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What Is E. R. A.? By Mae J. Work, D.O. (N.Y.)

I DO not feel that it is proper for me to keep silent in this discussion of the Abrams system of diagnosing and treating disease. There are two principal reasons for this: first, my interest in truth in the abstract, and, second, my interest in that higher phase of truth we very properly refer to under the caption of "present truth". I have been interested in the latter for many years; in fact, was born and brought up in sympathy with it, and without it life would be colorless indeed.

Before describing what E.R.A. is, and my connection with it, I wish to quote a few words from the pen of Thomas Colson, D.O., B.S., LL.B., editor of the *Physico-Clinical Magazine*, San Francisco, California. Dr. Colson says in his magazine for November, 1929:

Since a time when the memory of man runneth not to the contrary, as might be said in legal parlance, alleged diagnoses have been made by clairvoyant, psychic, or other power by many. We find mention of it in our earliest histories and on down through the progress of civilization to our present time. We will not enter into a discussion of the merits or demerits of such alleged diagnoses. We just want to point out that such diagnoses are no part of the Electronic Reactions of Abrams. The latter depend for their occurrence upon certain well-defined scientific principles.

Doctor Colson, in the foregoing excerpt, has set forth a principle which Mr. Goodrich's experiences show to be a fact; namely, that while the E.R.A. system is true and genuine, there are fakirs and frauds endeavoring to associate themselves with it and to take advantage of its good name and reputation.

It was late in the year of 1922 that a man in public life, an unusually broad-minded and intelligent man, a thinker, and a lover of his fellow men, one for whom I have great respect,

The Golden Age was requested to publish the article appearing in Number 273 relative to electronic treatments. *The Golden Age* has requested Dr. Mae J. Work to reply thereto, and the reply is herewith submitted. This will end the question of controversy, so far as this magazine is concerned.—Editor.

advised me that, in his opinion, there would be extended opportunities of doing good to my fellow men if I were to take a course of study with Doctor Abrams.

This gentleman knew Dr. Abrams personally, understood

his methods, and believed them to be thoroughly scientific, and as he is a keen observer and a sound reasoner and was willing to use his influence with Doctor Abrams to get me into his personal class, and did so use it, I took it to be the proper move that I should go to San Francisco for the purpose, and did so.

In December, 1922, I arrived in the far western city a living question mark. Not at that time fully convinced of the great value of E.R.A. in the treatment of disease, I was nevertheless willing to learn, and anxious to add to my practice of osteopathy all of the latest and best methods for the diagnosis and treatment of disease.

On Sacramento St., opposite Lafayette Park, I found a modest two-story structure, without even a sign on the outside to indicate what was within. After passing through the big iron gates alongside the building I found an entrance with a door bell and on a small plate beside it merely the name "Dr. Albert Abrams".

After explaining my mission I was ushered into the clinic where Doctor Abrams was performing what then seemed like miracles, but what, with a better knowledge of his methods, I now see was merely the practical application of truths with which he was familiar but of which, at the time, I knew next to nothing.

I can help the reader a little at this point by explaining that the earth is a magnet. Navigation of earth and sea and sky is built upon this fact, and man is involved because he must live his life here on earth with lines of magnetic

force streaming through him, from birth to death. The Abrams method takes advantage of this fact and uses it to help man in his weakness.

/ It is stated that if a human corpse is left on a float in a tank it will inevitably turn with its head to the north. Even through the lifeless body the lines of magnetic force will go in the direction they prefer. It is for this reason that it is better to sleep with the head to the north, when that is possible.

When I entered the clinic room, which seats about sixty people, I found it filled with progressive physicians who had come from near by and from great distances to study at the feet of this man who has given the world the most wonderful method of curing human ailments that has thus far been devised. Although this man of genius has now gone into death, the legacy of knowledge which he left with mankind will long continue to bring health and happiness to the human family.

In this clinic, day after day, Doctor Abrams examined blood specimens, from his office and mailed to him from all over the world. He did not necessarily need to see the patients in order to be able to tell all about their physical condition. From a specimen of blood he was able to give a full diagnosis and outline a treatment. The following is the method pursued. The language may be somewhat technical, but will be sufficiently clear to most of your readers.

The blood specimen, which is usually taken from the lobe of the patient's ear, is first squeezed into a piece of clean white blotting paper. In making the diagnosis this blotting paper is placed in an instrument called the dynamizer, a small rubber container with an aluminum electrode connected with the ground.

The cover of this container is lined with aluminum and wired to a series of three rheostats called reflexophones, which in turn are connected to a band around the head of a human reagent or subject. This reagent is also grounded and his abdomen is used by the diagnostician, who uses the method of percussion to detect diseased conditions of the blood.

The energy from the blood specimen in the dynamizer, as it passes through the rheostats and through the nervous system of the reagent, gives the clue to the condition of the blood. Reports on the abdomen may be detected by percussion (tapping with the finger tips) or by

rubbing a charged rubber or glass rod over the skin of the abdomen. The diagnostician must also be in the circuit, which he does by placing his foot against the foot of the reagent.

The reagent or subject stands upon two pieces of grounded metal and faces the geographical west, in line with the rotation of the earth upon its axis. As the compass pulls to the north and south, which are the magnetic poles of the earth, in order to get greater energy from the blood specimen and from the reagent or subject, he faces in a direction opposite to the pull of the magnet. The reason why we advise sleeping with the head to the north is for the opposite reason, so that the patient may obtain greater relaxation, by having the earth's lines of force travel through his body along the lines of least resistance.

In our examination of energy of the blood specimen we find that each disease has a vibratory rate of its own. It is commonly known that everything in nature vibrates, but it was for Doctor Abrams to detect, identify and measure these vibrations in the blood. When the electrons throughout the body are vibrating at their normal rates the body is in health or at ease, but if, for any reason, the electrons in any part or organ of the body suffer a disturbance which causes them to vibrate at other than their normal rates, this disturbed polarity causes a new formation, dis-ease.

Electromagnetic waves have no effect upon objects which are incapable of vibrating with them, but will produce a decided effect if the mechanism is sufficiently sensitive and accurately tuned. Hence there are many latent conditions of the blood that can be detected by the electronic reactions of Abrams and that would be unobservable by any other means now known. Inherited infections and vaccinations prepare the way for all kinds of diseases, especially tuberculosis and cancer.

E.R.A. is identical with the principle in radio communication. The grounded dynamizer corresponds to the broadcasting station. The blood specimen emits radiant energy through the sensitive cover of the dynamizer, just as radio waves are emitted by the sending aerial. The energy from the blood is measured by the coils of the rheostats, and with these we are able to tune out all wave lengths except the one with which we wish to deal, just as we do with any good radio receiving set.

The reaction or result of the E.R.A. test is the report on the reagent or subject of the energy wave sent out by the blood specimen through the coils, and is produced upon the reagent's abdomen by means of nerve reflexes. A nerve reflex is an involuntary impulse reflected over a system of nerves from an excited nerve center, caused independent of the conscious mind or will, as, for example, sneezing (nasal reflex) or batting the eye (conjunctival reflex). This nerve's function is called reflex action.

After concluding the diagnosis we take the same blood specimen and the same reagent, and leaving the rheostats set at the same vibratory rate we then connect the treatment machine or oscilloclast into the circuit and ascertain from it precisely what energy rate will best destroy the disease reaction. When we find on the treatment machine the proper number it quickly overcomes the disease reaction even when the electrode is held at a distance from the subject's body.

The oscilloclast is a box 12 inches by 14 inches arranged in such a way as to give forth a radio wave of 7.56 meters. It receives its power from the ordinary electric light socket. It will thus be seen that the legitimate E. R. A. machine and hook-up is not at all like the hook-up which Mr. Goodrich mentioned.

I can understand the Abrams hook-up, with the human subject for the diagnosis of blood, but when I get away from the human subject I lose the fine qualities that are contained in the human reflexes for detecting fine emanations of blood energy. The college at San Francisco has offered a \$10,000 reward for anyone who can produce a mechanical subject which can, with a reasonable degree of accuracy, *identify, measure, and detect* disease energy coming from a few drops of blood or transmitted direct from the human being (that is, the patient). No one, up to the present time, has succeeded in claiming this reward. Probably the Goodrich article is based on the idea of a mechanical subject. There is no button, to stick or not stick, in the regular Abrams hook-up.

I conclude this article with an editorial from the March (1930) issue of *The Journal of the American Electronic Research Association*, supplemented by a paragraph from a similar editorial in the same journal for February, and a

letter from the pen of Franklin M. Henry, of the College of Electronic Medicine, which are of interest and importance in this connection.

INSTRUMENTS: It has become a matter of settled knowledge that the Abrams Oscilloclast delivers at its terminals:

(a) A very minute high frequency electrical current, detectable and measurable by sufficiently delicate instruments.

(b) Energy that is in the range of radio-frequencies emitted in the form of successive, highly damped wave trains, the length of the wave being close to $7\frac{1}{2}$ meters.*

The first, scientific, experimental demonstration of these facts was made, we believe, in the Burnett-Timkin Laboratory, Alpine, N. J., and they were given publicity in papers by Dr. J. C. Burnett and Physicist J. H. Hallberg in 1923, at which time the experimental evidence was shown before the Eastern Electronic Research Association and many guests at Hotel McAlpin, New York City. Similar evidence was presented by these gentlemen to the National Convention in 1924 as reported in the *Journal* for October, 1924, page 290 et seq.

Later much of this work was repeated and other experiments added at the McManis Laboratory, Kirksville, Mo., the result of which was to greatly strengthen the foundations of Electronic Medicine and confirm the confidence of its sincere students in the correctness of its fundamental propositions.

It was at this time particularly heartening to E. R. A. workers to receive proof through the efforts of Drs. McManis and the scientific work of Dr. Thomas Colson and Mr. F. M. Henry that their practice rests on facts which can be "timed, weighed and measured" and therefore cannot be overcome by high-handed condemnation and ridicule.

At the A. E. R. A. convention, 1925, (*Journal*, January, 1926, page 6) Dr. Thomas Colson, then of the McManis Laboratory, presented evidence of the actual tuning properties of the coils of the Abrams instruments. By string galvanometer curves thrown on a screen he gave a graphic illustration of the tuning effects of the different steps in the dial of the Oscilloclast.

Still more exacting experiments have now been carried out with reference to the Oscilloclast at the Abrams College in San Francisco by Dr. Colson and Mr. Henry as a result of which nearly all doubts and points of controversy have been cleared up. The tuning properties of the dial coils, based upon capacities and inductances, has been confirmed, as has also the

*NOTE: To the physicist (a) and (b) may refer to the same thing; but the clinician, having in mind his high frequency modalities, differentiates between that branch of physiotherapy and "Electronic" or radio-frequency wave therapy.

wave length of the radio-frequency of the Abrams instrument.

Studies have been carried out in the College Laboratory with reference to the best method of application of the Oscilloclast treatment, and from this source we have the definite information that treatment is modified by the length of the treatment cord which connects the patient to the machine. This cord should be of standard size—six feet long and No. 18 stranded wire for the original Oscilloclast. For the "Improved Oscilloclast" the size of wire and the number of strands in the treatment cord make little difference but the length of this cord is of some importance. As explained in the Journal for September, 1929, page 297, it should be 73 inches long for emphasis of the current effects or 53½ inches when it is desired to emphasize the voltage effect.

There have been from the first certain unknown quantities about the Abrams Oscilloclast and certain mystifying features of construction which appear ridiculous to the physicist. All such features are absent from the new Oscilloclast.

One of the early questions raised was, Are the benefits of Oscilloclast treatment obtained through the law of destructive resonance as taught by Abrams? Engineer Ellis, of Chicago, after months of study of the electro-physics of the Abrams instruments announced his belief that the value of the treatment lay in the introduction into the body of a minute dosage of electricity in a form that enabled the molecular or atomic components of cells or plasma to acquire whatever electrons were needed to re-establish electronic equilibrium. He constructed instruments which were acceptable, as far as mechanical construction is concerned, to those who possessed the scientific training necessary to judge of such matters.

Certain others were thinking and working more or less along these same lines and the conception of electronic treatment held by many is that of "feeding electrons to the sick cells." A number of machines based upon this idea were placed upon the market and these made a strong appeal on the claim that no tuning of the treatment is required and that diagnosis is entirely superfluous, so far as being related to the treatment is concerned, whereas in the Abrams method accurate diagnosis and exact tuning of the treatment to meet the individual requirements of the case are essential.

Dr. Abrams tried to lessen the labor of tuning by finding a "destructive rate" for each disease or infection. For example he found that the characteristic reaction he obtained from his specimens of tubercle bacilli in vitro were annulled by the Oscilloclast when the dial was set on five. The same thing happened when the source of the reaction was a patient or a blood specimen. Therefore "rate 5" on the Oscilloclast became the "D. R." for "T. B." To

this treatment many patients responded well and even unexpected cures were effected but it soon became evident that not all tubercular cases would be much benefited by this "D. R." In many instances both symptoms and reactions would persist. Then finer tunings and individual tunings were introduced. In Abrams' latest work this was accomplished by means of the supplementary coils and dials of the "Micro-Oscilloclast."

During this period of development of specific tuning of the treatment it was found that by attaching the treatment cord which conveys the Oscilloclast energy to the patient to all three binding posts of the Oscilloclast by means of branches, practically all the Micro rates, or any required tunings, were obtainable simply by tuning all three of the dial selector switches conjunctively but each to a different number. For example, the dial number 3, 4 and 5, when combined and carried through a standard treating cord to a patient have the same dissipating effect on the reactions as its micro equivalent—127.6.

This three dial method of tuning has stood every comparative test as well as the hard test of several years' practice and is now in daily use by a number of physicians. No actual scientific explanation of the tuning properties of the three dials used conjunctively has yet been offered. Doubtless it would be difficult to determine the total capacity and inductance values of the three dial coils operating together, with their connections, the treating cord and electrode. These values may be presumed, however, as in other cases, to correspond to the resistance values of the three dial coils when these are joined together and have their selector switches placed on the corresponding numbers. These latter values have been found to agree quite closely with those of Oscilloclast—Micro tunings which are experimentally equivalent in dissipating effect upon the reactions.

In 1924 Dr. Walter E. Elfrink, (Journal, September, 1924, page 210) sought to increase the power of the Oscilloclast by changing it to a closed circuit therapeutic instrument. This was done by closing the test lamp circuit so the light would flash with the swing of the "tic tock." Then the two sides of the lamp circuit were joined through small fixed condensers to two added binding posts which, when connected through the treatment cords and patient, formed a "shunt" of the high circuit. The treatment circuit, containing the right hand rheostat of the unit, was tuned in the original manner. It was claimed that this "Elfrink hook up" made the treatment less subject to variation by environmental influences and increased the volume of energy flowing through the patient. After more than five years it cannot at this time be stated with certainty that the closed circuit plan either is or is not superior to the method of

Abrams—another item which reveals a lack of collaboration in our research.

Notwithstanding the fact that accurate therapeutic tunings are believed by most physicians who practice E. R. A. to be essential, the Oscilloclast has also been successfully used, as are the so-called self-tuning, or as are the non-tuned instruments. In the method of Dr. H. E. Jones the numbered contact posts or buttons of the tuning dial are all joined together by a bright copper wire which is first anchored to the stop pin at zero then passed from button to button around the dial, making one snug turn around each button. Patients are connected to the binding post in the usual manner and it is claimed the treatment may be distributed to more than one patient since all receive the same energy and each appropriates all he can absorb as would be the case if several patients were treated under one big lap.

On these "short-circuited" units patients may—and should, it is claimed—receive treatment many hours, even days, at a time. Ill effects are unknown. Treatment is administered as nearly continuously as circumstances warrant until disease reactions are negated.

We are able to state here as the result of personal observation and experiment that it is possible to render a patient negative of the common Abrams disease reactions, determined on the Abrams diagnostic circuit, by Oscilloclast treatment through the short-circuited unit. This is accomplished in a reasonable time with no attention whatever to tuning. Thus far we have not felt content to dismiss a case until we had abandoned the short-circuited unit and employed carefully tuned treatment for a time. It should be noted in this connection, however, that in Dr. Jones' work the force of the treating energy is greatly augmented, it is claimed, by passing it through a certain arrangement of radio sets; also that synergistic measures, such as light, color and mechanical vibrations, are employed.

Capacity and inductance effects of the short-circuited unit have not been studied and we have no idea, in terms of physics, as to its tuning properties or how it works.

We are interested in this matter because we believe it to be for the public good and for the advancement of Electronic Medicine to have available a means whereby a large number of people may be benefited by having their major disease reactions taken care of at very little expense of money to them and of time and labor to our physicians. This being accomplished we will still have more than we can do in trying to save the difficult cases—to rescue those ready to perish.

Let us turn now to a brief discussion of the most delightful phase of the recent developments in E. R. A.—the standardization work that has been going on

at the College during the last two years and which had its initiation previously at the McManis Laboratories at Kirksville. This work is delightful because the full, clear light of science illumines it, dispelling murky uncertainties. It is satisfying to substitute knowledge for supposition, fact for theory—to be able to give a reason.

The new diagnostic set is a scientific instrument. Every detail is based upon painstaking, scientific determinations of cause and effect made by capable men who had the will to do it and ample facilities at their command. In construction and tuning properties this set is standardized. Each set is an exact duplicate of every other set. It is an encouragement and a joy to progressive workers who have had to do much of their work with crude instruments, the tuning properties of which were unknown or unreliable.

The new Oscilloclast is likewise a scientific instrument of high standard and is well adapted to the best type of professional work in the Electronic field. The discriminating physician who has high aims in his work is bound to welcome this instrument and to derive much satisfaction from the use of a treatment machine which he can discuss with definiteness, pride and confidence with patients or visitors.

As is now generally known the "Improved Oscilloclast" is a two-meter wave machine, compared with the $7\frac{1}{2}$ -meter wave of the old Oscilloclast. Experience thus far with the new machine is very encouraging as to clinical results obtained. It is too early at this writing to state with finality whether, as a general therapeutic proposition, the new machine is altogether superior to the old or not. It may be that the $7\frac{1}{2}$ -meter wave at the force that represents the sending power of the old Oscilloclast will accomplish some things which the two-meter wave at the higher power of the "Improved Oscilloclast" cannot accomplish. On the other hand it is highly probable that the latter may be effective in certain instances in which the former would be useless, or nearly so.

Some of these points can be decided only as clinical experience accumulates. It is possible now, however, to state that the probabilities are that there will be definite or specific uses for both the old and the new Oscilloclast waves and that in practice each will be complementary, or supplementary, to the other.

The chief points of excellence of the "Improved Oscilloclast" may be enumerated as follows:

- (a) Easy portability and attachment to A. C. lighting system.
- (b) Noiseless operation.
- (c) Scientific construction; good workmanship.
- (d) Known wave of two meters.
- (e) Superior power.
- (f) Easy and sharp tuning.
- (g) Rates expressed in megacycles—a definite scientific term and concept.

- (h) Carries also one tuning unit of Abrams rates from one to ten.
- (i) Calibration by actual tuning effects so that values are standard regardless of possible variations in resistances.
- (j) Identical results may be expected from all machines for all are calibrated to a fixed and permanent standard so that each unit made is an exact duplicate of its predecessors.
- (k) Energy from this instrument may be easily demonstrated by a radio frequency galvanometer.

January 11, 1930

Dr. Mae J. Work
34 Orange Street
Brooklyn, N. Y.

MY DEAR DOCTOR:

It is not clear whether you refer to broadcasting treatment over a broadcasting station as Dr. Jones has done at various times, or whether you refer to broadcasting directly from the treatment apparatus. Assuming that you mean broadcasting treatment over a broadcasting station, your questions will be answered with this use in mind.

The Oscilloclast delivers a radio frequency wave of approximately $7\frac{1}{2}$ meters. A radio broadcasting station operates on a wave length between 200 and 600 meters. Any radio engineer can tell you that it is impossible to modulate a given wave length by a shorter wave length. Modulation can only be accomplished by a much longer wave length. The circuits of all broadcasting stations are designed in such a way that only wave lengths longer than 30,000 meters (sound waves) will effect modulation. It is quite evident from the foregoing that none of the radio frequency output of the Oscilloclast can be broadcast through any broadcasting station. It is true that if an Oscilloclast should be coupled to the input or microphone circuit of a broadcasting station, the station will be modulated at a frequency governed by the audio characteristics of the instruments. If a radio set were tuned in to a broadcasting station which was connected to an Oscilloclast in this manner, you would hear the sound of the tick-tock mechanism in the loud speaker, but this would not mean that any of the radio frequency current was being broadcast. These sound waves generated by the Oscilloclast are, of course, not of importance therapeutically, for the following reasons: A. Setting up different rates does not change the sound a particle. B. The sounds are not constant, but their characteristics are governed by the input voltage which is constantly fluctuating. C. In many installations the patient cannot hear, or at best can hear but faintly, the sound of the Oscilloclast. Yet in these cases the patients get well just as fast as if they could hear the sound wave. To my knowledge no one claims that the sound wave de-

livered by the Oscilloclast has therapeutic value, but it is the *only* part of the Oscilloclast output that can possibly be broadcast from a broadcasting station.

If you refer to broadcasting treatment using the Oscilloclast itself (not in conjunction with a broadcasting station) you might be interested to know that it is true that the Oscilloclast does produce some effect for a short distance. This effect is not particularly important therapeutically because it drops off very rapidly, varying with the square of the distance. It is not efficient therapeutically except when connected to a patient with a wire but will dissipate reactions over a distance of from five to twenty feet. A few observers have reported this dissipation effect for a slightly greater distance, but their work has not been confirmed.

It is impossible at the present time for any attachment whatsoever to amplify or increase the output of the Oscilloclast, as the wave length is too short to be amplified by any existing methods. The only way to secure increased output is by building a more powerful Oscilloclast, but at best this could only increase its broadcasting effect a short distance. None of the devices, which have been offered from time to time as means of increasing the output of the Oscilloclast energy, have any effect whatsoever towards producing such an increase.

It is hoped that the above discussion will answer your questions satisfactorily.

Yours very truly,
COLLEGE OF ELECTRONIC MEDICINE
By FRANKLIN M. HENRY

FMH:HMR

From the February issue, the following:

The Abrams treatment is not a cure-all. In fact it is the custom of those electronic practitioners who make up the membership of this association to say that it does not, itself, cure anything. It does, however, have very definite and demonstrable effects upon the body. . . . There is abundant clinical evidence and a considerable amount of experimental scientific evidence that the following are among the known effects of E.R.A. treatment:

- (a) A gentle cell stimulation with increase of metabolic activity.
- (b) Beneficial changes in the blood stream.
- (c) A gentle acceleration of detoxicating processes.
- (d) Antiphlogistic effects.
- (e) Sedative and analgesic effects.
- (f) A gentle influence in the direction of normalizing function and of correcting the imbalances of the sick body.
- (g) A mild supporting influence upon lagging life processes.
- (h) An inhibitory influence upon micro-organisms which are inimical to the body's welfare.