention the past several months. An outstanding victory for ERA took place in Utah in the defeat of a pernicious bill directed specifically at Doctor Abrams' discovery and the practice of ERA. If the ear of the public could always be reached, legislation aimed against new discoveries and their development for the welfare of the world would rarely if ever be possible. It is fortunate that members of legislatures who keep their ears close to the ground realize the unfairness of embarrassing these developments in any way. Nevertheless a constant struggle is necessary on the part of those physicians who are blazing the trail for ERA. Great credit is due the small group of only a half dozen physicians of Utah who use this method in their practice in their recent victory. In such cases it is not usually well to differentiate the service of some particular individual, but we feel it is only right to attract attention to the efficient leadership of Dr. R. E. Maupin of Salt Lake City. Dr. W. B. Secrest and Dr. Claire M. Gouley of Salt Lake City also were among those who carried the burden of responsibility with Doctor Maupin. The first one to attract my attention to the Utah situation was Dr. Grace Stratton Airey, now of Los Angeles, but formerly a practitioner in Salt Lake City. Word had come to her from Dr. H. E. Wilkinson of Hurricane, Utah, urging the necessity of immediate action in connection with this grossly unfair bill (H. B. 131). We immediately communicated with Doctor Maupin and the Defense Committee of the American Electronic Research Association and found that the Salt Lake City doctors were already on the firing line. Before the legislature realized the nature of the bill, it had been recommended favorably by the Committee in the Lower House and passed by the Assembly; but it finally died, as we understand it, in the sifting committee of the Senate. We have had favorable reports from several other states whose legislatures have closed without legislation interfering with the development of ERA. The Defense Committee of the American E. R. A. is doing wonderful work all over the country and deserves the financial support of every physician who uses ERA in his practice.

Erie, Pennsylvania, Situation—

In our February JOURNAL we discussed this briefly and cautioned our doctors against the traps laid by the detractors of ERA. We are printing in this JOURNAL

a "Reply to Doctor Darrow," by Dr. J. V. McManis, who was called to Erie from New York City, where he was busy in matters of the Research Committee of the American E. R. A., of which he is Chairman. Owing to the fact that Doctor Darrow featured one of his newspaper stories around "The Man from Missouri," Doctor McManis sent a letter to the Editor of the same paper covering the matter in general.

Doctor Boyd and the Emanometer—

In view of the reports of the London investigations which appeared in our February JOURNAL, it seems apropos to publish a review by the London Truth, April 9, 1924, of the earlier steps leading up to those investigations. This copy of Truth has just come into our hands through the kindness of Dr. Hadley V. Carter of New York City. All those familiar with ERA will recognize the confusion of the writer in failing to differentiate between the Abrams diagnostic set of Dynamizer and Reflexophones and the Oscilloclast which is devoted exclusively to treatment. He states, "Whereas you have to 'lay on' your electricity to Abrams 'Magic Box,' you do not do anything of the sort with the emanometer." The writer is no doubt now acquainted with the fact that Doctor Abrams' diagnostic instruments have no electrical connection whatever and that it is only the energy from the blood specimen in the Dynamizer which is detected, identified and measured through the use of these instruments and the human reagent by the physician making the diagnosis.

Doctor Abrams always said that instruments would be perfected and development of his discovery would be fostered by others than himself which would eventually bring general recognition of ERA; so all glory to any physician or group of scientists who attract favorable attention to the existence of the Electronic Reactions of Abrams, as was the case recently in the British Isles.

Dr. W. E. Boyd's achievement in developing his instrument, the emanometer, for diagnosis by Electronic Reactions, attracted the interest and favorable attention of this scientific committee of investigators. His protective method of procedure against contamination and all other possible adverse influences is the most splendid confirmation of Doctor Abrams' teachings. Doctor Abrams bored many of his students by his reiterated words of caution in regard to the care and safeguards necessary if the work was to be exact and definite in its findings.

To Doctor Boyd we express all due appreciation for his accomplishments in the field of Electronic Medicine, and we bespeak for his fertile brain further developments which will aid in speeding the day for a wider recognition of Doctor Abrams' discovery and his own personal achievements.

ON SOME OF ALBERT ABRAMS' METHODS OF DIAGNOSIS AND TREATMENT

An Address, and Demonstration

By **SIR JAMES BARR, C.B.E., D.L., L.L.D., M.D., F.R.C.P.,
F.R.S.E., Knight of Grace of the Order of the Hospital
of St. John of Jerusalem in England.**

**Delivered at the South West of London Post-Graduate Medical
Association on October 16 and 17, 1924**

MR. PRESIDENT AND GENTLEMEN:

It was with a considerable amount of reluctance that I accepted your invitation to give an address and demonstration on some of Albert Abrams' Methods of Diagnosis and Treatment, not merely because the subject is one which has excited a good deal of controversy of late, but also because I have given over medical teaching for some years and the only education in which I am now interested is my own, which I hope will not be completed in this sphere. I have no wish to follow the example of Dr. Abrams who killed himself trying to teach others, or rather was persecuted to death by his professional brethren, I might almost have to say stoned to death if such missiles were permissible in the present day. He was ever anxious to see his views generally accepted in his life-time, and he knew that his life was going to be a comparatively short one. On more than one occasion I told him not to bother, as it did not matter to him in the least whether his views were accepted or not; fifty years hence someone would make the same discoveries, and then he would get the credit, whether he would know of it or not in another world was not for me to say.

The discoveries of Mendel passed unnoticed until they were re-discovered thirty years later by three independent observers, de Vries, Correns, and Tschermak. Dr. Thomas Young's vibratory theory of light was held in derision in this country until it was espoused in Germany. Jenner, Simpson, Pasteur and Lister had their venomous detractors. More recently the Royal Society held up the work of Sir Jagadis Chunder Bose for ten years, owing to the strenuous opposition, and, I may add, ignorance, of the physiologists, who resented the intrusion of a physicist into their preserves. In 1903 he communicated to the Royal Society his investigations on mechanical responses in plants; on the velocity of the excitatory waves in plants; and on the excitability and conductivity of plant tissue. The Royal Society in refusing publication told him that "the results were of fundamental importance, but as they were so wholly unexpected and so opposed to existing theories, that they would reserve their judgment until, at some future time, plants themselves could be made to record their answers to questions put to them." I do not know what kind of questions they intended to put to plants, and what kind of answers they expected to receive, but at any

rate Bose set about inventing various instruments such as the Phytograph, and finally he created the Crescograph, a magnetic instrument which magnifies over one million diameters. With this instrument he was able to record not only the growth of plants, but also the effects of the environment and even of a passing cloud on that growth. His paper on the universal sensitiveness of matter had previously been refused in 1901 owing to the antagonism of the physiologists. When one compares the crude and often inconclusive work of physiologists with the delicate experiments of Bose, it is impossible not to feel amazed at the barbarity of the former. Finally in March 6th, 1913, the Royal Society accepted his paper on "An Automatic Method of transmission of excitation in Mimosa."

No wonder that Abrams' work has been opposed by the self-exalted climbers, the "wise and prudent," who having attained a small heaven of their own, with a very circumscribed horizon, wish to make as large a hell as possible for their antagonists.

My hesitation was finally overcome by my admiration for your President, Dr. Biggs, whom I learned to respect and esteem when he was Chairman of the Ethical Committee of the British Medical Association.

The fact that you have invited me to give this address is evidence that there is a spirit of enquiry abroad; you are not satisfied with the ignorant vituperation of the *Lancet* and *British Medical Journal*. It was ever thus in medicine; every advancement has met with rebuffs. It has always been a matter of condemnation, enquiry and acceptance. I am glad that you have arrived at the stage of enquiry; the self-interests of Editors, Commissioners, and correspondents should count for naught when the truth is at stake. I do not ask you tonight to accept anything which I tell you until you have proved its accuracy; the only knowledge worth a tinker's curse is that which a man acquires for himself and makes his own.

There should be no popes in medicine, where no one is infallible. The only men who make no mistakes are those who never make anything else. If you keep your eyes open you will find plenty of the self-satisfied infallibles among those who are ruthlessly climbing to the top of the profession.

Two months ago I saw a prescription given to a lady by one of this class. It contained bromide of Ammonium, aromatic spirits of ammonium, compound syrup of the hypophosphites, and tincture of sumbul. What this jumble was intended to do I cannot conjecture, but at any rate it had not the intended effect, as they lady told me that she only took one dose and it made her very ill. I hope there is not a general practitioner in London who would prescribe strychnine in an alkaline mixture, yet this is what was done by a man who, in newspaper parlance, is described as the eminent physician.

I well recollect when I was a junior student being asked a question by the late Sir William Gairdner. I did not know the answer, and I was not going to make a guess, but candidly said, "I do not know, Sir." He replied, "That is an excellent frame of mind to be in; now you are in a position to learn something." As Pasteur said, "I do not know, I will try to find out." That is the spirit in which I wish you to come here tonight, and if so I shall try to teach you all I can in the time at my disposal. If you merely come to criticize, you had better stay away.

A man must serve a time to every trade;
Critics are ready-made.

In 1899 and 1900, when Abrams described his discoveries of the lung and cardiac reflexes in the *Medical Record* and *New York Medical Journal*, I was attracted by his work with which I have kept in touch ever since; thus a mutual friendship and, I may add, admiration were established. As I do not belong to the advertising fraternity it has only been very recently that the company which I keep has attracted attention.

I believe I may claim the honour of introducing Abrams' methods to this country, though I nearly had to share that distinction with Dr. Auld. In 1903 there was an animated controversy in the *Lancet* between Dr. Auld and Dr. Harry Campbell on Abrams' pulmonic reflexes. Dr. Auld stuck to facts which did not seem to comport with Dr. Harry Campbell's views on the physics of the chest and therefore he would have none of them. I should have thought that theories ought to be made to agree with facts, and not the reverse. The controversy seemed to end in a draw rather than a battle royal, but why Dr. Auld never returned to the arena I cannot say; perhaps he found more congenial work.

In 1912, in my presidential address I concluded that "the future of medicine will rest with enlightened and highly educated general practitioners—men who will look after the health of the community, who will see that mechanism of a high order is produced, and who will see that the machinery of the individual is properly lubricated and not subjected to any unnecessary friction or strain. The enlightened public will look to their medical attendants as guides, philosophers, and friends both in health and disease." I believe the majority of your members are general practitioners, and to such I wish to address myself. If I do not save you many consultations, and render numerous operations unnecessary then I shall consider that my address has been in vain. There is nothing in Abrams' methods beyond the competency of the ordinary general practitioner, but I wish to warn you that Abrams' methods are not substitutive of, but supplementary to, ordinary medical knowledge, and the better you know your physiology the more successful you will be in the acquisition of this new knowledge. Your burdens will not be thus lightened but increased, and you will be subjected to a good deal of obloquy and misrepresentation from your stick-in-the-mud conferees, who will not take the trouble to learn anything new. If your object in life be to make money, to attain place and power, to become medical attendant to Lord Tom Noodle, a Prime Minister, or any other notability who will serve for advertising purposes then I would strongly advise you to eschew Abrams and all his ways. In fact, for worldly success you should be an ignorant advertising hypocrite, an accomplished charlatan. On the other hand, if your aim in life be the acquisition of knowledge, and the desire to do your best for your clientele, then I would advise you to widen your vista, and obtain information from every available source. Be eclectics, choose the best of everything in this best of all possible worlds. Be not content with pragmatism because it works and pays, be not satisfied with anything short of the absolute truth—if attainable. I do not wish you to infer that I consider Abrams' methods as the summum bonum; they are merely steps in the path of progress. The more scientific medicine becomes the simpler it will become. The tendency of all science is towards simplicity, but unfortunately the so-called orthodox medicine of the present day is becoming more abstruse, and less and less scientific; moreover, it is ceasing to be even a refined art. Abrams recently said, "The present day represents an

avalanche of discovery in physical science, but medicine still retains its pristine glory unsullied by such discoveries." There is not a medical man alive who could have discovered wireless telephony, and very few among the high-brow of our profession understand the use or are capable of handling Occam's razor.

So far as Abrams' methods are concerned I am self-taught, and there is no reason why you should not acquire similar knowledge. Moreover, you have the advantage of many inventions which did not exist when I began. However, I have had the pleasure of sharing in the evolution of his work which was often so rapid that I told him that I wished he would move more slowly, so that others could keep pace with him.

I have often said that if Abrams had done nothing more than discover the cardiac and pulmonic reflexes he was worthy of a prominent niche in the temple of fame. In America and France Abrams' cardiac reflexes must have saved thousands of lives, yet in this country up to a few years ago these reflexes were only carried out by myself, and a few of my medical friends.

There is perhaps no man who has done more to popularize Dr. Abrams' spinal reflexes than Dr. Jules Regnault of Toulon, formerly Professor of Anatomy, and now a distinguished surgeon, and, by the way, Editor of the "La Cote D'Azur Medicale." When the *Lancet*, and *British Medical Journal* were spraying their virulent venom Dr. Regnault was writing a highly appreciative obituary notice of Dr. Abrams.

I shall not state all the methods of eliciting the spinal reflexes, but simply give you the one which I usually adopt. I take a slightly conical cork, about one-and-a-half inches long, and an inch or an inch-and-a-quarter at the largest end—this serves as a pleximeter. As a plexor or concussor I use a small mallet with a handle about seven inches long, and weighing about one-and-a-half ounces. The end of the cork—the wide end as a rule—is placed on the spine of the vertebra which you wish to concuss, and then thirty moderately rapid, sharp taps are applied with the mallet to the other end of the cork. You next give thirty taps on the second dorsal spine in order to prolong the reflex which you have elicited. I called this the fixation complement, a term which was afterwards adopted by Abrams. You then wait for half a minute, and repeat the series, again wait for fully half a minute and give a third series. The reflex should then last for an hour or two. In severe cases the reflex should be elicited several times a day, but in ordinary cases I usually find morning and evening sufficient. To save repetition I may say that after eliciting any reflex you should finish with the second dorsal.

We will begin with what I consider the most important reflex, the reflex of cardiac contraction. If you concuss the seventh cervical and second dorsal spines as before indicated in the case of a huge heart you will reduce the transverse measurement by two inches; any heart which does not thus respond is in a bad way, and is not likely to be benefited much by digitalis, or other cardiac tonics. This reflex also contracts the aorta and other large arteries, so that you may not be able to reach the aorta which was previously thumping in the supra-sternal notch. This reflex was first employed by Abrams in the treatment of thoracic aneurism, and he had a large number of symptomatic cures. Although a large sacculated aneurism does not disappear it ceases to expand and contracts sufficiently to render life comfortable. I have found it specially valuable in large

fusiform aortas—the vessels contract, and with the diminished size of the heart the amount of blood thrown out at each stroke is lessened. Of course other treatment should not be neglected; if there be a syphilitic basis it should have attention, and any calcareous degeneration should be treated with decalcifying agents. The blood pressure falls, and the aorta often recovers sufficient elasticity to alter the loud clanging aortic second sound. A dry diet is necessary.

The patient should avoid all strenuous exercises, though he need not be confined to his bed, nor even to the house; moderate exercise improves the circulation in the muscles and thus lowers the general blood pressure. Many years ago I was consulted by a very able surgeon in his day, formerly Surgeon to the Liverpool Royal Infirmary, and a very religious man. I separate the religion from the surgeon as there is no necessary connection, but the religion comes in what follows. He had difficulty in swallowing owing to the pressure of a thoracic aneurism on his oesophagus, and wished me to pass a bougie. This I refused to do. He then said that if I had any hesitation in the matter I had better call in one of my colleagues. I told him that I did not care if there were a dozen colleagues present there would be no bougie passed on him in my house. He replied, "Why not? I don't care if I died this moment in your consulting room." "But," I retorted, "I do; I should have to wipe up the mess, and, perhaps, give an explanation to the coroner." This drew a compacent smile from him, and he was content to submit to my treatment. He led a moderately active life, and although he had many severe anginal attacks—from one of which I relieved him in a public meeting—he had a happy life to about the age of 84 years. I saw him many times on his death-bed with the late Dr. Steeves, and he died as he lived, a religious God-fearing man.

This cardiac reflex stimulates the vagus, probably from its connection with a spinal centre, hence it is useful in all disease in which there is deficient vagus tone. In the *New York Medical Journal*, February 15, 1922, I said of Abrams' cardiac reflexes, "they are not intended to resuscitate the dead, but for revivifying the living they are inestimable." I shall mention a few of the diseases in which this reflex of contraction should be employed.

Auricular fibrillation. I believe I have saved and prolonged the lives of many suffering from this affection. Of course it may be said that they would have got over the attacks anyhow, and the prolongation of their lives is a matter of opinion. However, the death rate is very high, so any procedure which will arrest an attack is worthy of consideration.

Quinidine is the favorite remedy nowadays, but the success claimed under its use is certainly much less than 50 per cent. In a recent record at the Bradford Meeting of the B. M. A. by Professor John Hay, of 166 pooled cases with valvular disease thus treated, only 27.7 per cent had normal rhythm for more than three months. What became of the remaining 72.3 per cent is not stated—presumably they went to Davy Jones' locker. In cases of fibrillation without valvular disease the success was 40 per cent. The best results were obtained in Graves' disease, especially if the toxæmia was treated by a partial thyroidectomy. Personally I have never prescribed quinidine because I do not believe in poisoning my patients, and partial thyroidectomy is wholly unnecessary.

I shall only trouble you with one case treated by the Abrams' cardiac reflex of contraction. About sixteen months ago I found a medical man in the library

of the Liverpool Medical Institution suffering from great cardiac distress; he thought he was dying and he certainly looked it. He was attending the Annual Branch Meeting of the B. M. A., and on account of the attack he had to leave the meeting. I recognized that he was suffering from an acute attack of auricular fibrillation. I took him into a private apartment and carried out this reflex. Of course I had not the cork and mallet with me, but I always carry an equally useful pleximeter and plexor, viz., the first two fingers of my left hand, and the ulnar side of my right closed fist. In less than half an hour the attack was over, and he was able to return home, unaccompanied, a distance of twelve miles. This reflex does not last indefinitely, and it is well to carry it out several times a day until all risk of recurrence has passed, and then once or twice a day to maintain the cardiac tone. He had afterwards two minor attacks due, I believe, to neglect of this cardiac reflex. In one of these attacks an Electro-cardiogram was taken by Dr. Wallace Jones. For the last twelve months this reflex has been daily executed by his wife, and there has been no recurrence. He told me recently that a medical man asked him how he managed to keep in such good health, and when informed his medical friend laughed heartily at such credulity. My patient retorted, "You can laugh as much as you like, but I have had the experience and can now get on without any medicine." Any intelligent being can carry out this reflex with a little instruction, so you can have any number of unqualified assistants—I have several hundreds—without any risk of being hauled up before the general Medical Council. I know a lady who thus employs her grandson, aged 7 years; the boy was delighted when I gave him a special mallet and cork for his own use, as he suffers from asthma—we will deal with the pulmonary reflexes later.

When you have arrested the fibrillation I think it is as well to maintain the reflex for a time by the synergic action of digitalis, strophanthus, or pilocarpine. The old Guy's pill to which has been added one grain of the sulphate of quinine, answers admirably; this pill should only be continued for a short time. A tonic of pilocarpine, strychnine, quinine, phosphoric acid and syrup of the hypophosphate of calcium is useful at any time.

So far as I am aware Abrams never wrote anything about auricular or ventricular fibrillation, and I believe the employment of this reflex in the treatment of fibrillation originated with myself. I am therefore specially anxious that you should see the other side of the picture. Our present knowledge of fibrillation is largely based on the experimental work of Professor MacWilliam, therefore I wish to fairly represent his views on the subject, though in the time at my disposal it is impossible to do so fully. I would strongly recommend you to read carefully every paper you see by Professor MacWilliam, and your diligent study will be well repaid. In connection with fibrillation I wish you to peruse the following articles by him: "The Mechanism and Control of Fibrillation in the Mammalian Heart," Proceedings of the Royal Society, October 17th, 1918, page 302; Auricular and Ventricular Fibrillation, British Medical Journal, August 11th, 18th, and December 22, 1923. MacWilliam refers to fibrillation succeeding vagus inhibition, and says that "fibrillation of the ventricles has also been seen following vagus stand still, but this is a very rare phenomenon compared with the development of auricular fibrillation in similar circumstances. In the course of researches over a great many years I have obtained records of only a very few examples." Professor MacWilliam evidently does not claim that fibrillation is a common

sequence of vagus inhibition and possibly the few examples which he has seen may have a better explanation. It would seem to me that the powerful Faradic current which he employed in his experiments would be quite sufficient to set up fibrillation no matter what preceded.

The Abrams reflex of which we have been speaking is certainly a vagus stimulant, and I believe it acts through the vagus in arresting the fibrillation. Now if the sequence mentioned by MacWilliam was a common event, my treatment would be like giving the patient a bit of the hair of the dog that bit him. I give the following long quotations of his from the proceedings of the Royal Society because it might seem opposed to my experience: "The relation of the vagus to fibrillation is quite different in auricles and ventricles; in the auricles the vagus favours fibrillation in the presence of some irritation; e.g., **electrical stimulation**; in the ventricles vagus influence can often be clearly shown to retard or prevent fibrillation, while not able to remove the latter once it has been established. The difference is due to the stronger action of the vagus on conductivity than on excitability, as a rule, in the auricles; this naturally promotes fibrillation. Pilocarpine, in suitable doses, acts similarly to the vagus, and its relation to fibrillation in auricles and ventricles is to be explained on the same lines." I have many times inhibited my own heart to the extent of abolishing the pulse in all my superficial arteries, without producing either auricular or ventricular fibrillation, but then I was not countering the vagus action with any powerful electric stimulus.

Professor MacWilliam has shown that anything which increases conductivity and depresses excitability of the cardiac muscle "tends to be in some measure protective against the occurrence of fibrillation and favourable to recovery from that condition when once it has been established." The drugs which he found useful in checking fibrillation were urethane, strontium chloride. The potassium salts depress conductivity and thus favour fibrillation, while this effect is countered by strontium, and, as Ringer long ago showed, by free calcium ions. Adrenalin is often beneficial by reducing excitability and improving conduction. Yet, "in many instances fibrillation was induced by a small dose of adrenalin and remedied by the intraventricular injection of a very large dose." Injections of Hirudin (into the saphenous vein) of about 8 to 10 mgrams. per. kilogramme of body weight showed striking effects in opposing the development of fibrillation." The effects of pilocarpine seem to have been variable in his hands, though he found it "much more potent than the vagus, though its influence is in the same direction and of the same nature in many respects at least."

I think it would be scarcely wise to apply indiscriminately to the human being this information derived from experiments on cats with strong Faradic currents giving 400 to 600 shocks in the minute—conditions which never do appertain in the human body. MacWilliam says that ventricular fibrillation is the most frequent cause of sudden death, but as the period from the inception of fibrillation to the final stoppage of the ventricles is only a matter of a few seconds his conclusions must be inference from his experiments rather than any observed facts. It is fortunate that there seems to be some block between the auricles and ventricles which prevents the ready conveyance of fibrillation from the former to the latter, otherwise there would be no time for treatment of any kind.

No doubt a true fibrillation of the ventricles of say 300 to 500 oscillations in the minute is very rare, but in auricular fibrillation the beats of the ventricles as

recorded in the pulse are usually rapid, irregular, small and feeble. Now the effects of eliciting the Abrams reflex of contraction are at once evident in slowing and increasing the volume, and force of the pulse. This and the great relief to the patient with obvious improvement in his well-being are sufficient evidence to me of the value of the reflex.

You frequently hear about the heart's action being regulated by a stimulus, whatever that may be, given out by the sino-auricular node, but in these cases the auricles and ventricles have a stimulus of their own. In fact, every muscle under certain conditions has the property or quality of rhythmic contraction; witness an ankle or patellar clonus. Every muscle-cell in the heart is a miniature battery and the exercise of its function depends, as was shown by Ralgh Mines, on the difference in electric potential between the ions within and without the cells. In my opinion auricular fibrillation is started by over distention, heightened intra-auricular pressure especially in the right auricle. The over-distended and weak auricle cannot empty itself, hence there is a constant stiumlus from the pressure which sets up fibrillation in the excitable walls. The same does not so frequently apply to the ventricles because their muscle is more powerful and less excitable. I have long since shown that the more the cardiac fibre approaches that of involuntary muscle the more excitable it is and the slower its contraction, hence the right side of the heart is more irritable and less abrupt in its contraction than the left. I have in many cases seen the right auricle contract under mechanical stimulus four or five hours after the rest of the human heart had become quiescent in death. The last part to lose its irritability is the right auricular appendix. I believe this reflex acts chiefly through the vagus, but it may have a direct action on the heart as the following observation would indicate. If you percuss the seventh cervical spine with your right middle finger, and at the same time draw your left forefinger along the third and fourth left intercostal spaces in front, as soon as this finger reaches the margin of the heart you will perceive an impact with each stroke on the spine.

The calcium salts are essential for muscular contraction and for the maintenance of life itself. Sydney Ringer showed that calcium increases the efficiency of the beat but delays dilatation while minute doses of potassium hastens dilatation, and relieve the spasm often induced by alkaline preparations of lime and bicarbonate of sodium. At the same time it is well to avoid large doses of ionizable potassium salts as they depress conductivity.

I have used this long argument to induce you to study the subject for yourselves, and also to show you that, notwithstanding my admiration for Mac-William, he has not inhibited my practice.

Exophthalmic Goitre. I know no remedy for this disease equal to concussion of the seventh cervical and second dorsal vertebrae. I have long given up X-Rays and operations in this disease, and since then I have not seen a single death. This is not a deficiency disease, but it is well to try and create a deficiency in iodine, and thyrotoxin, and an increase in calcium. Concussion of the sixth cervical spine has a somewhat similar effect to that of the seventh; it also contracts the thymus when enlarged, and stimulates the parathyroids, consequently in this disease I use a cork with a large end to cover both the sixth and seventh cervical spines. Abrams was the first to discover that the parathyroids are the

activators of calcium metabolism, hence concussion of the sixth cervical spine is also useful in paralysis agitans.

As the vagus is not only the motor and anabolic nerve to the heart and large blood vessels, but also to the lungs and digestive tract, concussion of the seventh cervical vertebra is useful, from its vaso-constrictor effects, in haemoptysis, pneumonia, corneal ulcer, dilatation of the stomach, etc.

Migraine. Migraine, epilepsy, and asthma are often associated in the medical mind as allied neuroses, but, perhaps, they are not as much allied as red, green and blue in colour vibrations. In epileptics and persons liable to migraine there is defective vagus tone, and excessive action of the sympathetic, hence concussion of the seventh cervical is useful as a preventive, but when the explosion has taken place you are too late; the reaction which follows is accompanied by excessive tone which heralds recovery, and lessens the necessity for concussion.

All manner of reflexes, ocular, nasal, stomachic, and intestinal have cudgeled the medical brain to explain attacks of migraine, epilepsy and asthma. Even the smell of an artificial rose has been given as a cause of asthma—would it not be more likely the smell of the individual who handled the rose? Abrams long since said that a symptom is only a nervous reflex, so in the prevention and treatment of these diseases you should remove all abnormal reflexes. I believe there is in London a specialist in the reduction of blood pressure who demonstrates to his clientele such reductions by gently cauterising the nasal septum, but he does not tell them that the pressure will be as high as ever next day.

In the *Lancet* of July 5, 1924, Dr. Authur F. Hurst uses his best endeavour to resuscitate the ocular reflex as a cause of migraine, but not content with placing it on a pinnacle he makes a covert attack on Arbutnot Lane and intestinal toxæmia in the following choice language: "A pelvic caecum and a greater curvature and transverse colon below the belt are, like a moveable kidney, no more signs of disease than a crooked nose. They are frequently found in the healthy and vigorous, and the kinks and secondary adhesions, to which they are sometimes said to give rise, are almost always figments of the imagination. Many of the severest cases of intestinal toxæmia I have seen were in people who were poisoning themselves with aperients and with the toxins produced and absorbed in excess from their colon as a result of its contents having been rendered too liquid. With a return to a healthy degree of constipation their symptoms generally vanished."

"I have no doubt that the tendency to migraine may be greatly increased by the artificial diarrhoea produced in an attempt to overcome a hypothetical poisoning from intestinal stasis, which either does not exist at all or which can be completely relieved by very little more than proper attention to the normal hygiene of the bowels."

The foregoing is a fair sample of Dr. Hurst's English and logic, but I do not know how any intelligent being could swallow such a congeries of irrelevant statements without any reliable premises from which to draw conclusions. A crooked nose often gives rise to a good deal of trouble in the production of middle ear disease and asthma. Where it is giving trouble the sooner it is straightened the better. Arbutnot Lane had his innings a short time previously when he told Dr. Hurst that Surgeons made their living out of the ignorance and utter

incompetence of physicians. I have often said the same thing myself, though in more forcible language, but I also included the general practitioners among the lion providers.

I happen to be an admirer of Arbuthnot Lane not merely because of his deservedly high reputation as a Surgeon, but also on account of his teaching prevention. If every one followed his advice his occupation would disappear; perhaps, like myself, he may think that there are a sufficient number of fools to last his time.

It is really marvellous to see the enormous number of people who go about in apparent health with all manner of deformities due to medical ignorance. Under medicine as at present taught, were it not for the wonderful adaptive power of the human body, the death rate would greatly increase—one-half the population would die of acidosis, and the other half from alkalosis, and such a thing as old age would be a matter of the past. It would be happy the race who had no physicians.

Intestinal toxæmia plays a very prominent part in the proximate causation of migraine, epilepsy and asthma, but that is no reason why you should neglect subsidiary causes. That very imperfect organ as Helmholtz termed the eye, should be properly fitted with glasses when necessary. The mucous membrane of the nose should be rendered capable of withstanding the anaphylactic shock of an artificial rose, or the inharmonious vibrations of incongruous smells. You should see that there are no irritants to upset the terminal endings of the vagus in the respiratory and digestive organs. I shall give a paragraph to the treatment of asthma later on.

Concussion of the sixth and seventh cervical spines enlarges the spleen; in fact, Abrams goes so far as to say that if the spleen be not enlarged you have not been concussing the seventh.

It is not always so easy to locate the seventh cervical as some imagine, because in many persons the sixth and seventh cervical and first dorsal are all equally prominent. If you percuss from about the fourth dorsal spine upwards the first dull spine is the seventh cervical. We shall deal with the dilatation of the spleen later, and also with the effect of this concussion on dilatation of the lung.

The Cardiac Reflex of Dilatation.—Concussion between the third and fourth dorsal spines, acting through the depressor nerve, dilates the heart and arteries. The cork should rest on these spines and cover the interval between. The depressor nerve dilates the splanchnic vessels, hence this reflex is used by Abrams for eliciting his splanchno-vascular reactions. This reflex activates the thyroid, thymus, and mammary glands; it has a depressing effect on the vagus and pituitary; hence it lowers blood pressure, and is highly beneficial in true Angina Pectoris, useful in endemic goitre but injurious in cases of epilepsy.

Angina Pectoris. Five months ago Dr. Wenckebath received a great ovation at the Royal College of Physicians over his lecture on "Angina Pectoris and the possibilities of its surgical relief."

I am not going to weary you with quotations as you will find the lecture fully reported in the British Medical Journal of May 10, 1924, and it is well worth

carefully reading. It is really seriously proposed to divide the depressor nerve, the very nerve which one would think should not be touched. Abrams' method of treatment is to stimulate this nerve so as to lower the blood pressure and relieve a strained heart. This is the last disease to be handed over to the surgeon, and I would like to ask what really is the use of incompetent physicians unless it be to provide a living for surgeons.

In an address on "The use and abuse of the lime salts in health and disease," published in the *British Medical Journal* September 24, 1910, I said: "There is first the spasmodic type or true Angina, where the patient is pale, cold, haggard, anxious, and suffering severe pain with great oppression in the chest. There is a feeling of want of air, though no real respiratory distress; the skin may be dry or there may be a cold clammy sweat. The pulse is usually slow, infrequent, small and firm, though it may be frequent and rather feeble, and it is often intermittent. In these cases there is an excess of lime in the heart muscle, and also to a less extent in the blood." I gave an illustrative case, and showed the great value of decalcifying agents, such as phosphoric acid, lemon squash, etc. I think you will find my address worth reading as the excessive use of the lime salts is an important factor in the causation of angina and arterial disease. In these cases there is excessive vagotonia, and sudden death is brought about through the inhibitory action of the vagus. During an anginal attack the stomach is often distended which aggravates the condition mechanically and by irritating the stomachic branches of the vagus. This can be quickly relieved by concussion of the fifth dorsal spine which relaxes the pylorus and allows the stomach to empty itself. A very favourite remedy for relieving the spasm in angina is the inhalation of nitrite of amyl, but Dr. Abrams pointed out that in cases where the mucous membrane of the nose is very sensitive it may do harm by stimulating the nasal termini of the vagus, hence he recommended that the nose should be cocaineised before its employment.

After the Anginal attacks have been thoroughly relieved by the use of decalcifying agents and concussion between the third and fourth dorsal spines you may find that you have left a big heart and dilated aorta. In this case you should revert to concussion of the seventh cervical and second dorsal spines. Thus, and by diet and exercise prevent the recurrence of the previous condition. Some years ago I carried out this plan in the case of a medical man where a heart specialist had pronounced the ominous words Angina Pectoris. He has since carried on a large practice night and day, and for a long time I have ceased to ask after his heart.

Endemic Goitre. This is a deficiency disease and, as McCarrison has shown, the best treatment is iodine, and internal antiseptics. Concussion on the third and fourth dorsal spines stimulates the thyroid.

Progressive Muscular Atrophy. The acute form of anterior poliomyelitis occurs chiefly in children, and is an infectious disease which usually affects the lower extremities. This special selection is probably due to a greater vascular supply to the lumbar enlargement of the cord. The grey matter of the cord is supplied by the anterior spinal artery, and in early age the artery is very pliant, and ready to supply the blood according to the demand of the part. In these cases the best treatment is absolute rest, elevate the hips, and apply a

spinal ice bag over the lumbar and lower dorsal region of the cord. A febrifuge with salicylate of sodium is useful.

In later years progressive muscular atrophy is a degenerative lesion, and affects chiefly the upper extremities, and is due to an insufficient supply of blood to the cervical enlargement. So far as my experience goes it occurs mostly in teetotalers and milk drinkers. The excessive supply of calcium leads to contraction and sluggish circulation in this small artery and its branches with degeneration and calcification.

When the disease occurs it is too late to influence the rigid vessel through the depressor nerve. The treatment therefore should be preventive both in its origin and progressive character. I prefer claret and lemon squash to milk and hard water. Exercise rather than a life of ennui.

Intermittent claudication of the Arteries. This occurs most frequently or I might say almost exclusively in the vessels of the lower extremities. The intermittency is not in the claudication but in the pain in the muscles. At rest there is no pain, but during exercise the demand for blood in the contracting muscles cannot be sufficiently supplied through the contracted vessels, hence the pain. This occurs chiefly in the lower extremities for reasons which I shall explain, but in the Practitioner for September, 1913, Dr. W. F. Somerville related a very extreme case of calcareous deposits in the brachial, radial, and ulnar arteries. The late Dr. J. H. Bryant and Sir W. Hale White recorded in Guy's Hospital Reports, Vol. IV, a unique case of calcification of the arteries and obliterative endarteritis associated with hydronephrosis in a child aged six months. The right foot was gangrenous, and the changes in the anterior tibial artery extreme. The hydronephrosis was supposed to be congenital. The child was fed at the breast for the first two months, and on cow's milk for the last four. This shows what mischief an excessive supply of lime may cause where there is defective excretion.

In the Edinburgh Medical Journal, December, 1876, I showed how chronic high arterial tension led to atheroma of the aorta.

In a paper on the Etiology of aneurism published in the Liverpool Medico-Chirurgical Journal, July, 1881, I showed that calcification was due to deposition of lime salts in the atheromatous patches, which occurred in the subendothelial layer of the intima. The lime forms a calcareous soap with the atheroma, and the fatty acid is afterwards replaced by phosphoric and carbonic acids. Atheroma and calcareous deposit in the middle or muscular coat occur where there is high **pulse** pressure leading to longitudinal straining of the artery, rather than continuous high lateral pressure. Hence this condition of the middle coat occurs more frequently in the upper extremities at a lower pressure.

In my Toronto address, 1906, I showed how high lateral pressure caused contraction of the arteries; a healthy carotid artery will contract to about half its usual size when the body is inverted. In the lower extremities the blood pressure is at its highest, hence in them arteriosclerotic changes, atheroma, and calcareous degeneration are common. When the arteries become rigid and calcareous as is readily shown in X-ray pictures, they are incapable of supplying the amount of blood necessary for actively contracting muscles, hence the so-called intermittent claudication.

Professor W. E. Dixon says that the mucous membrane of the bowel will only take up a small amount of lime no matter how much is swallowed, and if you wish to introduce much more to the system so as to raise the blood pressure you must do so subcutaneously or intravenously. But this largely depends on the mode in which the lime is presented to the mucous membrane. The late Benjamin Moore was the first to show that lime is absorbed as a soap, and when it enters the circulation it parts with the fatty acid and becomes free ionizable calcium, and in this state serves its purpose in the economy. Life as we at present know it cannot exist without free calcium, but the amount required is small. Any excess is apt to hasten the mineralisation and death of the parts involved. The more alkaline the blood the less lime it will hold; hence if the kidneys be not particularly active the calcium gets deposited in the vessels and tissues. The best treatment is preventive, avoid any excessive use of lime in hard water and milk. Take plenty of exercise to produce lactic acid, and thus get rid of any excess of calcium in the circulation and tissues. Milk is specially objectionable as the lime salts in it readily form a soluble calcium soap which is easily absorbed.

Dr. Abrams himself once suffered from intermittent claudication which he traced to the *Bacillus coli*, but he must have detected the disease early as he rapidly cured it with the Oscilloclast. In 1904, I showed that the *Bacillus coli* only played a small part in the production of arteriosclerosis. Therefore, I stick to my own plan of prevention, and cure by decalcification.

In 1913, I condemned oatmeal in rheumatoid arthritis on account of its decalcifying effects. Now the Mellanbys condemn it in rickets on account of there being something wrong with its vitamins; but in claudication you have too much calcium, the best of all fat soluble vitamins, so you can use oatmeal in this affection so long as you do not combine it with milk

Lemon squash is an excellent remedy to prescribe in many affections because patients readily take it, thinking that they are drinking vitamin C by the bucket, but you can have too much of a good thing. In the summer of 1922, I was asked to see a gentleman with an enormously swollen face, and his eyelids were so oedematous that his outlook and look out were closed. He had been seen by an ophthalmic surgeon who was alarmed for fear of thrombosis of the circular sinus, and recommended that I should see him. I found that his wife also had a swollen face, but to a much less degree. This to my mind put out the idea of thrombosis of the circular sinus, as it was highly improbable that angio-neurotic oedema would occur simultaneously and in the same places in husband and wife. I at once asked what they had been drinking, and received the reply nothing but lemon squash. I told them that this explained the case; they had been decalcifying themselves with vitamin C. Now they must stop the lemon squash, take plenty of calcium, the only fat soluble vitamin worth much consideration. Milk and lactate of calcium cured them in a couple of days.

There are two distinguished medical men in London at present suffering from this disease and both under the same popular physician. I know one of these men personally, the other I have quoted in my writings on several occasions. When I met my friend in Scotland in the summer of 1923, he could not walk more than a few hundred yards, and there was I, an older man, who could climb Ben Lomond. He had been ordered fifteen grains of Atophan three times a day, and this was to be alternated week in and week out with a powder consisting

of equal parts of carbonate of magnesium, citrate of potassium, bicarbonate of sodium; one and a half drachms thrice daily. Probably you all know more about Atophan than I do. It is supposed to be a specific for gout and uric acid. On one occasion, when I had a painful swelling in my big toe, I took a few sample doses, and I must candidly say that I felt nothing the worse, but gout is not even a second cousin to claudication. I pointed out to my friend that the highly alkaline powder could not dissolve the calcareous deposits which were shown by the X-ray picture in his anterior tibial arteries, but on the other hand would tend to precipitate the lime in his blood and cause further blocking. I advised him to stop milk, to take plenty of lemon squash and claret, and when he returned to London to drink Salutaris water. Like myself he is not a good physick taker, but I believe he is going on all right, and when I last saw him I told him that I thought it was time he had some more X-ray pictures. In the other case I understand that a surgeon has been called in, and they are on the track of the *Bacillus coli*; but so far nothing serious has happened.

Splenic Sterilization. Dr. Abrams believed that the spleen was the chief manufactory of antibodies, hence in all infectious diseases he carried out what he termed splenic sterilization. He first concussed between the third and fourth dorsal spines to dilate the vessels and get the germs out of the dark corners. He next concussed the seventh cervical and second dorsal spines to dilate the spleen, and gather in the germs. He then treated the spleen with the Oscilloclast, and, where no Oscilloclast was available, he recommended, in the course of a couple of hours, concussion of the second lumbar spine which contracts the spleen, and drives the antibodies and germs out into the blood stream and so furthers the bactericidal action. In cases of malaria he gave a large dose of quinine after concussion of the second lumbar spine.

The Abrams Lung Reflexes. The lung reflex of contraction. This reflex is elicited by concussion between the fourth and fifth cervical spines. As a rule the concussion should be light, as the patients requiring it are usually in great pulmonary distress, and do not brook much interference. Get your patient's confidence, place your left middle finger in the hollow above the fifth cervical spine and percuss with the middle finger of right hand; afterwards concuss the second dorsal spine. If the patient is not very ill you can use the cork and mallet.

Asthma. In this disease there is overaction of the vagus and, defective action of the sympathetic. There is bronchial spasm, but the air vesicles are expanded with residual air beyond the constrictions, and the difficulty is getting air out of the lungs rather than in getting it in. Abrams held that this reflex stimulates the longitudinal fibres of the bronchial muscles and thus overcomes the contraction of the circular fibres; thus the action of the vagus is inhibited and the sympathetic stimulated especially when adrenalin is administered.

This reflex gives striking relief in a few minutes. You must not do anything to stimulate the vagus; hence concussion of the seventh cervical, pilocarpine, and digitalis do harm. A large dose of atropine often gives quick relief by paralyzing the terminals of the vagus, and an injection of adrenalin has an excellent effect by stimulating the sympathetic. Morphia relieves by rendering the patient oblivious to his distress. Stramonium and many other antispasmodics give tem-

porary relief, but it is permanent benefit which is required. The iodides stimulate the thyroid, increase metabolism, and are thus very efficacious. In these cases there is usually an excess of lime in the system, hence in the intervals we should use decalcifying agents, and prohibit the use of milk and hard water.

My friend Dr. J. J. Bell, of Bradford, cured a well-nigh desperate case of bronchitic asthma, which had resisted many remedies, with sulphate of magnesium. Here, no doubt, the benefit was due to the dehydrating effect and the patient being too ill to imbibe much fluid.

When there is much catarrh the calcium is not in excess, hence decalcifying agents are not necessary, but the chloride of sodium should be cut down, and alcohol prohibited.

Abrams often employed a sinusoidal current applying one electrode over the fourth and fifth cervical spines, and the other electrode over the sacrum. He found that machines varied in their efficiency, and hence he first tested the current on a healthy subject; if the current caused contraction of healthy lungs, it was all right for use in asthma and emphysema.

Lung Reflex of Dilatation. Carefully percuss out the lower margins of the lungs posteriorly, and then concuss the seventh cervical, or the third to the eighth dorsal spines and you will find that the lower margins of the lungs have descended about an inch. Many specialists will tell you that this is impossible but it is only impossible to those who cannot percuss. Abrams maintained that failure to dilate was an early sign of tuberculosis of the lungs. I would strongly recommend you to study Abrams' Methods of percussion. You will find papers by him and myself in the Medical Press & Circular, January 26, 1921. By myself in the Lancet, May 22, 1920. By Abrams and Dr. Auld in the Lancet, 1903.

Tuberculosis of the Lungs. For successful treatment early diagnosis is essential. If you wait until the diagnosis is made for you in the laboratory by the discovery of the tubercle bacillus, or by the radiographer you have missed your chance. Autopsies show that a large number of people have had tuberculosis and have been cured without treatment. On the other hand you are handicapped if you cure a case of pulmonary tuberculosis, and have not the corroborative evidence of the bacteriologist and radiographer: you are told that there was an error in your diagnosis, or you may receive a less generous appellation. Never mind what you are told, your business is to cure your patients, and the fewer death certificates you have to sign the better.

In your physical examination of the lungs there is the failure of the affected lung to expand under Abrams reflex of dilatation. In this examination the patient should stand, facing West, on two grounded metal plates; there are two bands of impaired percussion described by Clive Riviere across the posterior surface of the lungs; the upper band extends from the second dorsal spine upwards, and the lower band between the fifth and seventh dorsal spines. These two bands are due to contraction of the lungs under the influence of the pulmonic reflex of contraction. In the British Medical Journal, August 20, 1924, Riviere said: "A right-sided paravertebral dulness is the hall-mark of the tuberculous child, and the diagnostic value of the sign is as good, in my opinion, as are the apical crepitations and impairment which mark a tuberculous infiltration or phthisis of the adult."

When the child or adult is standing on the grounded plates, facing West and bending well forwards there is a small area of impaired percussion at the lower angle of the right scapula no matter where the pulmonary lesion is situated: this is due to slight pulmonary atelectasis, and when a deep inspiration is taken you will hear a few fine dry crepitations. There is also a narrow transverse band of dulness below the umbilicus which is removed by a few deep inspirations. These areas of dulness disappear when the patient faces North or South; with Abrams rheostat you can measure the intensity of the disease. There is impaired expansion and a feeling of resistance on palpation over the affected area; this is more distinctive than any alteration in the percussion note. The vital capacity is lessened—a spirometer is of more value in these cases than a stethoscope.

There is usually a slight rise of temperature in the evening and often a sub-normal temperature in the morning. The patient looks worse than he feels, and there may be a slight loss of weight. Of course you have got the tests of Von Pirquet, Moro, and Calmette, but these should be quite unnecessary to any careful examiner. Make up your mind at the earliest possible moment, and treat accordingly.

Abrams held that in tuberculosis of the lungs there is vagotonia, but I hold that this only occurs in favourable cases. It is at least forty years since I first pointed out that if you get a slow infrequent pulse, a moderately low temperature without much oscillation, and a good digestion the patients do well, but a case with a rapid pulse, a high and fluctuating temperature, a dilated stomach and bad digestion will tax your efforts to the utmost, and in spite of your efforts will usually go down the hill.

If you make an early diagnosis and treat early you can rapidly cure a patient who has got a good vagotonia and good resistance. If there be any deficiency in the tone of the vagus I recommend concussion twice daily in the following order, the fifth dorsal, the seventh cervical and the second dorsal spines. If you have an Oscilloclast it should be applied at rate 5 over the spleen and affected lung.

Abrams recommended painting the whole chest, not merely the part affected, with a solution of powdered gamboge in methylated spirit. It should be freshly prepared, say every second or third day. Put a large heaped teaspoonful of the powder in four ounces of spirit, and allow it to stand, with many shakings, at least twelve hours before use. The gamboge acts by its radio-active properties and negative polarity. A blouse or under-garment of yellow silk should be worn over the painted chest. The silk acts as a non-conductor, and Abrams found that yellow colour dissipates the reaction of tubercle.

When physicists said that radio-activity was the property of only a few substances, Abrams said that it was a universal property of matter. The physicists had only the electroscope to measure radio-activity, but Abrams used the human reflexes as detectors which are much more sensitive than anything ever devised by the hands of man. The eye is a much better detector of colour vibrations than any photographic plate; we can estimate the number of vibrations in any particular sound, but only the ear and brain can appreciate the harmonious vibrations in music. A friend estimated the wave length at the middle of the scale in my Oscilloclast at 392 metres, this would give you 770,000 vibrations in the second, or about a half to two million vibrations in the second in the whole scale.

Yet the American and British Medical Journals tell you that this broadcasting machine takes in electricity but gives nothing out. Can ignorance and prejudice go much further.

We have got no instrument to measure the vibrations of smell, yet you see how sensitive is the nasal apparatus of the dog, which often guides his intelligence much better than human reasoning.

The sense of taste must be highly developed in the lower creation, as they will not eat poisonous herbs. Bose found that the most sensitive organ for the perception of a stimulus was the human tongue; an average European could, by his tongue, detect an electrical current as feeble as six micro-amperes, a micro-ampere being a millionth part of a unit of electrical current. Professor Bose found that his Hindoo people could detect a much feebler current, namely 1.5 micro-amperes.

Some years ago I asked a Professor of Physics to examine for me the radio-activity of gamboge. He evidently thought it was a foolish problem, but he was too polite to say so. Every time I met him he always excused himself that he had been too busy. In the course of about five months I told him, after one of his excuses, not to bother, as I had satisfied myself by testing after Abrams' method, and I did not suppose that he had a sufficiently sensitive detector. Moreover, I had seen Dr. John G. Kerr, LL.D., demonstrate the radio-activity of a lighted candle, which is not usually supposed to be radio-active. The Professor said that the dispersion of the electrons was due to the burning which I was quite ready to admit, though it did not matter to me how the radio-activity was manifested so long as it was there. Dr. Kerr collected the protons on one wax disc and the electrons on another in such numbers that he was able to demonstrate their presence by their power to discharge a tin foil electroscope made by himself, and which was much less sensitive than one made with gold leaf. Recently physicists have greatly enlarged their list of radio-active substances, but I do not know that they have much improved their detectors.

When you have cured your patient of his tuberculosis with this radio-active gamboge of a negative polarity you may have to submit to the gibes of your confreres, that there was never anything the matter with him, and if there were the cure was only a matter of auto-suggestion. The Oscilloclast is a valuable addition but I do not recommend you to get one until you know how to handle it. If there be any secondary infection with streptococci, Abrams added twenty minims of beechwood creosote to every ounce of the gamboge solution. This is the stage when the majority of medical men begin to diagnose tuberculosis; no wonder their successes are not brilliant, though their practices may be profitable.

Abrams' methods are supplementary, not substitutive so you must not neglect sunlight, fresh air—a dry invigorating atmosphere, good food, moderate exercises, etc. Injections of morrhuate of sodium would seem to be useful, and, perhaps, after a little you will have the opportunity of trying Spahlinger's serum.

Tuberculosis is a racial disease, and a very bad one because it cripples the survivors. However, with the exception of influenza, it is almost the only racial disease left in this country, and, like the poor, is certain to remain with us until we cease breeding a C3, X Y Z population. The late Dr. D. W. Hunter said that until we established a selective birthrate he would look upon the abolition

of the tubercle bacillus as a national calamity. Nature must have some way of weeding out the inefficient. It would have been much better if we had retained typhus fever, which my late friend, Sir William Gairdner, used to say was a most gentlemanly disease; if it did not kill you, you were all the better for having had it, and once vanquished it did not return. A relative of mine said the plague was necessary for India, as the surging hordes were certain to die of starvation if they did not die of the plague, and he thought the plague was the better of the two.

The Stomach Reflexes. After the cardiac and pulmonic reflexes I think the stomach reflexes come next in importance. Concussion of the fifth and the second dorsal spines relaxes the pylorus, and enables the stomach to quickly empty itself. The fifth dorsal is usually located by counting down from the seventh cervical, but when there is any difficulty you will find that the percussion note is flatter over the fifth than over the fourth or sixth dorsal. Concussion of the fifth not only relaxes the pylorus, but also stimulates the splanchnic nerves. When the stomach is overloaded, and the contents will neither pass on nor come up, it can be readily washed out by giving one or two glasses of warm water, and then concussing the fifth dorsal, the seventh cervical, and the second dorsal spines. The seventh cervical stimulates the vagus, which is the motor nerve of the stomach, and thus hastens its evacuation through the dilated pylorus. This can be readily seen with the X-rays after a barium meal. The failure of the stomach to empty itself quickly is evidence of something more than spasmodic contraction of the pylorus. This is an excellent procedure in the morning sickness of pregnancy.

Congenital Hypertrophic Stenosis of the Pylorus. In these cases there is a contracted pylorus, but it has not been definitely proved that there is an hypertrophy occurring before birth. It seems to be associated with overaction of the suprarenals and an excessive amount of lime in the tissues. I think it is most likely to occur where the mother has taken in much more lime during pregnancy than she has excreted. Children developed under such conditions may be shrivelled and covered with sebaceous material at birth.

In the Eugenics Review and in Science Progress this year, Professor E. W. Macbride has given a good resume of the work of Gustav Tornier. Tornier's theory is as follows: "Every embryo is endowed at the beginning of its existence with a certain quantity of protoplasmic energy. This energy manifests itself in two ways, (1) by the early beginning and vigorous character of the movements of the embryo; (2) by the ability of the embryo to resist the tendency of all its tissues, especially those of less active growth, to absorb an excess of water—in a word to regulate the intake of water. In practically all eggs the portion of less active growth is that in which the yolk globules are stored, and hence Tornier speaks rather too loosely of the absorption of water by the yolk and its consequent swelling, the swelling is not confined to the yolk-containing cells, nor strictly speaking, is it the yolk itself which swells, since this consists chiefly of globules of a lecithin-like substance insoluble in water. The very same swelling takes place in the mammalian embryo in which there is no yolk. Davenport and Parker showed long ago that a large part of the increase in bulk which embryos undergo during the early period of their development is due to the inhibition of water."

According to Tornier when the embryo in the earliest period of its existence has not a sufficient supply of oxygen the protoplasm becomes weakened, and is not able to prevent the over-swelling of the less active portions by the water.

There would seem to me a much simpler explanation of this excessive swelling in a deficiency of calcium in the growing tissues. Calcium ions are essential not only for muscular contraction but for the very existence of life. It is a long time since Sydney Ringer showed that even *Laminaria* tents swelled much less in a solution of calcium salt, than in one of the salts of potassium or sodium. The deficiency in oxygen had not been proven and in my opinion a deficiency in calcium is a sufficient explanation. In hypertrophic stenosis the "boot is on the other leg"; there is an excess of calcium and the foetus is somewhat shrivelled. When the pylorus is contracted at birth the condition is further aggravated by excess ve lime in the milk especially in cow's milk.

In treatment it would be well to eliminate the curd of milk, and feed the infant on whey, glucose or lactose and orange juice. When milk is resumed it should be well diluted and citrated. A little olive oil does good by forming a soluble soap with any calcium in the milk. Recently the use of atropine has been extolled, but it would seem to me that theoretically this is objectionable. The excessive action is in the sympathetic and adrenals, and therefore it would be a mistake to paralyse the antagonistic action of the vagus. Small doses of opium would relax the pylorus and do good. I can recommend percussion of the fifth dorsal spine, the seventh cervical, and second dorsal spines, but as you are dealing with an infant the percussion should be gentle finger-finger percussion.

Acute Distension of the Stomach. This is not an infrequent occurrence after abdominal operations owing to the meddlesome interference of the surgeon with the splanchnic nerves. In these cases it is not sufficient to relax the pylorus, you must also stimulate the stomach to contract by concussing the seventh cervical. Concussion of the first three lumbar spines also contracts the stomach, but at the same time other reflexes are induced which may not be desirable.

A procedure which I regularly adopt in stomach and duodenal cases is to give the patient night and morning, when the stomach is fairly empty, one or two glasses of warm water, and then concuss in the following order, the fifth dorsal, the seventh cervical, and the second dorsal. At bedtime one or two tablespoonsful of olive oil is useful, especially in duodenal cases.

Duodenal Ulcer. This has become a very fashionable disease from which the surgeons are reaping a rich harvest owing to "the ignorance and utter incompetence of physicians." The surgeons frequently bury their own mistakes as well as those of the physicians, and then explain to the relatives that the fault was not theirs, that they should have seen the patient six months earlier. Sir Berkeley Moynihan says that a good surgeon should first be a good physician. There are very few surgeons who do not consider themselves good physicians, but they like to complete their diagnosis on the operation table. In my opinion no exploratory operation should be undertaken without a fair knowledge of what you expect to find.

The reason why medical failures in duodenal ulcers are so common is owing to lack of prevention and early diagnosis. If you wait for the diagnosis to be

made by the radiologist or surgeon you must not be surprised if the patient seeks another medical adviser. We occasionally hear of cases where the first symptom was perforation of the ulcer. Such cases are most apt to occur in men of the middle class in straitened circumstances who think that their pains are only due to a little indigestion which they can correct without running up a medical bill. These cases will occur until people learn that it is cheaper to prevent disease than to cure it. When the radiologist discovers a crater there is apt to be an eruption.

In cases of duodenal ulcer there is excessive vagotonia with hyperacidity, and consequently more or less spasm of the pylorus which only relaxes when the contents of the stomach become very acid. Then a large amount of acid chyme is poured into the duodenum which cannot be neutralised by the bile and pancreatic juice. In such cases pilocarpine which has a synergic action with the vagus should be avoided, but atropine is often useful even though it lessens the saliva and makes the patient's mouth uncomfortable. Bicarbonate of sodium neutralises the acid, but its value is lessened by the fact that it stimulates the further production of hydrochloric acid; chalk is a better antacid. Sodium chloride should only be allowed in small quantities.

The symptoms of hyperchlorhydria and duodenal ulcer are much the same, though I think in the former the vagotonia is much less. It is well to have some sign to indicate when an ulcer has occurred, and the sign on which I place a considerable amount of reliance is the presence of peptone in the urine. If you take a little urine passed an hour or two after a meal and float it on the top of Fehling's solution in a test tube the presence of a pink ring at the junction of the two fluids indicates peptone. If there be any serum albumen in the urine, which is the exception rather than the rule in these cases, you will get a reddish brown ring which can scarcely be confounded with that of peptone. Moreover, serum albumen, globulin, albumose and quinine are precipitated by picric acid, but not so the peptone of which I am speaking. Some men will tell you that it is not peptone but albumose, and that it is of no clinical importance, as it has been found in scarlet fever, measles, pneumonia, empyema, advanced phthisis, acute yellow atrophy of the liver and phosphorus poisoning. I think any medical man can discriminate between these diseases and duodenal ulcer. It really does not matter what chemists call it, so long as it acts as an indicator of intestinal ulceration—the location of the ulcer can be determined by the symptoms. It is certainly not the albumose of Bence-Jones and Bradshaw.

Whether the case be one of hyperchlorhydria or duodenal ulcer always order night and morning one or two glasses of hot water, followed by concussion of the fifth and second dorsal spines, and often also of the seventh cervical when the stomach is not emptying itself quickly. After the seance at bedtime the patient gets one or two tablespoonsful of olive oil.

To stimulate the healing of the ulcer if such exist, I often order the iodide of calcium with the syrup of the hypophosphite of calcium; one-tenth of a grain of parathyroid night and morning is also useful. To make the hyperacidity more or less harmless Kaolin is beneficial. Sometime ago a patient said to me that Kaolin is only China clay. "Quite right," I replied, "but you acknowledge that you are very much better, and the peptone has disappeared from your urine so there can be no doubt that you have improved. If you had been a

Welshman I might have given you powdered slate from the Penrhyn quarries, which is said to have much the same effect." This reminds me of Sir William Gull, when he prescribed sulphate of magnesium and peppermint water the patient improved until his doctor told him that he was only getting Epsom Salts. He was then very indignant at having been charged a large fee for such a commonplace remedy, but he had to acknowledge that he was better, and Sir William Gull asked him, "What then have you to grumble at?" I tell this story because I find that the old white mixture of the sulphate and carbonate of magnesium is an excellent laxative in these cases.

It is now many years since Abrams first pointed out the value of Kaolin, but he chiefly used it on account of its radio-active properties and negative polarity; now it is largely used internally for absorbing toxins. There is a wide scope for its external use; dermatologists will find Kaolin and sulphate of barium much superior to oxide of zinc and starch in the preparation of Lassar's paste. Bose follows Abrams, and says: "Could anything have been more unexpected than to find that a sphere of china-clay focusses invisible light more perfectly than a sphere of glass focusses the visible; that in fact, the refractive power of this clay to electric radiation is at least as great as that of the more costly diamond to light? From amongst the innumerable octaves of light, there is only one octave with power to excite the human eyes. In reality, we stand, in the midst of a luminous ocean almost blind; the little that we can see is nothing, compared to the vastness of that which we cannot. But it may be said that out of the very imperfections of his senses man has been able in science to build for himself a raft of thought by which to make daring adventure on the great seas of the unknown."

Diagnose your cases early and cure them; don't give the surgeons a chance. Personally I have not the most remote intention of acquiring duodenal ulcer, appendicitis, intestinal stasis or cancer, so I shall have to die of something else. A surgeon friend of mine once said to me that he did not know the disease he would like to have, or the death he would like to die; he would just stave off the evil day as long as possible. "So say all of us."

Concussion of the fifth dorsal spine contracts the splanchnic vessels, and antagonises the depressor nerve; concussion of the first dorsal has a somewhat similar effect.

Concussion of the tenth dorsal spine aids in dilating the lungs, and, as I have before said, the absence of this dilatation is an early sign of pulmonary tuberculosis. It also stimulates the pancreas and testicles, and empties the appendix. Abrams says that the appendix acts as an Electric Condenser to the stomach, and when a diseased appendix abolishes this action, you get the so-called appendix dyspepsia. He was averse to removal of the appendix when it could be avoided, so he frequently employed this reflex. However, when the streptococcus reaction from the appendix exceeded one ohm he said it should be removed. He also said when the appendix was gangrenous, you got the death reaction which would indicate that you had delayed too long. The modified Cromwell's advice is useful in all intestinal affections.

Concussion of the eleventh dorsal spine which contracts the stomach and intestines is useful in enteroptosis.

Concussion of the twelfth dorsal spine relaxes the intestines, and is useful in spastic constipation. Abrams applied a sinusoidal current to reduce a large prostate, but I have long contended that enlargement of the prostate is easily prevented. All that is required is the regular use of small doses of thyroid and decalcifying agents, such as phosphoric acid, and lemon squash; avoid milk and hard water. I have saved many an old gentleman from the surgeon's knife. The routine examination of every male over fifty-five years of age should include the rectum and the prostate. An enlarged prostate is a positive disgrace to medicine, and a valuable acquisition to surgery; another case of surgeons making a living out of incompetent physicians. A large fibro-plastic goitre is an even greater disgrace, because it is readily visible from its inception. Both require the same preventive and therapeutic measures, iodine, thyroid, and decalcifying agents.

Concussion of the first, second, and third lumbar spines contracts the stomach, intestines, liver and spleen. It lessens haemorrhage associated with uterine fibroids. The principal lumbar reflex is elicited from the second lumbar spine which is used for Abrams' entero-diagnostic reactions. Abrams made use of the contraction of the spleen in his splenic sterilization as before related. In malaria after concussion of this spine he administered a large dose of quinine.

There are other minor reflexes with which I shall not now trouble you. I think I have given you sufficient to be going on with.

The next great advance which Abrams made was in the discovery of the polarity of disease, and the use of the stomach reflex. If you hold either end of a six-inch bar magnet within four inches of a healthy stomach it contracts; the same thing happens when the energy of disease is thus conveyed; e.g., if you have two aluminium electrodes connected by an insulated copper wire, and apply one electrode over a cancer tumour and bring the other electrode close to the stomach of a healthy individual the stomach contracts. This effect can be neutralised by holding at the same time the negative pole of the bar magnet close to the stomach of the medium or over the cancer. This shows that the polarity of cancer is positive.

He also made great advances in his electronic theory of percussion, and showed that if you wished to accurately percuss the abdominal and thoracic viscera the patient should stand on two grounded plates facing West. He showed that the right fingers and toes are the positive poles, and the left the negative in the male, while in the female the reverse is the case. Consequently when a person faces the West a neutrality is established between the two sides. This is well exemplified with an iron poker; if you suspend it in the magnetic meridian it soon becomes magnetised, and its north pole deflects the north pole of the compass; when the poker is turned east and west it is soon demagnetised. These changes in polarity are accentuated by a few strokes with a hammer.

The evolution of Dr. Abrams' electronic methods of diagnosis by examining the blood and handwriting were so rapid that it was difficult to keep pace with him. I hope to make an attempt to show you some of these methods to-morrow, but these reactions are very delicate and should only be carried out in a very quiet room. I have never before given a demonstration to more than three persons at one time, and my friend Mather Thomson says that ten has been his limit. However, with your forbearance I shall make the attempt, and trust to

Providence that the experiment will come off all right. Of course I shall require two or three healthy young volunteers, male or female, to act as mediums. I would prefer the ladies as having more sensitive reflexes, but for ethical reasons I would hesitate to expose their nakedness.

I must also trust to the hospital authorities to allow me a sufficient number of patients for my demonstration.

If there be time I shall show you how to analyse handwriting. I have often amused myself in this way, but I have never employed it as a means of livelihood. I have another paper on Chriometaseosis on the stocks which shows as interesting results as the former, but whether I shall ever publish it or not I do not know: the Medical profession is not yet ready for such a form of amusement. A game of golf and a glass of whisky would be more appreciated. A lady rather scored off me in this direction sometime ago. She was very anxious that I should examine her handwriting, but I thought I knew as much about her as her handwriting was likely to reveal, and I did not care to take any unnecessary trouble in the matter, so I told her that she was an "Athenian," always running after "some new thing." She retorted that I had made a great mistake, she had never been to Mars hill, but was just a good Presbyterian like myself.

Chromotherapy is coming into vogue in America, but it does not commend itself to me as I do not think it will be ever found to have much therapeutic value, as the vibrations are limited to the octave of visible light; whereas, we know that the actinic rays and heliotherapy are at the ultra-violet end of the scale. Chromotherapy is nothing new, as when small-pox was rampant there were many views as to the use of coloured glass in the windows of the bedrooms to lessen suppuration in the pustules. There are many wisecracks who ridicule such an idea as a mere craze, but I would not reject it on that account; on the contrary because a conceited prig called it a craze I might think it worthy of investigation. I know a lunatic who would put anyone here to shame over the solution of a complex mathematical problem.

There is no doubt that the harmonious blending of colours has a very soothing effect. A well-dressed woman is not only pleasing but attractive; unfortunately a good many women do not know how to dress, and their costumes often repel rather than attract. Various shades of blue have a soothing effect on myself; it appears that flies do not like blue, and I do not like flies. The horrible fiery red colour which we often see in hospitals on bed coverlets and bed jackets might suit a negro but cannot be pleasing to any eye with refined taste.

I have here three silk handkerchiefs a bright blue, red, and yellow. You will perceive that when I throw the blue handkerchief over the head of a healthy male subject, grounded and facing West the dull percussion note over his sex areas disappears; when I throw the red handkerchief over a female subject similarly placed her sex dulness disappears; and when I throw the yellow handkerchief over either male or female the sex area of dulness is reversed. After this I can scarcely say that I don't believe in the effects of colour, but simply I would not trust it to cure disease. Abrams taught that blood for examination should be collected in a subdued light and there should be an absence of all strong colour. I object to examine any blood which has not been taken by myself or by some one who understands the necessary precautions.

Heliotherapy. I am very pleased to see Sir Henry Gauvain here, and I must congratulate him on the splendid results of his work. He has shown how heliotherapy can be carried out successfully in this country. I have no doubt that he has been often considered crazy, but there is no risk of any follower of Abrams ever saying so. Abrams rather forestalled Finsen, and although his work of late years lay in a different direction he always extolled heliotherapy. I believe Mather Thomson was one of the early possessors in London of a mercury vapour lamp, and he makes good use of it. On one occasion he set my scalp desquamating after a short exposure.

Terrestrial Magnetism. In the examination of blood and handwriting the medium should stand on grounded metal plates, facing West. Before examination you should see that the plates are properly grounded. When I touch the metal plate with this electrode the electric lamp in the circuit immediately lights; then if you remove the grounding wire from the plate the lamp will not light. My plates to-night are so well grounded that by an accidental short circuit I blew the fuse, and put you all in darkness for a short time.

If you take a healthy male, especially one with a low tension pulse, facing West, and ground his right foot and right hand, and place a rubber mat under his left foot, you will find that his pulse becomes smaller and somewhat feeble; on the other hand if you ground the left side, and insulate the right the pulse becomes fuller, and occasionally slightly quicker; and the cardiac area is reduced. These observations require a delicate sense of touch, and acute sense of hearing. The examination should not be much prolonged as the heart soon adapts itself to altered circumstances. The hand is readily grounded by an electric wire from the grounded foot plate to the hand, or by two electrodes connected by an insulated copper wire; one electrode on the foot plate, and the other resting on the fingers.

After all there may be a good deal in the old idea of placing the bed in the magnetic meridian, with the head to the North; the compass was not invented in the present day, and our forefathers were not such fools as we take them for.

There are many people who have the pernicious habit of crossing their feet, and clasping their hands, which leads to short-circuiting of the electric currents of the body, and you all know how quickly a short-circuit damages an ordinary battery.

This is specially reprehensible in nervous individuals. It is impossible to prevent people crossing their feet in bed, so in cases of epilepsy and migraine I frequently insulate one leg with a silk stocking, the right in the male, and the left in the female. I think it is also an advantage to increase the electrical discharge from the head by rubbing the scalp with toilet vinegar.

After all it is really the little things in life which matter. If a live shell in-pings against your head it is all over so far as you are concerned, and your friends may regret that your head was in the trajectory of the shell.

In an address which I gave at Huddersfield last Winter on Bronchitis and which was afterwards published in the New York Medical Journal I showed how many lives might be saved in cases of capillary bronchitis, or broncho-pneumonia, by the early attention to some minute details. I can assure you that Abrams'

methods are worthy of your most careful study and work, but you will not learn them by any display by me or anyone else. You must do the work for yourselves. As Bose said: "We often forget that the real laboratory is one's own mind, the room and the instruments only externalise that. Every experiment has first to be carried out in that inner region." The man who only sees with his eyes, hears with his ears, smells with his nose and feels with his fingers, and not with his understanding is a poor mortal who may pile up a heap of information, but can never have any real knowledge

My method of procedure is always to examine the patient in the first instance by ordinary clinical methods, and if I am satisfied, as I usually am, I take no further trouble. If there be any obscure point I wish cleared up, and the patient is able to stand up on the grounded plates I adopt Abrams' Auto-Electronic Methods. If the patient be feeble then I examine the blood which requires a healthy medium, and Abrams calls this the hetero-electronic method. I am convinced that this procedure will be generally adopted when Abrams' methods are widely employed. Those who are carrying out Abrams' methods much more extensively and exclusively than I have ever done, devote much attention to the examination of the blood for the simple reason that the majority of their patients are the failures of other medical men.

When you see a patient you can size him up in every way, and there are many avenues of investigation thrown open beyond those of the blood. By Abrams' examination of the blood you can tell whether the patient has got diabetes and acidosis, but you cannot tell the percentage of blood-sugar; the amount of sugar, acetone, and diacetic acid in the urine, or the state of the patient's nutrition. Of course his potentiality will give you some indication as to the gravity of the case, but after all, ordinary clinical methods are better in such a case.

The negative evidence from an examination of the blood is often as valuable as the positive, and we have here got a good example on a little patient in this hospital. He is a fragile looking boy, aged 10 years with a huge liver, but his spleen is not enlarged. His haemoglobin is only 25 per cent. I have not made any microscopic examination of his blood, which I should have done if I had it at home. I believe he has been seen by many medical men both outside and inside the hospital, and the final diagnosis was primary cancer of the liver. I suppose syphilis was excluded on account of a negative Wassermann. Now you see an examination of his blood with a healthy medium gives no reaction for cancer, but a strong reaction for Congenital Syphilis, with a very high potentiality of 25 units. I would certainly recommend an anti-syphilitic treatment, but as the patient is very ill you may soon have an opportunity of comparing the two diagnoses. Abrams had very little faith in the Wassermann test.

I shall next show you the reactions from the blood of an old negress with a large suppurating cancer of the breast. It gives a female reaction with a very low potentiality so her tenure of life will be short. It gives the racial reaction of the Negro, and a strong cancer reaction.

Next a sample of blood from a young woman which gives the reaction for tuberculosis of the left lung with a low potentiality of five units. She is improving and should get well.

Dr. Mather Thomson kindly brought a portable Oscilloclast to the Meeting, and gave a lengthy demonstration of its use, and on the method of determining the rate for the treatment of any particular case.

There have been great discoveries in physical science of recent years, and I think we are on the eve of many more. It is quite possible that wireless vibrations may come to be of therapeutic use, but how far, or in what direction I cannot conjecture. My son-in-law has discovered how you can turn your body into an aerial, convey the vibrations to the receiver, and after tuning, deliver them at the other end through the loud-speaker, or ear-phones. You can thus have a double dose of 2LO, Chelmsford, or any other station.

A hearty vote of thanks terminated the proceedings, which lasted two hours on each day.

(From Saturday Review of Literature, No. 31)

ROCK OF AGES

By S. FOSTER DAMON

Divide the leaf, and I am there,
 Perceived by all, beheld by none;
 Break the great mountain, split the hair,
 And at the center there is One.

One substance indivisible,
 The uncreated urge incessant,
 The only thing past miracle,
 Imperishable, omnipresent, . . .

("—Excuse me, sir, at this my baulking;
 "But no, God's found within my stratum!"
 "—Excuse me, sir, but I was talking
 "Not about God; about the Atom!"

But while the two harangued and cursed,
 Suddenly God Atom burst,
 Electron! Be not cleft for me!
 Let me build my faith on thee!)

SCIENTIFIC EVIDENCE

By C. W. YOUNG, D.O.

Palo Alto, California

When the writer began his practice as an osteopath, he had many gratifying successes such as nearly all other osteopaths have. He knew he was bringing relief to suffering humanity just as surely as he knew any other fact of which he could be conscious, and he knew that this relief had been secured by applications of the osteopathic concept discovered by Dr. A. T. Still. Again and again he was astounded, amazed and disgusted at the attitude of the medical profession. They persistently insisted that nobody was cured by osteopathy, and that all osteopaths ought to be jailed as fakirs. People could come to our offices by the hundreds of thousands and go away singing our praises, but that made no change in their attitude. The fact that many of their lame or paralyzed patients left them and after coming to us could leap and walk with perfect ease, made no impression on their minds. The fact that sometimes their near-blind could see and their near-deaf could hear after receiving osteopathic treatment was no evidence to them that there was merit in the treatment. The convincing evidence that the death rate of flu victims was vastly less with patients under osteopathic care was no proof to them of merit of osteopathy.

When the writer reported to his medical doctor that he had been greatly benefited by an osteopath in the treatment of a serious malady that the doctor failed to help, the doctor insisted that there was no merit in osteopathy. He said I might have been helped by massage or suggestion, and he warned me most earnestly against placing any reliance in osteopathy in the future.

Sometime later I placed in the hands of a retired M. D. a copy of *Osteopathic Health* for April, 1921, entitled "A Health Interview with an Osteopath," which was my own composition. In this magazine I narrated my personal experiences and with enthusiasm told of some of the cases cured or benefited by osteopathic treatments that I had given in my practice. After he had read the article he told me that it was not scientific.

The attitude of the majority of the medical profession in assuming to know that Doctor Still discovered nothing of value for the treatment of disease, and using derisive words when cures were called to their attention, and doing their utmost by word of mouth and in their publications to keep ailing humanity away from the help of the osteopaths, has always seemed to the writer to be brutal and inhuman.

But alas and alack, the same malign psychology is creeping out among many of the osteopaths! They are saying that clinical testimony is utterly valueless in determining the therapeutic value of any alleged agency of cure, and that it is a disgrace for an osteopath to attempt to use any alleged agency of cure, until after the value of that agency has been proved scientifically. Gradually there is evolving among our ranks a body of men who are just as cockey, just as sure they are right, and just as unscientific as are the medical men.

There is an osteopath by the name of Miller who claims to have made a valuable discovery of a technique for "draining the lymphatics." That is to say, he thinks he can assist nature to cause congested lymph to be taken up by the kidneys and other eliminating organs and expelled from the body. He claims this technique is exceedingly valuable for the treatment of pneumonia and other acute diseases. He proposed to demonstrate the treatment on an actual case at the Kirksville, 1924, Convention of The American Osteopathic Association. I heard many skeptical remarks, but no one said, "I hope it is true—that there is still another means for battling against disease." From the way the scientific doctors talked you felt they would surely be disappointed if anybody found merit in the treatment.

Doctor Miller in the presence of osteopaths filling a large room, proposed to drain the lymphatics in a severe case of ascites—a large man with abdomen distended like a balloon. There were two very scientific osteopaths present. One considers himself the greatest of all scientific diagnosticians in the osteopathic ranks—and maybe he is right. The other, a truly valuable member in our ranks has written a book on lymphatics. Both these doctors, one after the other, were permitted to address the assemblage, and they certainly voiced their skepticism, that all who considered themselves to be scientific, had been encouraging. They wanted to know how thoroughly this patient had been examined and what was the condition of the heart? What was the blood pressure? What was the blood count? etc.. Doctor Miller replied that he had made no such examination, as he merely expected to demonstrate the effect of his technique upon the excessive accumulation of fluids in the abdomen. The scientific diagnostician objected that there was no bucket on hand to receive the drained lymph. He also asserted with much emphasis in the presence of the clinic, that if Doctor Miller succeeded in doing what he said he would do, the man might die right there on the table! Finally the remarks of the two very scientific osteopaths were checked by cries all over the room of "Hire a Hall!—Hire a Hall!" Doctor Goode asserted that it was improper to ask anybody to hire a hall, and then Doctor Miller, whom some osteopaths seemed to be as slow to give credit for discovering something new which might prove of value in osteopathic treatment, as the medical doctors are slow in giving credit to Doctor Still, proceeded with his demonstration. It was on Thursday. On the previous Monday, Doctor Miller had used the technique on the patient, and had greatly reduced the circumference of the abdomen, and the patient, instead of dying, felt much better. The abdomen had refilled with lymph, in the meantime, and was about as large as it was on Monday. Doctor Miller placed a two-inch adhesive tape around the middle of the abdomen. The patient was in the dorsal position on an osteopathic table. Doctor Miller took his position back of the head. He placed the heel of each palm just below each clavicle and pushed with both hands against the anterior portion of the upper ribs and then released, making a pumping motion. He kept this procedure up for fifteen minutes. He looked for all the world like a washerwoman scrubbing clothes over a washboard. In a few minutes the tape began to loosen. When he was through it looked as though it was everywhere two inches away from the abdomen when held in original position. I asked the patient how he felt and he said that the treatment brought great relief and comfort; that the tension in the abdomen had been very distressing

and that it was entirely relieved. He voided urine very copiously after both treatments.

The way some osteopaths talk one would believe that the M.D.'s were entirely justified in their skepticism about osteopathy until McConnell, some twenty years ago, twisted the spines of some guinea pigs and rabbits to produce definite lesions and then after a time killed them, found pathological viscera, and made a study and due report of same. For years I did not know that my suffering was relieved by the osteopath—not till the day when McConnell maimed the animals—then it was proved scientifically and Glory Hallelujah! I finally knew that Dr. A. T. Still was not a fakir and that the osteopathic concept was worth while.

Dr. Lela White Shedd, reputable osteopathic physician, of Modesto, Calif., began to suffer from severe pain and weakness in the lower part of the spine (the exact history may be secured from her). She tried local osteopaths and received no relief. She managed to attend the convention of the American Osteopathic Association in Los Angeles in 1922 and was carefully examined by some of the osteopaths with nation-wide reputation for efficiency and was given a very grave prognosis. She went home and became worse and worse. She was practically a bed-ridden invalid. About the limit of her capacity was to go from her bed to the bathroom. Apparently all the future held in store for her was torture until tardy death would bring relief. Then Dr. Maud Pitts, a D. O. of Santa Cruz, Calif., made a diagnosis by ERA methods and applied the Abrams' Oscilloclast. Very soon definite relief was experienced. Astonishing to relate, the pain and prostration finally vanished entirely, and the happy patient went to San Francisco and took the ERA course and now will tell you how she is securing cures with the help of ERA that are just as certain and just as clear cut as any of the cures ever accomplished by osteopathic treatment.

Last June, in Oakland, at the meeting of the California Osteopathic Association, a resolution passed a year before, was read condemning osteopathic physicians who try to bring relief to tortured humanity by the use of the Abrams Oscilloclast. I saw a look of pain on the faces of Doctors Shedd and Potts. They are both sensible, wholesome, capable women. Knowing what they knew, they realized to the full the crass stupidity and injustice of the resolution. They told me that Doctor Shedd had been told by an osteopath that she was crazy to believe that ERA helped her. Some time later I talked to one of the scientific osteopaths about the resolution and told of the wonderful health restoration that had come to Doctor Shedd through the ERA and told him she was right there in the convention and would confirm everything I said. "That proves nothing," was his reply. This is precisely the attitude of the medical profession toward every new agency of cure unsanctioned by them. The fact that people get well proves nothing, and should be no argument against denouncing as fakirs and putting in jail all who helped to get them well.

When my medical doctor told me that the osteopath might have benefited me by suggestion, I replied, "If you understand that people can be fooled into getting well, why did you not restore me that way? You had the same opportunity."

If we assume it is true that there is absolutely no healing virtue in the Oscilloclast, as some of those who decry ERA contend, and that the hundreds of

thousands who are now testifying to great benefits received were helped by suggestion only—where is the harm in that? If the “weird story” given when the Oscilloclast is applied is the thing that cures, let us all be thankful. The way some learned men talk one would think that the great object of life is to be scientific and not to be well and happy. They object to Doctor Shedd and others like her being cured in an “unscientific way,” and they often call them hysterical or crazy.

When the Scientific American set about to see what science could prove about ERA, it completely ignored all clinical data except to hint that those who claimed benefits were possibly cured or benefited by suggestion. There was no attempt to show that all cures were of the type wherein suggestion would be effective. They examined the Oscilloclast and declared they could not see how it could have therapeutic merit.

In the writer's opinion it will be a sad day when scientists persuade us to reject human testimony as worthless, such as that of Doctors Shedd and Potts. Years ago I read in newspapers and magazines about a mysterious device that enabled a man to hear a song very clearly, though the singer was a thousand miles away. I had never heard a sound over the radio. I knew of no scientist who could explain electricity or tell how it works, nor anyone who could explain scientifically how the radio works and yet I believed the human testimony absolutely, and when my ear first came in contact with a radio-receiving device, I was not at all surprised at what I heard.

I have talked with many people who say the ERA has benefited them or their friends or acquaintances. I know that some hundreds of osteopaths have taken up the work and most of them were considered very sane before they did so. The man I thought to be most studious, capable and progressive in Minnesota—Dr. Keyes—tells me that he is unquestionably getting some very favorable results with the help of ERA. His own wife was benefited thereby. It is not a cure-all, he says, and no one knows its limitations, but it has accomplished some things that so far as he knows could not be accomplished in any other way. For years I have been well acquainted with Drs. Cave, Moore, and Scotchorn, and they all told me at Kirksville, last summer, that there surely is merit in ERA, and they all can describe cures just as I can tell of cures in my practice. It is true there are many failures, and there are some graduates of ERA who have failed to secure favorable results with the Oscilloclast. It is also true that osteopaths have met with failures and a few graduates are failures. The physician rather than the method is at fault. In many cases of these so greatly benefited by ERA it would be just as difficult to describe the cure to suggestion as in the cures wrought by osteopathy. Most all osteopaths who are practicing the ERA are just as dumbfounded and just as disgusted at the attitude of many of their fellow osteopaths in deploring the relieving of humanity by ERA as all osteopaths are dumbfounded and disgusted at the attitude of the majority of the medical profession toward osteopathy.

In the light of all the testimony, I think the asylum was more likely designed for those who insist that the ERA is a fake rather than for those who have found merit in the treatment.

Doctor Abrams and his followers have made a prima facie case, and those of us who have not taken up the work, ought to commend those who are trying to lessen pain and suffering by this method.

(Editorial from San Francisco Examiner, March 5, 1925)

WE HEARD THE PRESIDENT AND WE SAW HIM TOO

Once again San Francisco is the birthplace of a miracle.

Photographs of President Coolidge's inauguration, sent across the continent **by wire**, reached this city yesterday within an hour after they were taken, and the prints were developed and on exhibit practically by the time the President had finished his speech.

What an amazing thing! It beggars the vocabulary. Two years ago it was regarded as creditable for the pictures of Eastern events to reach this coast five days after the occurrence. One year ago everyone was talking about the wonders of the air mail, thirty-hours from New York. Yesterday it was **one** hour—and the pictures were as clear and perfect in detail as the average run of professional photography; they were not at all "damaged in transmission!"

San Francisco and New York alone saw this miracle. The receiving machine in this city was the only one operated by the telephone company in the West. Local newspapers published the photographs sooner than the newspapers of Baltimore, and only a few minutes behind the newspapers of Washington itself. Radio wafted the President's words, at the moment of utterance, to fifty millions of listeners, and as San Francisco's listeners turned away at the end of the speech, there were the photographs!

America is shrinking to the dimensions of a public square in a small-sized village; but there are one hundred and fifteen million persons in that square.

What next?

(From The New York World of September 18, 1924.)

SEEKS LAW OF LIFE IN ATOM'S ENERGY

**Dr. J. C. Burnett, in Private \$250,000 Laboratory,
Would Cure All Human Ills**

Aided by Electric Expert

WILL LAY RESULTS OF TWO YEARS' LABOR BEFORE SCIENTISTS

In a beautiful and unusual laboratory in the wooded hills of the Palisades, at Alpine, N. J., designed and erected by his wealthy wife and himself at a cost exceeding \$250,000, Dr. J. Clawson Burnett is at work searching for the fountain of life. He thinks it will be found in electronic energy, which will some day diagnose and treat human ills and make this a better world to live in.

Dr. Burnett, with the assistance of J. H. Hallberg, an engineer with a considerable reputation in the electrical world, is attempting to show the practicability of the atomic theory as regards the human body. Matter is electronically constituted, and he holds it can therefore be controlled to man's advantage.

Have Announcement to Make

The first fruits of their labors, extending over two years at Closter and some months in their remarkably equipped laboratory at Alpine, are ready for the examination of scientific societies. Should they prove as valuable as he considers them, Dr. Burnett says the world may have them.

His is a privately endowed institution, known as the Burnett-Timken Research Laboratory, and he says the commercial possibilities of his discoveries do not interest him.

Dr. Burnett and Mr. Hallberg will leave to-day for Chicago with an instrument known as the oscilloclast, around which a medical storm has raged since its invention several years ago by the late Dr. Albert Abrams of California. The oscilloclast was designed to heal diseases by the discharge of electronic force; in other words, instead of healing by medicine, it was intended to heal by radio waves.

Body 99 Per Cent. Efficient

Much has been claimed for the oscilloclast and much said against it. Dr. Burnett and Mr. Hallberg claim to have an important announcement to make concerning it, emphasizing the fact that they are interested only in proving or disproving the advanced theories of Dr. Abrams concerning electronic con-

trol. They intend to prove that the oscilloclast actually gives off electric energy, a vital question around which much of the heated discussion concerning it has centered.

The instrument will be demonstrated at the Hotel La Salle in Chicago during the convention of the American Electronic Research Association, which is to convene from Sunday to Wednesday. Scientists from all parts of the country will attend.

Before long, Dr. Burnett expects to make public reports on other scientific questions of importance to the electrical world. One of the first will offer proof that evaporation is an electrical phenomenon, which, if substantiated, would be of inestimable value in the diagnosis of disease, inasmuch as body fluids could be submitted to valuable tests now meaningless.

"We maintain," says Mr. Hallberg, "that the human body is 99 per cent efficient, an opinion based on our own experimnts plus deductions from the latest medical developments. Given proper food and light, the body would take care of itself, without interference.

"Light we consider of primary importance. Tests on eggs and chickens prove that. Therefore, vibrations are of primary importance, which can be substantiated by such simple experiments as vases ringing in tune with a piano note or a bridge vibrating to the steps of soldiers in line. I think we are at liberty to assume that the whole body is affected by light—that is, by electromagnetic waves.

"You can get some idea of what I mean by the radio. Pick up a pair of phones. They are dead, meaningless. And yet, reached by electromagnetic waves they become alive. Remarkable, you say. Why shouldn't we be able to do the same with the human body?

"Your hand gives a certain response, has a certain reflex, from a certain electromagnetic wave. Now, cut your hand or bruise it. You have a different hand, if I put it very simply; the atoms of your hand are different than they were when your hand was well. Their reaction is different. Now, if we can control our energy, and we must find the particular wave which will cause the healing reflex for every disease, then haven't we an exceptional cure?

Medicine Still an Art

"In time I am certain we will be able first to diagnose diseases and then cure them by electromagnetic vibrations. Medicine, with all due respect to it, is still an art; witness how often diagnosis of eminent physicians will disagree. By means of electricity we hope to make diagnosis, and cure, an exact science."

Dr. Burnett said that by means of his experimnts he hoped to find a fundamental law governing life. He did not expect to discover how life began; the beginnings, he said, would be "too far in the higher vibrations."

"No matter how we develop diagnosis and healing by electrolytic means," he said, "we shall not, of course, be able to end disease. We will never be able to do that because man is too satisfied with the way he lives. He likes his pleasures and his comforts too much. But what we can do is make the world a better place in which to live."

Dr. Burnett is a young man, thirty-eight, who began his study of the human body after he suffered an attack of tuberculosis in his right shoulder and was healed, despite what he described as his extreme scepticism, by the oscilloclast. He studied at the American School of Osteopathy and practiced for eight years, opening a large sanitarium at Newark.

Four years ago Dr. Burnett married the then Miss Cora B. Timken, of the family which made millions out of the Timken Roller Bearing Company. She was interested in art and in philanthropy, and combining the two evolved the plan which brought into being their huge estate and bizarre laboratory at Alpine.

Cornerstone Lacking

To many of the local residents it was a mystery, and until a representative of The World went through it yesterday from top to bottom it was completely shut from the outside world.

The building is unusual in appearance and design. Mrs. Burnett holds that buildings should grow out of the ground, not look like cigar boxes set in a yard. Therefore, the design was executed under her direction by the architect, John E. England, Jr. To fit Dr. Burnett's plans it hasn't a nail in it that might be magnetic. It is entirely of stone, with wood, brass, copper and bronze for the fittings. It has in it tables sunk into the bedrock of the Pallisades. Its equipment is rare and complete.

Mr. Hallberg is a native of Sweden, now fifty. In 1890 he was graduated from the Latin-Laroverket in Halmstad and left for America to make his fortune. After occupying various positions here he became electrical engineer and designer of the General Incandescent Arc Light Company of New York, Superintendent of the big Cincinnati Gas and Electric Company, then consulting engineer for the Commission on Municipal Electric Lighting of New York, the National Carbon Company and various lighting and power, industrial and manufacturing plants.

One feature of the enterprise is curious. At the right of the front door is a gaping hole in the wall.

"Some day," explained Dr. Burnett, "when we have proved some of our theories and been accorded a place in the world of science, we will hold a formal dedication for this laboratory. That's where the cornerstone will go."

ATTEND ANNUAL CONVENTION OF THE MIDDLE STATES SOCIETY

PHYSICO-CLINICAL MEDICINE,
2151 Sacramento St.,
San Francisco, Calif.

GENTLEMEN:

The Middle States Society will hold a Convention in Des Moines, Iowa, at the Savery Hotel, Tuesday, Wednesday and Thursday, May 19th, 20th and 21st, 1925.

"Nuff Sed!"

Except it will be bigger and better than ever, and everybody will be there.

Added features will make **this** Convention such as you never attended before.

For instance, Roemer of Waukegan will be there, with his explanation of light and tension; Johnson of Chicago will tell us all about ultra Violet Rays and how they annul reactions; McManis, du Plessis, Hayward, Pflueger, Blackburn, Burnett, Moore, Cave and all the old standbys will be there—not with the same old song but with melodies of recent progress.

Electrotherapy and Physiotherapy will be given a prominent place and share on the program.

You will not be wearied by radicals, but you will hear of convincing findings from the laboratories of leading ERA physicians.

The Entertainment Committee promises an Italian Dinner at Caesar's—Broadcasting from W.H.O—a banquet—a dance—and a novel theatre program of good variety.

You will have practical and scientific papers, lectures and demonstrations all day and fun at night.

Special lectures and question boxes for ladies and children.

Special instructions and **entertainment** for nurses and assistants.

Bring them all along!

Des Moines, the World's Convention City, awaits to welcome you!

COME!!!

MIDDLE STATES SOCIETY

Des Moines, Iowa.

PRIORITY OF DISCOVERY

History Repeats Itself

In the dark and gruelling days following the death of Dr. Albert Abrams, with the vicious attacks on his fair name in the field of science, charged with fraud, charlatanism, quackery and the like because he dared to give to the world his discovery of the Electronic Reactions in the face of disfavor by medical societies, nothing was heard of anyone wishing to claim the honor of being the originator of his achievement. But now, a few weeks after a distinguished group of scientists in London have declared before the Royal Society of Medicine that the Electronic Reactions really exist and that they may be nothing less than a new form of energy, we find an effort on foot to give credit for this discovery to Dr. George Starr White, of Los Angeles.

Thus history repeats itself. With the dawning of a new day in the recognition of Albert Abrams' discovery, it would seem that medical societies which frowned upon him are starting activities to separate his name from this method of diagnosis and treatment and under new nomenclature to use its essence without acknowledgment.

It should be sufficient to quote the following which was published in the *JOURNAL OF PHYSICO-CLINICAL MEDICINE* of September, 1924. These excerpts are from two articles. The first is from "A Record of the Training, Credentials and Professional Recognition of Dr. Albert Abrams," pages 17 and 18:

Dr. George Starr White—*American Journal of Clinical Medicine*, Nov., 1914; Feb. and March, 1915; Address and Demonstrations, *University of California*, Feb. 16, 1915. Extract from *American Journal of Clinical Medicine*.

"It is many years since the medical profession has shown such interest in any new discovery as they have in **electronic diagnosis, first discovered by Dr. Albert Abrams of San Francisco**. It is not the novelty of the method that interests the progressive physician, but the great field opened to him. To be able to diagnose at the very beginning, tuberculosis, carcinoma, syphilis, pus formation, and so on, and not have to rely upon doubtful laboratory methods, is almost beyond comprehension or belief."

The second is from "Some Replies to Critics," by Dr. Albert Abrams, page 46:

Priority as Discoverer

We recall,

"Seven cities warred for Homer, being dead,
Who living had no rooffe to shroud his head."

Perhaps one of the most notorious claimants for priority is one George Starr White. He may easily be refuted by reference to his published writings.

FRED E. MOORE.

(From London Truth, April 9, 1924)

CANCER AND THE ABRAMS MYSTERY

It was mentioned last week in connection with the non-operative treatment of cancer that evidence of the cure of cancer, among other diseases, by the Abrams treatment has recently been reported to Truth. It is, of course, well known by all interested in the subject that cancer is among the diseases the cure of which is claimed by the San Francisco magician and his disciples; and only a few weeks ago one of the most successful of the disciples invited the British Medical Journal to send him three cases of carcinoma, "preferably not moribund," for a demonstration of the results of the treatment. I only know this gentleman by name, but I can say that he did not offer this invitation without substantial reason, and in proof of that I will cite two of his cases, the general facts of which I know from the evidence of the patients. I should like to say here that I am not a disciple of Abrams myself, as a patient or practitioner, or otherwise. But on the evidence available it seems to me possible that there is more in this thing than can be disposed of by the rough-and-ready controversial methods hitherto adopted, and that the subject calls for something in the nature of scientific investigation.

About the beginning of last November a personal inquiry was made at Truth office for information about the practice of the doctors above referred to. Nothing more was heard of the incident until about a fortnight ago, when a lady called to express thanks for the information that had been given, and told me the whole story, which she thought deserved publicity. During last autumn her husband, a professional man in London, became very ill. His doctor took him to a consultant, who diagnosed a sarcoma on one of his lungs. This is, I understand, a form of cancer which develops very rapidly. The diagnosis was verified by X-ray examination and confirmed by a specialist. The medical men pronounced operation impossible, which, I presume, follows almost necessarily from the nature of the case. The patient was not, of course, told the worst, but he was told that he must give up work and resign himself to living as an invalid. In point of fact, he was by this time almost incapable of work, and it has since been learned that one at least of the doctors did not expect him to live six months. He or his friends had heard of the Abrams treatment which led to the communication with Truth, as the result of which he immediately put himself under the electronic practitioner. His wife states that after two or three weeks he was perceptibly improving. Before Christmas, that is to say after about four weeks' treatment, the doctor discharged him cured. Nothing apparently remained but the weakness incidental to the disease. When his wife called here, three months later, she stated that he had by that time resumed his usual work.

The second case was one diagnosed by the doctors as cancer of the bowel, and also pronounced inoperable. The patient placed himself under the same doctor, and was "discharged cured." I have not all the details of this case; the patient subsequently went abroad and has remained there. The cancer had apparently followed on the serious operation known as "colotomy." But a few weeks ago, being about four months after the conclusion of his treatment, he

wrote to say that he was in normal health, except for the inevitable consequences of the previous surgical operation.

These are the two cases of cancer, and they are of special interest because the diagnosis was arrived at by the usual professional methods, independently of Abrams and his electronic reactions. But as we are on Abrams, I should like to mention here a case of a different character of which I have had particulars at first hand. The patient in this case had a few years ago, late in middle life, what he describes as "a severe nervous and mental breakdown." Its severity is shown by the fact that he had to give up the appointment which he had held for many years in a public service, and as he expresses it, he was "unable to do anything, and had lost all interest in life." His local doctor after a time sent him to a hospital, where he was advised to attend regularly as an out-patient under an eminent London specialist. He did so for eighteen months, without deriving any benefit. A relative who was concerned about him heard of the Abrams treatment, and in the end the patient went to a London practitioner well known as an exponent of it. This doctor told the patient that if he would persevere for four or six months he might hope to be cured; and he proved as good as his word, for after six months of daily treatment the patient was "discharged cured," and has had no recurrence of his old trouble in the subsequent fifteen months. He says that, though he has had plenty of difficulty and trouble, he has been able to face it quite cheerfully, and that life is more enjoyable to him now than it was thirty years ago.

However difficult it may be to explain these results, it is still more difficult to explain them away when one knows, as the fact is, that similar things are being done almost daily by the two doctors mentioned above and many others who are using the Abrams method. Since Dr. Abrams died, the leading medical journals in this country have handled him very roughly. The various American exposures of "electronic reactions" have provided the principal material for this purpose, and the *Lancet* in particular served up once more, diagrams and all, the article in Henry Ford's *Dearborn Independent*, which was noticed in *Truth* soon after it appeared a year ago. In the *Dearborn Independent* an electrical expert "pulled to pieces," literally and figuratively, the Abrams "oscilloclast." He showed triumphantly that, owing to the numerous "closed circuits," and the generally childish absurdity of the whole device, by no possibility could any appreciable amount of the current introduced at one end of the apparatus be given off at the other, and that, in point of fact, none was given off that could be detected by the most delicate instrument known to electric science. Nevertheless, the oscilloclast continues to perform its miracles both in America and England. The question is, how does it do it, even after debiting the machine with Abrams' honourable admission that 50 percent of his cures may be assigned to "the psychic factor"?

Now, there is a development of the Abrams idea by Dr. Boyd, of Glasgow, called the "Emanometer," a private demonstration with which by a London doctor, who had been using it both for diagnosis and treatment, was described in *Truth* twelve months ago ("Miracles, Magic, and Medicine," *Truth*, March 14, 1923). Whereas you have to "lay on" your electricity to Abrams' "magic box," you do not do anything of the sort with the emanometer. It begins and ends with an "earthed" wire, and whatever current it develops when in action

is what I believe would be technically described as an "induced" current. What the instrument measures is presumably the effect on this current of introducing a specimen of the patient's saliva or blood into the circuit. The Dearborn Independent exposure of the oscilloclast has, therefore, no bearing whatever on this instrument. I mentioned the other day that Sir Thomas Horder, while shaking his professional head over the dangers of diagnosis by the Abrams method, had spoken with respect of the work of Dr. Boyd; his remarks imply, indeed, that he has himself not only seen the emanometer at work, but assisted in the process of percussing the human subject, which is an essential part of the business. He says of Dr. Boyd:

He appears to have proved definitely that the coil which Abrams called a "resistance" was in reality acting as an "inductance," and that Abrams had empirically constructed a form of wireless receiver. The inductance, acting together with the human subject as a selective receiver, picks up minute ether waves. . . .

I take this to mean that Abrams really stumbled in the dark upon something the nature of which he did not properly understand. That may possibly explain why his "magic box" continues to work miracles, though proved to be, from an electrician's point of view, simply an ignorant and childish "fake."

Now let us get back to cancer. When inspecting the other day the restored cancer wards at Battersea Hospital, I took the opportunity of hearing what the Hon. Medical Superintendent, Dr. Robert Bell, had to say about non-operative treatment of cancer by the Abrams process. Dr. Bell knew all about the oscilloclast, and seemed quite ready to credit it with the cure of the cases above mentioned or any others. Incidentally, he told me that he had himself devised a variant of the Abrams machine with which he is experimenting. He propounded the theory that—if I have got it correctly—the virtue of the dietary which he uses in the treatment of cancer resides in the living matter of fresh vegetables, fruits, seeds, eggs, and in milk, butter, and cheese, etc., and that it is in essence "electronic." He suggested that the hypothetical infinitesimals labelled "vitamins" are also simply electronic activities. On this view of the matter, as I understand it, the oscilloclast gives the patient—at any rate, the cancer patient—something which the body may obtain by the processes of nature from any natural food, whether of vegetable or animal origin, in which the vital principle is still extant, which means, among other things, that it has not been cooked. Right or wrong, we have here an intelligible theory which for the present fits all the phenomena observed or alleged, and possibly also Sir Thomas Horder's account of Abrams' mistake.

At the risk of boring the reader, I think this is the right place to mention one of several mysterious phenomena revealed at the seance with the emanometer described in Truth last year. In the first place we spectators were forbidden to approach within a yard or two of the apparatus, because it had been found that this would disturb its functions. The doctor went further. He told us that a day or two previously he had found the emanometer functioning erratically for no evident reason. Looking round the room for a possible cause, his eye fell upon a hyacinth in full bloom on a table close by. At a venture, he put the pot and the hyacinth outside the door, whereupon the emanometer at once

resumed its ordinary behaviour. What can this signify, except that the potent emanations from the hyacinth influenced the induced current in the emanometer just as did those from a human being?

Is there anything incredible in this? Sir Jagadis Bose has told us some surprising things about the electrical emanations of plants; if I remember rightly, he has asserted that a plant gives off an appreciable electric discharge at the moment of death. Assuming such things, it would be no matter for surprise that in the processes of reproduction, with which the scent of flowers is associated, plants should be in a state of electronic excitement, as noticed by the emanometer; nor that their fruit and seed, as well as their ordinary tissue, should give off electrons when killed in the process of digestion, as suggested by Dr. Bell. A subtle connection is here suggested between phenomena which on the surface appear unrelated. All these phenomena call for the attention of the Imperial Cancer Research Campaign, with its prodigious resources in brains and money. I hope they are already having it. The mysteries of the mighty infinitesimal lie in the domain of the physicist rather than that of the physician; but in them lie hid the secret of the nature of life no less than that of matter, and if of life then assuredly of health also. No process of scientific research worthy of its name will dogmatise about them prematurely or rule out evidence from any quarter which offers a chance of enlightenment.

AN ERA STORY BY A LAYMAN

Robert Cosmo Harding, author of *O'Conner's Career*, *First Degree*, and many other stories, has written a very comprehensive and interesting article for the layman on ERA for the British public.

REPLY TO DOCTOR DARROW

TO THE EDITOR OF THE DAILY TIMES, ERIE, PENNSYLVANIA

Had Doctor Darrow honored me with his presence the night I made my talk at the Central High School Building, he would have understood the futility of his trying to obtain permission from accredited ERA physicians to check them up on the work they are doing.

The day has passed when any new method or innovation in the healing art must look to organized Medicine for approval of the work they are doing. The men and women in ERA work are conscientious in their efforts to help humanity. They are not a bunch of crooks and four-flushers, nor are they insane, as Doctor Darrow pictures them.

Doctor Darrow admits that he was born without any tact. His talk and actions, as I saw him that Sunday night in the First Baptist Church pulpit convinced me that not only is he not tactful, but that he is distinctly hostile and prejudiced toward ERA. Try as he might, I do not believe he could conduct a fair investigation of our methods.

The ERA physicians are willing and anxious to submit their methods to sincere investigators who cannot possibly have an axe to grind—to investigators who are qualified to conduct such an investigation, who will acknowledge a fact when it is proven to them, but not to men who in one breath say that there is absolutely nothing to ERA, and then turn around and say that if ERA is true it means the closing down of our present great orthodox diagnostic laboratories. Perhaps when Doctor Darrow made this statement he did not anticipate that at the close of his remarks the lady would ask this question: "Doctor Darrow, if it be true, as you say, that there is absolutely nothing to ERA, why is it that you and other medical men are fighting it so hard?" Which question Doctor Darrow did not answer. I admit that this was rather an embarrassing question for the lady to ask the Doctor after such a wonderful speech.

Doctor Darrow is also reported as having said the following in *The Erie Daily Times*, February 11:

"The local disciples see their cause failing. They are beginning to see the hand-writing on the wall, therefore, they have to import a man from Missouri to bolster up a losing cause." During all of your talk, Doctor Darrow, the Doctor from Missouri sat through it without a word to say. He wanted you to have every opportunity to present your case. He did not even try to embarrass you with questions so you should not feel aggrieved that he was there, but if it be true that ERA is as near dead as you picture it, why bother with the matter further?

ERA is gaining rapidly in recognition, and the public is beginning to find out that it has an abundance of merit in it regardless of attacks that have been made against it.

It is indeed fortunate for ERA that Scientists in England, like the physician to the Prince of Wales, who heads a committee of investigators, are looking into

this matter. Their first report states that there is something in it. Just what, they do not know surely as yet. They think that it may be a new form of energy. Pressure was brought to bear upon this committee not to make their report public. We wonder who made this suggestion? We assume, of course, that it was some one who had the best interest of humanity at heart. No, in spite of the fact that this suggestion was made, the committee was of large enough calibre to publish the report. While the work of this committee is far from finished, the report they gave out is very encouraging to ERA physicians and offers little to please those who are fighting to suppress the development of ERA.

It is probable that those who sought to prevent the publication of this report were afraid that its publication might lead to a chaotic state of present-day orthodox methods of diagnosis and treatment. It is this sort of thing that evidently Doctor Darrow fears.

Present-day methods of diagnosis and treatment need serious investigation. It would be a blessing for humanity if this could be brought about. Keep that which is good and discard the chaff. We need methods of diagnosis and treatment that are scientific. The practice of Medicine should be a Science and not an Art. To be scientific, a thing must be capable of being timed, weighed, or measured. A part of the Abrams system can now stand this very test. We hope to make it possible, as we progress, to time, weigh or measure all the things we do.

The important thing is that the public should not permit those who oppose us to befuddle the issue during the time ERA is being developed to its full usefulness. Our opponents sensationally condemn our methods as not being scientific, but they do not at the same time state that no present day method of healing can measure up to this standard.

ERA physicians are working hard to perfect their methods, and the jury that will decide for or against our work will be the public and not an organized Medical Society or a few untactful gentlemen who are prejudiced and hostile to our work.

The fact that we are getting results in many cases in which orthodox methods have failed is worth while, and for this reason, the public is going to see to it that ERA has a fair chance to prove itself.

Our message to the public in Erie is this. We are working hard for the betterment of humanity. In our ranks we have men and women of the highest integrity; men and women who have the courage of their convictions. All we ask is that you do your own thinking regarding this ERA matter, and if you wish to know about it, ask an ERA practitioner or a patient who has taken the treatment; but in fairness please do not ask those who are interested in our destruction or downfall. Judge our work by the results we get. The time is not now far distant when we will give to the world a method of diagnosis and treatment that will be scientific in the true sense of the word. Remember, our work is similar to that of Radio, and it will be through the study of this great principle that our problems will be solved.

Sincerely yours,

J. V. McMANIS,
Kirksville, Mo.

Chairman Research Committee, American Electronic Research Association.

CLINICAL LECTURES OF DR. ALBERT ABRAMS

(These valuable lectures by Doctor Abrams should be prized beyond measure by every ERA physician. As stated in previous journals, they have never before been published, and from month to month we will continue to give Doctor Abrams' words of wisdom as well as his general comments just as he expressed them while working with his patients in the Clinic. How fortunate it is that during the last year of his life his efficient Clinic Secretary recorded his spoken words upon the Stenotype. In future years when ERA comes into its own, Doctor Abrams' Clinical Lectures and his other writings will be eagerly sought by those physicians who have finally come into accord with the basic principles underlying Doctor Abrams' discovery. So I urge all those who possess the Journals to keep these files as prized possessions. The time will come when physicians will strive to secure these publications of Doctor Abrams' writings, and the supply of Journals which we hold in reserve can not be expected to meet the demand for back numbers. From this time forward we plan to present monthly these unpublished lectures until we have completed same.—Doctor Moore.)

Doctor Abrams: Is everything ready? All right. Don't touch that specimen. I can tell you that a thousand times, but you keep right on just the same. Oh, yes, I know you are careful, but you would get careless if I did not keep after you all the time. Pull down the curtain. Light interferes with these reactions. Where is my pencil? What is the first thing I do before I start making examinations? First concuss the 7th cervical and 2nd dorsal. That is correct. Then I mark out the lower border of the liver. All right. Give me the first specimen.

Carcinoma, Breast—

It is a re-examination. "Married woman; age 20 years. Has had 42 hours' treatment to date. Specimen taken just before treatment. Still has discomfort in left side below axilla which pressure and deep breathing relieve; not constant. Seems better in every other way." What did we find originally? "Carcinoma of left breast; 7 ohms. Tuberculosis; negative. Congenital D. R.; 38 ohms." See if there is any Carcinoma. No reaction. Look for Congenital D. R.; present; 4/25 ohm. Set it at 42 for Tuberculosis. Negative. Is there any Strep? No reaction. Write to the Doctor: "Possibly some adhesion may have survived the original trouble. We find all negative excepting a low grade of Congenital D. R." Next.

CLINICAL LECTURES OF DR. ALBERT ABRAMS

**Homosexuality—Importance of Diagnosis—
Danger of Telling Patient—**

Open the door, please. Let's have a little fresh air and light on the subject. There is a new case, isn't there? Give me the history, please. "No. 249. Man; age 33 years. Fatigues mentally and physically rapidly. Sighs repeatedly. Involuntary quivering of muscles of shoulders and arms. Lost 20 pounds in 4 months." Give me 49, Doctor. It is human blood reaction but the sex is reversed. Check that up carefully. In the case of homosexuality it is a dangerous thing to tell a patient, but it may have a very important bearing on the condition and treatment of the patient. He may be worrying over his condition. He may have committed some wrong and be afraid of the consequences. Look for Carcinoma, 50. It is present. Where is it? It is digestive; small intestines. You can see the pallor on the abdomen. It is located in the duodenum. Is it metastatic? No, it is non-metastatic. Measure it. 4 ohms. Look for Sarcoma; negative. Set it at 42 for Tuberculosis; negative. Is there any 55, Doctor? No reaction. Now, 57 for congenital D. R.; reaction present. Do you all hear it? All right. What does it measure? Stop. Check up again. Congenital D. R.; 38 ohms. Have him come in. (Patient comes in). Locate 50. Don't let me know where you are. Stop. Mark it. Go from the other side. Outline it. Is it the same place we found it on the subject? Let me see All right, mark it. He is to have general treatment and locally at rates 6 and 3. That is all. Don't get discouraged, my friend. You will get your pep back. Next case.

**Courage Necessary to be Follower in a
New Movement—**

What's next? Why do you give me a re-examination? I know it all has to be done, but I would like some variety. This routine work gets very tiresome to me, gentlemen. To me a problem solved is a problem dead, and I want to be at something new. But I have undertaken this and I must stay by it. There is no one else to do it, and I must provide in some way for the future of my disciples. **In some ways it takes more courage to be a follower in a new movement than the leader, for the leader has the faith in his convictions to sustain h m. He knows he has the truth, while the follower may doubt at times.** That is why I always

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warn everyone who comes here to take the course that he may expect opposition and persecution. But some people like to make martyrs of themselves, it seems.

**Pain in Back—
Sarcoma, Bone—**

Now, for the history. "No. 176. Man; age 57 years; married; 2 children, boy and girl. After stooping for any length of time, patient gets severe pain in lumbar region localized, but a few hours after that gets pain all over body, especially in shoulders and hands. Teeth and tonsils removed with no results. Was told he had chronic appendicitis and colitis. Much gas. Pain through entire abdomen. No vomiting. Appetite good. Diarrhea; six bowel movements a day; mucus in stools. Urine examination negative. Blood pressure normal. First Examination: May 18, 1923; **Sarcoma; present; bone; non-metastatic; spine. Acquired D. R.; present; 38 ohms. Strep.; present; right tonsillar region.** What is today's report? "Soreness on right side of neck. Pain in right hip; also right shoulder and arm." We will see what we find today. Is the blood in? Look for Sarcoma. There is no reaction. Check up again. It is negative. See if there is any 55. Yes, Acquired D. R. is still present. What does it measure? There is very little; less than an ohm. Stop. It measures 1/25 of an ohm. Look for Strep. It is still present. Where is it? In the sinus and right tonsillar region. We will check up on the patient. Have him come in. (Patient comes in). How about that pain in the back when you lean forward?

Patient: It is very bad right now.

Doctor Abrams: Has that modified any at all?

Patient: Not a bit.

Doctor Abrams: What treatment has he been having? Give me the card. "Treatment: S. S. 3 and rate 3 to spine. Paint spine with mercurochrome." Very good. Now localize the Strep. in the sinus. Don't let me know where you are. Stop. It is in the right antrum. Make a note of that. His new treatment is rates 2 and 4 to right antrum and right tonsillar region.

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**Acquired D. R.—Reaction Suboccipital Region—
Metal Takes Up Energy of Oscilloclast—**

There is a lady waiting there. What is her case? "No. 250. Married woman. Blood examined here before. Treated for several months. Two years ago, after having been married two days, could not grasp pen to write. Weakness gradually spread up right arm; speech began to thicken. Following that, her extremities began to weaken and drag. Two months later, left side involved. Four months after illness began, patient could not balance herself. Blood examined here 5 months ago. Acquired D. R. was found; 38 ohms. She is not any better but condition has remained stationary. She is going away and wants re-examination. She was bedridden and took treatment at her home. Diagnosis was multiple sclerosis." This is a very sad case and apparently hopeless. Give me 49, Doctor. Human blood; female reaction. Look for Acquired D. R. It is still present; cerebrospinal strain. What does it measure? Stop. Check up. It is 30 ohms. Have her come in. (Patient walks in with great difficulty, aided by two people). You see, she has a smile on her face. Isn't that wonderful? How long have you had treatments?

Patient: I have had 18 weeks' Oscilloclast treatment at home.

Doctor Abrams: Have you improved any?

Patient: No.

Doctor Abrams: Go over her head for 55. Use that aluminum cap. To make one you can take an aluminum pan and paint it with black lacquer on the outside. Yes, there is still a reaction of 55. Now, remove the cap and go over the head with the electrode to localize it. Don't tell me where you are. But don't keep me at it all day. All right, stop. Check up again. Where is it? There is a reaction of 55 in the suboccipital region. There is a great chance for her. How much improvement there will be I don't know. Unfortunately she stopped treatment before she had finished. She had treatment at home and used an iron bed with metal springs so that probably some of the energy was lost. (Patient's sister states that for a year and a half the condition has remained stationary. There was a slight change for the better.) She is to be re-examined soon again. I can not understand why we have not gotten rid of that

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reaction of 55. Don't give up hope, my child. That smile will help you along. Test out the Oscilloclast she is using and be sure that it is all right. Also see that the bed is insulated. The amount of energy used is very small and the metal will take it up. Place the mattress on the floor on a sheet of rubber and avoid any loss of energy. Even the small amount of metal in the springs will cause a loss of energy from the Oscilloclast, for naturally the energy follows the line of least resistance. I want particular attention given to this little lady so that she has every possible chance of getting every benefit that can be given her. She has had a difficult enough time as it is. Next. There is another patient waiting. First we will take a few minutes' recess and then continue the work. I know you gentlemen won't object to a chance to smoke.

**Acquired D. R.—Hypertension—
Difficulty in Walking—**

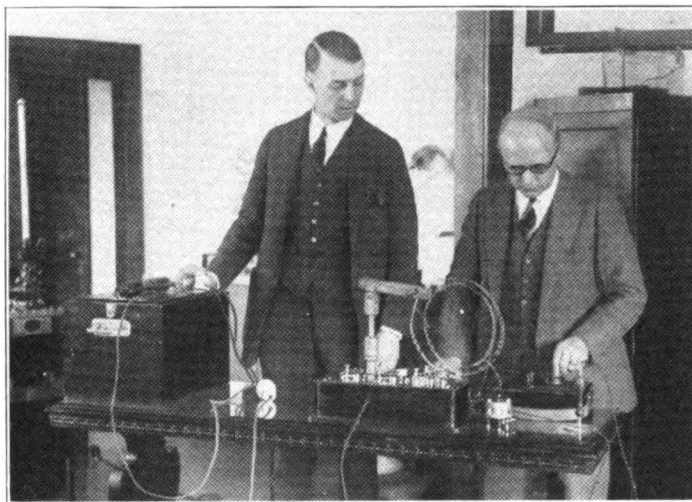
Give me the history, please. "No. 253. Married woman. Numbness in both hands. Difficulty in walking. Double vision. High blood pressure." Every case of hypertension is always due to syphilis, usually acquired, but sometimes congenital. "Head-aches, worse at night; localized on the right side. Kidney removed in 1918. Large stone in kidney. Diagnosed by other doctors as multiple sclerosis." In every case of this kind we find syphilis. I am beginning to think that every case of nervous disease is localized syphilis. It all depends upon where the syphilis is localized. 49. There is no female reaction. Look for Carcinoma. It is present. Where is it?. It is genitourinary. Measure it. It is very low; 4 25 of an ohm. That doesn't mean anything. Now set it at 55 for Acquired D. R. I get the reaction. But don't be too sure. Give me the E. D. reaction. Yes, I still get it. Now, give me the Splenic reaction. Yes. Now, try the Solar Plexus reaction. Yes, you see we get the reaction of Acquired D. R. each time. That is the way to check up. It is not necessary to depend entirely upon one reaction. Have her come in. (Patient walks with great difficulty; has to be led in). This is similar to a previous case. A curious coincidence. First use the aluminum cap to ascertain if there is any reaction of 55 over the head. Yes, it is present. Now, remove the cap and localize the reaction. Don't let me know where you are. Stop. Where is it? It is in the suboccipital region. She must have

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general treatment and treatment locally at 3. You find nystagmus and tremor and staggering. That is of no value. The thing is to get at the cause. (Patient goes out). Of course, if destruction has taken place, you can do nothing. You must make this explanation to the patient's relatives and make no promises. But always remember that, as a physician, you must give every aid possible to your patient, even though it may not redound to your own personal renown. Of course, you have to be careful and protect yourself also.

Reaction of Sarcoma Following Carcinoma—

What is the next case? It is a re-examination. "No. 179. Married man; ago 30 years. No children. About 4 months ago, while lifting a piano, he felt something snap in lower part of back. Paid no attention until one month later when patient felt severe sharp pain in back radiating down left thigh to knee. Can not sleep at night due to pain. Made worse on getting up after sitting for a while. Pain gradually disappears after walking around for a while. Numbness along thigh. X-ray revealed nothing. Put in plaster cast at University Hospital for 2 weeks; got no relief. Tried Osteopathy and Chiropractic; no results. Lost 25 pounds in 4 months. First examination: May 21, 1923; Carcinoma; bone; non-metastatic; over sacrum; 7 ohms. Congenital D. R.; 35 ohms. June 4; Carcinoma; 2/25 ohm. Treatment; Two cords at rate 6 and one cord at rate 3 to spine." What is today's report? He has had about 3 weeks' treatment. "Patient much better. Pain much less in back but still some present." Is the blood in? Set it at 50 for Carcinoma; no reaction. Look for Sarcoma. Stop. Check up again. **Sarcoma is present.** Sometimes you may have a combination of Carcinoma and Sarcoma. Now, you see there is a slight sarcomatous reaction. It must be low because we did not get it when he first came here. Measure it. Stop. Correct. Sarcoma measures 1 ohm. **Treatment:** Three cords at rate 3 to the back. Next.



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Truth never came into the world but, like a bastard, to the ignominy of him that brought her forth, 'till time hath washed and salted the infant, declared her legitimate, and churched the father of this young Minerva.

—Milton.