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THE OSTEOPATHIC PHYSICAL THERAPEUTIST

VOL. I

JULY, 1931

No. 4



A. Rollier

DR. AUGUSTE ROLLIER

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A Publication of interest to all in the healing professions concerned with the best and latest information in the great field of Physical Therapy.

EDITORIAL

A Year of Progress

IN a period of unsettled conditions 1930-31 the achievements of the Physical Therapy Research Society and Council of Physical Therapy are worthy of attention.

After six years of activity it is a great pleasure to note that the Annual Meeting is to be held within a short time and it might be proudly said that during the past year our membership has tripled in numbers.

Many leaders of the profession have shown their faith by becoming charter and life members; other by sustaining membership and many others who constitute the active list as well as numerous leading authorities in various parts of the world who have affiliated themselves as Honorary Life Members.

This means much to all. The Council of Physical Therapy have collected information concerning scores of modalities and techniques which are available to our members and in fact all in the profession interested. They have created new interest in Physical Therapy and Osteopathy. They have arranged to give any member many times his dues through discount arrangements on physical agencies, adjuncts and the like. It is their plan to offer more in mutual service until the section is second to none in this or any other profession.

Our Program Chairman, Dr. Marian A. Dick has prepared a program of interest and of high technical value to the profession. The respective field of physical agents as represented by our outstanding workers is inviting and instructive to all looking for progress as well as those members in the profession seeking knowledge as to the status of Physical Therapeutics.

Every divisional organization of the A. O. A. has a mission to perform. Physical Therapy is now on trial by many; our progress should help remove their doubts.

Physical Therapy unlike Drug Therapy stands in the practice of Osteopathy. Selected physical agencies and special conditions to be treated and these agencies invade the realms of all specialties. They are of Surgical as well as of Osteopathic value.

Attention is called to the "Hepato-Cardiac Syndrome" mentioned by Dr. William Martin and recently published in part in an issue of this journal. For the benefit of those who did not read it we will briefly recite: "At first the liver alone is involved but we have practically every abdominal organ, the local circulation, and the heart and aorta. Each are playing their part in the condition".

Dr. Martin's studies led him to believe that the "cardiac dilation is the result of the hepatic engorgement". In general he employed diathermy, the static wave current and mechanical vibration for the treatment of this condition.

The late Dr. William Benham Snow stated "for the dilated aorta and heart there is no measure known to him so effective for restoring tone to a relaxed cardiac muscle and aorta as the employment of mechanical vibration for periods of two minutes daily over the intervertebral spaces from side to side below the seventh cervical and first dorsal vertebrae."

Other physical measures including electric baths, mineral baths, sinusoidal currents, constant current, ultra-violet rays, and hygiene measures have been found of benefit in the treatment of not only cardiovascular conditions, but others too numerous to mention, either alone or in conjunction with Osteopathy. They need but a trial for a favorable verdict.

Specific Actinotherapy Procedure

By FRANK I. FURRY, D. O., M. D.

Denver, Colo.

WHILE practising in Cheyenne some years ago, a middle-aged man returning from California, developed a severe case of erysipelas. The disease covered the whole head—face and scalp—and his average temperature for a month was 104. With Osteopathic treatment, the usual local applications, and good nursing, the patient survived, and after some weeks was well again.

A few years later, again following his return from California, he came into my office with a patch of erysipelas starting on his nose. One application of the carbon-arc light soon ended that attack.

Since then I have treated several cases of erysipelas with the quartz light and with quick results. After hearing Dr. Sampson say that he had cured sixty-one consecutive cases with one treatment each, I tried the one-treatment method on my next case. This was a man with the face well covered with the eruption, which was not being controlled by treatment, including vaccines and leucocytic extract. One strong erythema dose of ultra-violet killed the infection on his face and it cleared up rapidly; but in a few days his scalp was covered and his ears were as large as hen's eggs. With shaving the scalp and further application of the ray, this exacerbation was soon controlled. The germs, already working in these parts, were not rayed in the first application.

The lesson is: treat not only the diseased area but follow with full bodily treatment and repeat daily until the patient is well. The general tonic effect will promote recuperation and may prevent spread of the disease.

Herpes Zoster

I have cleared up several cases of shingles in one, two, or three treatments: if given early enough one treatment will suffice. Where the neuritis is well established and painful, diathermy, also, should be used.

One case—lumbar, hip, and thigh involvement—had three hypodermic injections during one forenoon, for the pain. Air-cooled quartz

lamp and diathermy, at noon, gave relief and another treatment the next day was sufficient.

Another case, a lawyer, had suffered agonies for a month and he was relieved of his pain by the first treatment with the above modalities. His comment was: "why the — was I allowed to suffer this way for a month".

Shingles on the face usually leave the skin pitted and scarred. I have seen cases involving the supra-orbital area, which, under medical care, left disfiguring results.

A young married woman came in with eruptions on one side of her face from the temple to the chin. I pronounced it shingles. A consultant agreed with the diagnosis and remarked that it would leave her with a badly disfigured face. At this remark she burst into tears. A blistering dose with the water-cooled quartz, followed by daily treatments with the air-cooled soon cleared it up without a scar. The whole side of the face was covered with a mask-like scab a quarter of an inch thick.

Diphtheria.

While attending the 1908 A. O. A. convention, in Kirksville, I received a telegram stating that my six-year-old daughter had nasal diphtheria. The use of anti-toxin was in its trial stages, and after consulting with several leading members of the convention, I telegraphed to use no anti-toxin. I reached home the sixth day of the illness and death occurred that night.

Twenty-one years later, while attending a "Y" camp in the mountains, our son, then aged thirteen, was sent home on the sixth day of an undiagnosed illness. As soon as I saw him I recognized the old enemy, nasal diphtheria. Immediate consultation, followed by the use of 100,000 units of antitoxin within thirty hours, probably made the difference between this picture and the one before. I never saw such hideous features on a human being; the nose was distorted with the contained membranes, each eyelid was puffed to the size of a walnut, the throat was like that of a cobra—protruding be-

yond the jaws—the heart and kidneys were so involved that life was despaired of for weeks. The palate became paralyzed, then one side of the face, the arms and finally the lower extremities, confining the boy to his bed for five months. (Since then he has increased six inches in height and seems to be perfect, physically.)

Now all this, to tell of the use of the quartz light in the case. I used the water-cooled in the nose and throat, and gave general treatments to the body with the air-cooled lamp. It is the rule of the Denver health department to start making cultures on the ninth day of quarantine and if found negative three days in succession the quarantine is raised, which was the result in this case; and they do not understand, to this day, how such a severe case could become negative so soon.

About four years ago I learned of two young girls, sisters, who had been under quarantine for two months, as diphtheria carriers. The water-cooled ray in the throat cleared them up in two applications.

They had friends in the contagious hospital, also charged with being carriers. The parents of those children prevailed upon the authorities to bring them for treatment. They were followed by others, who all became negative after one or more exposures.

The powers-that-be apparently learned that the work was being done at an Osteopathic institution and vetoed the excursions to my office. They had forty carriers incarcerated in the hospital, some of them for as long as three years. The county authorities purchased a quartz light and in a short time the detention ward was empty. Some time later I read an article in the A. M. A. Journal, reciting the wonderful work done in our county hospital. Did the Osteopaths get any of the credit?

Rachitis.

Of course, you all know that the ultra-violet is a specific in rickets. Cover one half of the body of a rachitic child and ray the other half and the protected part will recover from the rickets as rapidly as the exposed part; hence the action must be thru the blood. Like insulin in

sugar metabolism, the ultra-violet ray must add something to the blood or activate some internal secretion to promote calcium metabolism.

Impetigo and Ring-worm.

Firm pressure on the lesion with a quartz applicator on the water-cooled machine—first removing the scabs in impetigo—produces quick results in these diseases. In fact, most skin diseases respond nicely to ultra-violet. Some bad cases of acne need the help of the X-ray, and sometimes psoriasis is stubborn. Eczema usually responds nicely to local and general applications.

Tubercular Adenitis and Peritonitis

I have not treated large numbers of these diseases, but the ones I have treated have responded nicely to general bodily irradiation from one to three months. If the glands are discharging, in adenitis, I use the water-cooled lamp locally.

Vincent's Angina and Pyorrhea.

After cleaning and scaling by the dentist, use of the pyorrhea applicator, attached to the water-cooled lamp, usually works wonders. In trench mouth, to secure quick results, the whole mouth and throat should also be rayed thru a tubular applicator. Pyorrhea should have a blistering dose, under pressure, at infrequent intervals, until a cure is effected—the time of cure depending upon the severity of the disease.

Furuncle and Carbuncle.

To abort, use water-cooled quartz applicator, under compression. If unsuccessful, bore into each threatened opening with a wooden applicator, dipped in strong phenol; swab cavity with phenol, followed by alcohol; then follow with water-cooled and general bodily radiations. Treat daily. This treatment has always produced good results in my hands. Just to illustrate: I recently had a case in an elderly woman who nearly died from a previous carbuncle on the back of her neck. She was surprised at the quick results obtained with this treatment, without her feeling sick.

(Turn to Page 116)

Short Wave Ultra-Violet in Ear, Nose and Throat Conditions

By FRANKLIN C. HUMBERT, D. O.
Syracuse, N. Y.

A FEW words of explanation may be necessary to define ultra-violet of a short and long wave character.

From all available evidence, we define ultra-violet as that portion of the electro-magnetic spectrum which ranges between 1700 and 3200 Angstrom units, an Angstrom unit is one-tenth millionth of a millimeter, very short indeed.

The longer wave lengths in ultra-violet are greater in health building 2800 to 3200 than are the shorter below 2800. Hence the use of the air cooled at greater distance.

The water cooled short wave ultra-violet has greater germicidal effects without any heat given off to the patient. When compression is used and the blood forced out of the tissues, it has still greater penetration.

Experiments have proven upon irradiation of a patient with ultra-violet, distances approximating less than 18 inches produce a leukopenia and do not increase the blood calcium.

When we use short wave lengths in treatment, we have in mind, not general body chemistry, but sterilization of a small local area, particularly its germicidal effects and when used with compression these effects are practically immediate.

May it be emphasized, that all cases of infection are low in blood calcium. Therefore, the use of general body radiation with the air cooled ultra-violet will materially aid in the progress of the case. Give your air cooled treatments at distances between 36 and 40 inches, beginning one minute front and adding one-half minute at each subsequent treatment.

Much literature has been written about Diathermy, infra-red, galvanism, and air cooled ultra-violet, but little has been said concerning water cooled short wave and the excellent results obtained in treating the following conditions:

Acute and chronic Pharyngitis.
" " " Laryngitis.

Acute and chronic Rhinitis.
" " " Otitis Media.
" " " Tonsillitis.
" " " Epi-Pharyngitis.
" " " Vincent's Angina

Hay Fever.

Eczema of the auditory canal.

Pustules, ulcers and abscesses frequently found in the mouth and about the gums.

Bleeding gums, and chronically infected gums, especially pyorrhoea that has not advanced too far.

As the after treatment in extractions of teeth, much of the pain and soreness is relieved.

I always use water cooled ultra-violet after every treatment of the tonsil electro-surgically. It relieves pain and mitigates edema and prevents infection.

Aspiration of the pus from a chronic follicular tonsillitis, followed with short wave ultra-violet is excellent treatment. Several treatments by this method obtain results second only to the electro-surgical method.

In the application of this method with the water cooled generator use compression always. In fact we treat small areas deliberately and large areas cautiously. Five seconds extra gives much better results than five seconds too little.

Acute tonsillitis 90 to 100 seconds with the quartz prism under compression and follow the next day with 120 seconds, to 145 seconds with abortion of the case, and no complications. Peri-tonsillar abscesses are rare under this treatment.

Acute Otitis Media—Use the quartz rod in the auditory canal for 90 seconds open the eustachian tube with Osteopathic treatment for drainage under angle of jaw. The Liebel-Flarsheim aspiration apparatus in the nares for deflation and inflation. Positive galvanism on the mastoid 15 minutes and 20 minutes infra-red. Rarely is a paracentesis of the drum necessary. The results are remarkable.

I treat all infected middle ear cases as a primary mastoiditis. I believe the mastoid air cells are immediately involved to a greater or lesser degree. Hence, positive galvanism over the mastoid 2 x 3 electrode and a 4 x 5 on the post cervical area.

In chronic otitis media use the same method as above, except use an alcohol wash in the ear, before using the quartz applicator. In fact I clean the canal thoroughly in order to reach the drum with short wave ultra-violet.

It may be stated for the benefit of members of the profession who are skeptical of those who use these methods, first, last, and always we are Osteopathic physicians and we use Osteopathic treatment, in all these cases. Yes, we adjust lesions to be sure, it seems this should be understood, but we state it here so as not to leave doubt in anyones mind.

Epi-Pharyngitis acute and chronic especially the chronic type, the sub acute catarrhal case, use the curved quartz applicator back of the soft palate and irradiate the entire epi-pharynx for 60 seconds. The second treatment 90 seconds, increase up to the tolerance of the mucous membrane.

No better results can be obtained by any method, in the treatment of pustules, abscesses and ulcers of the mucous membranes, than in the use of compression short wave ultra-violet.

Use the short large calibre quartz rod. Give 45 seconds first exposure. If over exposed the mucous membrane turns white. One application when over exposed, however will cure the abscess or eroding ulcer.

Occasionally you will see a case where the edge of the tongue becomes inflamed, often due to irritating the tongue while brushing the teeth. Use short wave ultra-violet.

An upper plate frequently causes a burning sensation in the roof of the mouth and a reflex burning of the tongue. Removal of the plate temporarily and irradiation of the area will give much relief.

Vincent's Angina—Deliberate application to the areas of infection will cure the case in a surprisingly short time.

Acute and Chronic Pharyngitis—Reference is especially made to a chronic case of hoarseness

which has continued for months or perhaps several years. Tubercular laryngitis is cured by the ultra-violet ray when all other methods fail.

The technique consists of irradiation for 60 seconds first treatment using a special quartz prism applicator followed with succeeding treatments with time limit increased up to 3 minutes. Results have been obtained in my practice with the most difficult cases.

Topical applications of 2 per cent Bucyn to posterior pharyngeal wall and base of tongue may be necessary in certain cases to successfully anesthetize the area in order to apply sufficient time in irradiation with the laryngoscope.

Hay Fever—A disease which we might classify as a vaso-motor disturbance of the area involved. The rhinitis symptoms often extending to the pharynx, trachea, bronchi, and bronchioles.

Osteopathic adjustment of the cause is essential. Here the pathology is of such a nature (i. e. dilatations of the capillaries of the mucous membrane with the subsequent secretion of mucous, is controlled by the upper dorsal area together with impulses arising from the cervical sympathetics) hence correction of lesion involving same. The low blood calcium is cured by air cooled ultra-violet irrigation of the membrane to remove the mucous followed by drying the membrane with the Liebel-Flarsheim apparatus, plus short wave-ultra-violet with quartz rod and curved rod applicators. Mistol applied to membranes as a protection from irritating pollen.

In conclusion it may be said, there are many varied diseases in which the water cooled short wave ultra-violet generator may be used successfully.

It is the author's wish that many more of our profession take cognizance of the fact above mentioned methods, and use this method of treatment in conjunction with other methods. It will be worth while.

Attend your State, District and National Conventions. It pays you to keep abreast of the new developments in the healing art.

Physio-Therapy—Handmaiden to Healing

By F. HOWARD HUMPHRIS, M. D., F. R. C. P., D. M. R. and E.

London, England

PHYSIOTHERAPY is the treatment of the patient by physical means. It is no distinct therapeutic entity—nor does it stand by itself as such. To the older and well tried methods, physiotherapy comes as a handmaiden, too arrogant often—though this is the fault of her youth and will pass with it—a handmaiden, willing to assist and cooperate with the work of healing the sick and preserving the well-being of the healthy.

Neither the busy surgeon, nor the active physician, nor the ever-occupied general practitioner, has the time, while concentrating on his work and perfecting his own methods, to turn aside into the quieter backwaters and tributary streams of physiotherapy which, though small as yet, nevertheless form an integral part of the river of the art of healing as a whole.

This being so, it logically follows that never was an opportunity for team work more apparent, never was greater need for it in the interest of the patient. Even as the man or woman who has devoted his or her time to the study of physiotherapy cannot be expected to keep abreast of the latest medical and surgical discoveries, so might not the physician or surgeon not versed in recent development in physiotherapy, turn to his specialist colleague, to see if there is any shaft in his quiver which might help to attack successfully the disease from which the patient is suffering.

Physiotherapy in all or some of its branches has been made the subject of attack in all ages, and the question may be pertinently put, what measure of any therapeutic value in the history of medicine has not been so assailed? Physiotherapy, however, is making such headway in so many countries that it may seem hardly worth while to put in a defense, rather might one, paraphrasing the epitaph on the tomb of Sir Christopher Wren, exclaim, "If anyone wants defense let him look around". Go to what country you will, and you will see physiotherapy gaining ground and taking hold. Week by week,

month by month, and year by year, it is gathering adherents from among the most conservative, as well as from the clearest headed and most scientific leaders in our profession.

Empiricism, from which no system of medicine has been entirely free at one period or another of its existence, is falling away from physiotherapy as a garment being discarded, and a scientific accuracy is taking its place.

It is this accuracy or rather want of it, which forms a frequent gibe by our confreres at this method of treatment. The accusation is made that there is little or no accuracy in our dosage. Now leaving aside the tu quoque argument as pertaining too much to the obvious may not the charge be met, first by a general denial, inasmuch as in some branches, at any rate, there is a degree of accuracy which, to have been reached in so brief a space of time, is little short of marvellous? Alternately or additionally, may it not be pleaded that we are, or can be, at least as accurate in our dosage, as can those who have followed the more usual paths of medicine? Accuracy of dosage is not in this or any other branch of medicine entirely a mathematical question of figures and fractions.

Early in my medical career, I was taught that the dose of a remedy is that which will produce its therapeutic effect. This, though then referring to pharmaceutical products, is equally true of physiotherapeutic remedies. I am willing to admit, that, at the present time, the number of those using physiotherapeutic measures, who have really studied the question of dosage, is relatively small, and even as it was said years ago, "It is not every girl who wears a sailor's hat that owns a yacht", so one may say today, and truthfully, that not everyone who uses a piece of physiotherapeutic apparatus is a competent specialist in physiotherapy, far less has made a study of the dosage in that speciality. But there are many who have devoted several years to this art and science, and among them can be found those who can and

will prescribe that dose which will produce the effect which was intended.

Many facts could be brought forward in support of these statements. One such piece of evidence is produced. The United States Public Health Service has spent millions of dollars in the physiotherapeutic departments in government hospitals. Would it have done this year after year, if it had not recognized that this expenditure was for value received? Let anyone who doubts the efficacy of physiotherapy, put this question to any business man in America, to any of the heads of the medical and surgical professions in that progressive country, and then, if his doubts be not replaced by a confident enthusiasm, he must be relegated to that happily vanishing minority who having eyes, they see not, and having ears they hear not.

It is necessary, however, while insisting upon the proven fact, that there is much of value in physiotherapy, at the same time to enter a disclaimer and to state definitely that physiotherapy is not a panacea for all ills. This unfortunately is so often claimed, that when the inevitable failure occurs, the whole science is discredited. It is worth while to consider for a moment the cause of the failure. Was the case suitable for physiotherapeutic treatment? What physiotherapeutic knowledge or education had the physician? (Let us hope he was a physician!) Was the apparatus and the application of it, such as to insure its success? When these questions can be answered satisfactorily in the affirmative the failures should not amount to more than 10 per cent of the total number of cases treated. Do we always get 90 per cent of successful results when we are following the lines of the Pharmacopoeia?

It may be pertinent to ask why, if physiotherapy, properly applied, can promise relief to nine out of ten people, who are suffering from disease in which it is indicated, does it stand more or less in disrepute, especially in England. Three reasons have already been mentioned—a fourth is found in the use of physiotherapy by unqualified persons. Not that they are wrong, or are to blame, as the law now stands; but it cannot be expected that people, whose knowledge of medicine and surgery may be assumed

to be below that exacted by the licensing bodies, can prescribe certain forms and doses of physiotherapy, can note and appreciate the varying effects or are able to modify and control the application from time to time, and so bring the patient to that state of health for the attainment of which he sought treatment. To qualified men only should be entrusted the control of physiotherapeutic treatment, even as to a qualified surgeon the right to use surgical instruments, or to a qualified physician, the right to prescribe, or to a qualified pharmacist, the right to dispense.

One point (which is elementary, but is often overlooked) is that each patient should be carefully examined before any treatment is undertaken; and for two reasons—firstly, a thorough examination may modify the form of treatment which at first suggests itself, since success depends not only on local but on constitutional conditions and secondly, the patient may be in such a state of health that an untoward result may follow the exhibition of a physiotherapeutic measure, but yet may have nothing whatever to do with that treatment.

For the better understanding of what Physiotherapy consists, the following scheme is submitted. It must be premised that to have an understanding of the use of the various physiotherapeutic measures, a clear comprehension is necessary, not only of the result which we wish to obtain, but also of the manner in which that result is to be accomplished, a knowledge of the ground in which we are to work, and, as near as may be, the way in which the morbid unhealthy condition is to be transferred into a healthy state. To attain success, we must visualize the pathological condition and inquire how this may be remedied by some specific effect which one of the physiotherapeutic measures at our command is capable of producing. Of these the main specific effects produced by physiotherapeutic measures may be one or more of the following:

MECHANICAL
 CHEMICAL
 THERMIC
 ELECTROLYTIC
 (Turn to Page 133)

Diathermy in Pyretotherapy Opens New Fields of Research

By J. L. HANSON, D. O., M. D.
Philadelphia, Penna.

BASED on the premise that health may be maintained or disease alleviated by maintaining the structural integrity of the body mechanism and that the mechanism properly functioning or assisted in functioning if need be, is the best restorative, the members of the professions of Osteopathy and Physical Therapy, to whom the above is a cardinal principle, have a peculiar interest in what has been and may be accomplished in the healing arts by pyretotherapy, sometimes known as therapeutic fever.

Experiments, some of them dating back many years, the majority of them, however, being based on very recent observance show some remarkable results in the treatment of paresis and allied conditions of a somewhat similar nature where the vessels and surrounding neuroglia are affected. In practically all of the self limiting pathological conditions a rise in temperature may be the cause of the curing process or an accompaniment of the process. However, in certain classes of conditions which are not listed as self limiting no such rise occurs unless there be complications.

Heat in its various forms is one of the basic essentials of treatment of disease by physical means. Through the years it has been used in many ways but only in recent years has the development of the science made it possible to accurately apply and properly record the forms of heat and their effects on the bodily structure.

To secure results of heat within the body as a whole as distinct from the treatment of a local area, which may be most easily accomplished, there have been developed a number of ways, the latter ones which make use of the high frequency currents of the physical therapy armamentarium being generally considered best:

First, with the injection of foreign protein and toxic substances.

Second, malaria inoculations.

Third, Sodoku or Rat Bite Fever.

Fourth, Diathermy.

Fifth, High frequency electrostatic field.

Sixth, Hyrdotherapy through hot baths.

The first method has been found to have more disadvantages than advantages. While it has been perfected to the point whereby fever could always be produced its control was uncertain and results often undesirable. Nearly the same facts apply to the third method Sodoku.

The plan of malaria inoculations in the treatment of forms of paralysis first used by Wagner von Jauregg in 1917 seemed better and since that time it has been widely used in both Europe and America. Clinical records compiled by Solomon show some 30 per cent of cases treated by this method showing marked improvement, another thirty to forty per cent benefitted in some degree. The mortality rate, however, ranges from 1 to even 10 per cent and there are the further disadvantages in the facts that the patient receives another disease which is often difficult to cure, the desired strain of plasmodium is often unavailable and hard to keep; the immunity of certain individuals; that in many cases the malaria paroxysms stop before the desired reaction is produced; that the intensity of these attacks is difficult to control and that medical treatment and malarial cannot be given at the same time.

While many beneficial results have been obtained by the treatment of many forms of disease by hydrotherapy and it is possible by this means to secure a fever temperature, data and results are somewhat inadequate due to the fact that no complete records of changing conditions have been kept and further that to the elimination through the skin and large output of urine resulting were often ascribed the improved condition. However it has been found possible by both the special hydrotherapy tubs of the larger institutions and clinics and also with the use of the ordinary tub to raise a temperature to from 103% to 104½ within one hour or less. With

this method mouth temperatures should be taken every ten minutes.

There are some other drawbacks to this method. Hot baths have been used since the time of the Romans and in recent years certain treatments have been tried along the lines of combatting syphilitic infections at Marlin and Hot Springs. Tests have also been made in the Stanford Clinic in California but it has been found rather difficult to keep patients in baths for the length of time necessary and most patients will get violent headaches if kept in tubs at temperature of 105 degrees for longer periods than 25 to 35 minutes.

However, it is through electrical currents that the most satisfactory results have been achieved and the largest field of research established and this is the one that offers to the general practitioner a way in which he may treat his own cases and carry on his own experiments to enrich this field of therapy.

While, as will be pointed out later, some activities have been carried on by use of what is in reality a radio wave system, the bulk of the practice to date seems to rest on what may be done with a form of application with which most physicians are now familiar, the application of diathermy.

The results of this method lead to the claims that the use of high frequency currents is far superior to the first mentioned means by the injection of foreign protein and toxic subjects and through malaria inoculation.

Further in the use in paresis and like conditions there are not developed the dangerous reactions which tend to further complicate the general pathological conditions of the patient and thereby increase the mortality rate. To date, the mortality rate in these cases has been practically nil in comparison to the former methods.

When one understands the modus operandi of high frequency currents as should the practising physio-therapist the advantages of this form of agent are apparent. With a machine of proper design and power the temperature of the patients can be under proper control at all times which can be accomplished with the use of scientific apparatus permitting of absolute

control of the thermic energy absorbed by the patient.

In a recent article Dr. Curran Pope, who has been making extensive researches, summarizes the advantages and requirements as these:

"It is a scientific treatment, imitating nature's processes of recovery by elevating temperature and inhibiting or destroying bacterial infection.

"The patient must be prepared by the use of sodium amytal.

"The diathermy current must be smooth, non irritating, and the machine capable of delivering heavy currents even up to eight thousand milliamperes.

"A nurse must be in constant attendance to record pulse, temperature and respiration and to give water, watch the effect of the current, and take care of both the machine and the patient.

"It is a strictly hospital method of treatment.

"It is always accessible.

"Treatments may be standardized for each patient.

"It is accurately controlled to frequency of treatment, duration, elevation of temperature, and intensity of reaction in each case.

"Individual reactions can be met by varying the intensity, the duration, and frequency of treatment, and by the use of post-therapeutic methods for reducing fever and stimulating the patient.

"No case so far has proved immune, but all can be made to react to electrothermic or therapeutic fever.

"We deal with no dangerous pathogenic germs, such as those of erysipelas and malaria.

"Antiluetic therapy or any other therapy may accompany the treatment.

"It is applicable to tabes, to cerebrospinal syphilis, to encephalities immediately after the attack, to disseminated sclerosis, to paresis, and to any disease in which protein shock or fever is of advantage.

"It has a wide field of possibilities.

"The temperature can be readily lowered by cold drinks, by cool (not cold) sponging and by removing covering."

While concurring in the main with Dr. Pope's statements there are several which in the light

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New Sinusitis Treatments by Physical Therapy

By H. E. BECKWITH, D. O.

Los Angeles, Calif.

IN the field of physiotherapy we find that there are several modalities which can be used in such conditions with more or less marked success. The treatment of sinusitis with some of these modalities is not a new thing. Some of them have been used for 30 years or more and with very favorable reports. It has taken about that long for the usefulness of physiotherapeutic measures to soak into the profession at large, and, even now, in the face of most remarkable case reports and therapeutic results a large majority of the profession will sneer and make fun of this type of work, and these same men who do the sneering cannot offer to the suffering patient half as much.

The treatment of all sinuses as far as electrotherapy measures are concerned is more or less the same, and the technique described for one will hold good for the other if the circumstances are more or less the same.

Let us discuss for instance the subject of *Frontal Sinusitis*. We have an infection. We have pus formation, etc. We must first make sure that there is drainage or if there is not we must attempt to obtain the same. Theoretically we have been taught that enclosed pus is a contra-indication for diathermy. Clinically, we have found that some of these contra-indications as listed are really not, but should rather be classified as conditions in which care should be used in the treatment. In frontal sinus infection we have a bony walled case. Diathermy used with care will often relax and open up the drainage and thus save any surgical procedure. Sometimes the indirect diathermy, where the patient lies on an autocondensation couch, or on a block tin electrode and the other pole is connected to the operator so that the current is passed from his fingers will secure drainage. Another very very effective method to obtain drainage is the use of the Oudin terminal with a vacuum or nonvacuum electrode over the area. And still another method is the use of the simple infra-red or the visible ray therapeutic lamp. Personally, I have used with very great

success the infra-red and the Oudin vacuum electrodes. I think that the last two methods will accomplish the result in almost every case, and do it very quickly. In fact, I have treated these cases thus for 18 years and have never had occasion to call for help from a specialist in order to have surgical drainage instituted. I am not saying that the time may not come when it will be necessary, but, I do want to impress the fact, the uses of the electrical modalities will reduce the need of surgical interference to almost "nil."

Having secured drainage, our next object is to reduce the inflammation and overcome the infection. Also an attack of acute sinusitis is generally complicated or rather associated with an attack of acute *rhinitis*. Any treatment of one must include the treatment of the other.

An acute rhinitis or an acute sinusitis will often yield to just the simple infra-red or light ray application. I believe with Stewart that, "there is no question but that most of the sinuses connected with the respiratory tract can be penetrated by radiant light and possibly by the ultra-violet light when applied properly with compression". If you have some doubt as to the penetration of the light ray, just take a dark night, fix a box with a light inside, and place your hand or arm over an aperture. What you see is nothing but the light ray which has penetrated clear through and registered itself on your retina. I do not believe that light rays will penetrate these infected areas and not have some beneficial effect on metabolism and detrimental effect on infection.

Another method of treatment was that described by Thometz several years ago. His treatment consists of the application of galvanism. He places a Morse pad on the back of the neck and connects it to the negative pole of a galvanic generator. His positive pole consists of a small wire applicator which has been especially made to fit in the particular sinus or nasal chamber and around which has been wrapped a cotton covering. This cotton is soaked in some

non irritating germicide as 5% protargol or 1-500 acriflavin. The electrode is passed into the nose in two different directions one along the floor and the other upward and backward. A bifurcated nasal applicator may be used and thus each side treated at once. He gives as his average dose about 7 milliamperes with 5 minutes duration with the electrodes in each position. He says, "By the treatment is obtained the sedative and shrinking action of the positive pole itself and the deep germicidal effect of the antiseptic positive ions cataphorically penetrating into the tissues." Thometz claims some very fine results with this treatment not only in acute and subacute choryza but also in the final extinction of attacks of hay fever.

Another method which is spoken of as the Dowling treatment, and which is somewhat more pleasant for the patient than the one described above, consists of argyrol tamponage. This treatment has been modified and made much more useful and effective by using a tampon to which a diathermy current may be applied.

Dr. Ewart of Long Beach, at the last meeting of the Osteopathic Physiotherapy Association of Southern California, described the make up of such an electrode which is apparently very easily done and very easily used. He used a long piece of gold braided string that is put out by Dennisons and wrapped it with cotton from both ends, leaving a small strip in the middle clear, to which the diathermy clamp is used.

This long cotton covered gold braided string is packed into the nares, after being soaked with argyrol solution. The other electrode of block tin is placed under the neck. This combination of argyrol plus the deep heating action of the diathermy current will act like magic in a large number of these cases. This treatment is effective for both acute and chronic types of infections.

The addition of the water cooled quartz mercury vapor light ray will also add just that much to the effectiveness of the treatment. This should be applied after the argyrol has been applied, thus enhancing the effect of the ultra-violet ray which is both germicidal to the bacteria with which it comes in contact, and is also

stimulating to the normal tissues of the body. Besides applying the ultra-violet rays intranasally as above their application over the anterior surface of the cheeks when the antrums are the sinuses involved and under compression on the skin, is a technique that is considered very effective in many cases. Be sure and warn the patient that he is apt to have a marked erythema over the cheek so that he will not go around and criticise you for burning him.

In frankly chronic cases the use of galvanic ionization where the sinuses may be made accessible by various manipulations, is a very effective although rather unpleasant remedy. It is being used with very marked success in chronic discharging ears. As an example, we may have a chronic antrum. The opening into the antrum is such that a small rubber tube within which is a spiral or a very flexible wire and also through which tube a one per cent solution of zinc sulphate can be instilled in the antrum. Zinc sulphate solution can be made to flow, by gravity, slowly into the rubber tube from a douche can sufficiently elevated. By having the metal wire in the tube connected to a metal segment used as a connector between two pieces of the rubber tube, the galvanic current can be connected to the wire and thus ionization will take place on all sides of the cavity where the solution comes in contact with the same.

The zinc ionization with galvanism is a very positive and effective treatment if it can be used from a practical standpoint. It is not always possible to contrive a means of its use even though one wants to try the same.

Besides the above methods which may be used in the field of electro-therapy, we have found that the use of X-ray therapy has also added a great deal to our results. In 1919 Goosman reported on the treatment of post operative cases of chronic mastoiditis which were not healing properly. A little later he deliberately tried the X-ray on ten such cases with a result that all of them healed up very rapidly.

Radiotherapists have often noted the relief from pain following a series of pictures of mastoid cases. Radiotherapists are also very

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Physical Therapy for The Osteopath

By A. C. BOEHM, D. O.
Chicago, Ill.

IT is hardly necessary to introduce any new arguments into the existing comprehensive principles of Osteopathy, but with the development of electro mechanical modalities such as the sine wave and galvanic machines, ultra-violet ray lamps, diathermy and various infra-red and visible light rays, the profession as a whole will doubtless agree with the viewpoint of its representative American Osteopathic Association and latter's Council on Physical Therapy, that the ideal therapy of the Osteopathic practitioner should embody these proven methods, whenever indicated.

A profound conviction prevails over those who have been in contact with the development and earlier work in Physical Therapy, so that now as we look back we feel that the acceptance of these instruments was merely a further elaboration on our system and proof of our contention that physical, rather than chemical treatment of disease was predominant, and most important.

I do not necessarily advice the beginner in electro-physical therapy to add all of the apparatus at one time. It is much better if only the apparatus needed for the work one is doing, in other words get what is needed first, other equipment should be purchased as needed. It is the aim of the Research Society and Council of Physical Therapy of the American Osteopathic Association to pass on apparatus and actualy do as much investigating as is possible, so that only authentic information about technique and equipment will be furnished our members.

The demand for Physical Therapy is becoming more apparent every day and the future of this therapy is assured, so that now it is up to those who are using it to put it upon as scientific a basis as is possible. There is no doubt the demand for detailed information along the lines of Physical Therapy, many requests from field men all over the country, also students prove this point very markedly.

The proper arrangements for teaching of Physical Therapy in our colleges with apparatus for

clinical demonstrations, is now being instituted on a fairly practical basis. The students are taught physics and principles of Physical Therapy and management of apparatus and technic involved in each case. Also the post-graduate work amongst field men with special clinics, and full sections at the National Convention are helping to acquaint the practioner.

To include all diseases even where the modalities given were applicable would entail the writing of a book far beyond the ability of the writer, also to include all forms of apparatus for the treatment of the different diseases known would be a huge undertaking, besides this article is intended to merely argue a few of the high points, for the uses of Physical Therapy. There is no one method sufficient to cover all diseases, nor all cases of any one disease, we are not trying to exploit Physical Therapy as a cure all or even a system unto itself, only offering it as a further aid to the many problems confronting us in our daily practice. However, I do believe and am convinced that in the various physical methods we have measures superior in many cases to surgery and the harder portions of our work in Osteopathy. Of course drugs, it is taken for granted, are hardly worth considering.

To entirely unravel the vast complexities of diseases, whether they be mental, dietetic deficiencies, traumatic injuries, environmental conditions, mechanical lesions, etc., will be our problems, which may never be accomplished. To say which is the best method is hardly given for any one of us to say, the world is in a constant change for what is best to-day may be inferior tomorrow. Can we then even hope to attain the ultimate in relief? For the benefit of our fellow man we should use to the best of our ability all the methods that are collectively worked out.

In taking up the specific value of any one particular modality such as the actinic rays from quartz or carbon ultra-violet lamps, we think of them as follows: Constructively, they are antigenic, they increase erythrocytes and nor-

malize the leucocyte count, they allay inflammatory conditions by destroying bacteria, they are antipruritic and analgesic, and in neuresthenic conditions, they both vitalize and soothe.

Destructively, they are used to destroy infectious bacteria (except spirochaetes), some foreign growths, and the epidermis. For local treatments and for small areas, we use a water cooled lamp, usually in contact or nearly so. Time of all treatments is one of the necessary factors.

Infra-red rays are long, slow rays, they act accordingly and immediate effects should not be expected. For limited use there are no particular contraindications naturally overheating is to be avoided, or you will be confronted with what we usually consider sun stroke. These rays stimulate the growth of tissue largely by the hyperemia they produce, due to the absorption of infra-red energy which when absorbed, produces heat energy. Slow healing chronic conditions require the use of these rays.

Diathermy is heat produced within the tissue, from a bipolar high frequency current, in other words electrical energy converted into heat energy by friction. Practically they are heat waves similar to infra-red. No electrical action is known, one alternation neutralizes the one preceding it so there is no polarity effect. This current is used as a medical and surgical modality. The surgical use is considered as a destructive process. Many former surgical conditions are now handled by the diathermic current. Tonsil coagulation is one example. The medical application is used in any condition requiring heat in the deeper structures of the body, joints, muscles, or any soft tissue.

The galvanic current is entirely a polarity affair, that is one metal or terminal being positive and the other negative. It is absolutely necessary to understand the various effects of each current on the tissue of the body to intelligently apply this treatment. Apparatus and applicators for galvanic treatment are thoroughly worked out, and much effective work can be accomplished with this current.

Sinusoidal currents, are variously controlled, this is the machine may be set to produce a slow, even sine wave for contraction of muscles, or a rapid sine wave for nerve stimulation. The type of cases best suited to sinusoidal therapy are

those in which there is partial paralysis of either central or peripheral origin. Also after fractures or dislocations, the sine wave currents are invaluable to aid in the restoration of function. In these cases all that is needed is stimulation, for very few of them have nerve destruction. In intestinal stasis and gastroptosis or enteroptosis, or even in uterine prolapse are the sine currents invaluable.

In summing up these few remarks or arguments on the value of Physical Therapy, I feel that much can be accomplished by keeping an open mind toward the subject. For those who feel that they have the time to study and the room to use for equipment, better results in treatment of diseases will no doubt accompany their efforts. After all we are endeavoring to be True Physicians, and leave our patients with our satisfied conscience, that all in our power has been done for them.

SOUTHERN CALIFORNIA PHYSIOTHERAPY SOCIETY

THE Monthly meeting of the Osteopathic Physiotherapy Association of Southern California was held at the offices of Dr. H. E. Beckwith, our president, on Tuesday eve, May 26th.

The first talk was given by Dr. Ewerts, of Long Beach, on the subject of treating inflamed sinuses and on deafness. Dr. Ewerts illustrated a method of nasal packs using diathermy as the modality. He cited some very interesting and successful case reports.

The second paper was on the subject of Pneumonia, given by Dr. Beckwith. He dealt with the pathology and showed very clearly the indications and the results to be expected in the same.

The third talk was given by Dr. Eckles, of Glendale, who spoke on his treatment of colitis and constipation. He gave some very interesting data and some mighty useful information on the same.

Every one present felt more than repaid for the time spent. The election of officers for next year was also held, resulting in the election of Dr. Eckles, of Glendale, as President along with the remaining officers as now listed.

The Manifold Uses of the Galvanic Current

A SYMPOSIUM OF CONTRIBUTED TECHNIQUES

IN response to the request in our latest monthly bulletins to members, numerous suggestions and techniques were sent in covering all phases of galvanic application. These have been combined somewhat, the treatments of the various diseases being grouped together. Among the diseases mentioned and techniques advocated are:

Hydrocele

In ordinary methods withdrawal of fluid is sometimes attended by recurrence. No anesthesia is used. The negative pole of the constant current is applied through a needle which is inserted in the sac full of liquid. The positive or indifferent electrode of the ordinary sponge covered disc type is applied to the skin of the scrotum. The current is turned on and gradually increased from zero to 50 milliamperes for 15 minutes. This is well tolerated by the patient. After withdrawal of the needle, the fluid escapes through the opening made by the puncture. By this means the membrane of the sac is stimulated producing adhesions causing absorption so that there is no further accumulation of fluid.

Ionization.

Because of its polarity the galvanic current has a genuine chemical power. The poles, positive and negative are just as opposite as day and night and what one does, the other does exactly the opposite.

While with the positive pole of such metals as copper, zinc and mercury certain minute particles are given off the negative has no such action. However, with certain chemicals, which should be dissolved in water to permit action, a reaction is set up which brings them to the part affected and form a very helpful division of this therapy.

Remembering the fundamental law, that like charges of electricity repel and unlike charges attract, certain substances may be "driven" into the body by galvanic ionization. If a negative element is driven from the negative pole the process is called anaphoresis and means "flow-

ing up". If a positive element flows from the positive to the negative pole it is called cathoresis and means flowing down. Phoresis is another name for ionization. The most commonly used elements in this technic are:

<i>Positive</i>	<i>Negative</i>
Aconite	Iodine
Potassium	Muriate
Magnesium	Chloride
Cocaine	Salicylate
Quinine	Sulphate
Adrenalin	
Lithium	
Sodium	
Mercury	
Copper	
Zinc	

The process is a rather slow one and a long application of current is necessary to secure phoretic action.

Some of the ailments in which various forms of ionization have been found of value, in addition to those cited in other articles, notably the one on endocervicitis treatment, are: acute articular rheumatism; chronic joint rheumatism; chronic myositis and fibrositis, lumbago, sciatica, brachial neuritis, chronic pain after injuries to joints and ligaments.

Chronic discharging sinuses, gout, adhesions around joints and tendons, contracting scars especially large superficial ones caused by burns, Dupuytren's contracture, keloid or projecting scar tissue of healing wounds. Chronic intractable ulcers, rodent ulcer, inflamed and suppurating corns, warts, boils and carbuncles, intra-uterine injections.

Cosmetic Uses

The surgical advantages of this method of removing or destroying tissues is that the operations are bloodless and blood vessels and lymph channels are sealed preventing infection. Surface applications of sterilization and stimulation are controlled in action and there is deeper penetration into crypts and follicles than with drugs.

The negative current is useful in depigmentation and the destruction of skin varicososes, tattoo and powder marks, pigmented moles, freckles, also enlarged capillaries. In freckles, use a very small amount of current, in powder and tattoo marks more current can be used, in enlarged capillaries use a fraction of a milliamperere for a few moments. The positive pole is less painful but may leave a blemish.

Eye, Ear, Nose and Throat

In benign tumors in the nasal cavity, non-hemorrhagic or hemorrhagic, using the zinc electrode in the nose, with a dispersing electrode on the back, the current is turned on slowly and without shock, using ten to fifteen milliamperes for about 20 minutes, then it is turned off very slowly. In hemorrhagic cases twice weekly. Malignancy is a contra-indication.

In eye work, use as waveless a current as possible turning off and on without shock. Applications are made with moist electrodes within glass cups that fit the eyes with lids closed; a weak current of one to four milliamperes is about right as the chemical action is the one you seek. The negative pole is used in incipient cataract as well as in retinitis pigmentosa. A mild negative current of one to three milliamperes is useful in hemorrhagic retinitis. Congestive affections and the pains of iritis are relieved by the positive current. Conjunctivitis responds to zinc sulphate solution on a cotton-covered small-tipped electrode of platinum or zinc. The positive must be the active electrode used; the negative surface electrode is placed under the patient's hand; by more or less pressure the patient can control the toleration of the current.

Ionization with zinc sulphate is used in hypertrophy of the turbinates.

Hemorrhoids and Proctology

Fissure in ano is treated with a blunt zinc mercury electrode with a current of from two to three milliamperes for five minutes. This is repeated in three or four weeks. If condition persists the positive pole should be used.

The positive pole is used for hemorrhoids. A puncture is made in the hemorrhoid with a platinum needle insulated with hard rubber up

to one-eighth inch of its point. This is inserted and with a current of seven to ten milliamperes, make a buried puncture. This needle is used through a speculum which is later withdrawn. While the electrode is held in position, pass a strip of hard rubber up the rectum, behind the spot under treatment, to protect the opposite wall of the rectum. The current will cause coagulation in 15 to 20 minutes.

Some success has been found in using the galvanic current in conjunction with the injection method of treating hemorrhoids, especially in external hemorrhoids.

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It is desired to continue this discussion on galvanism in the next issue of our journal and contributions containing new and improved procedure or special case histories will be welcomed.

SPECIFIC ACTINOTHERAPY PROCEDURE

(Continued from Page 104)

Local and General Treatment.

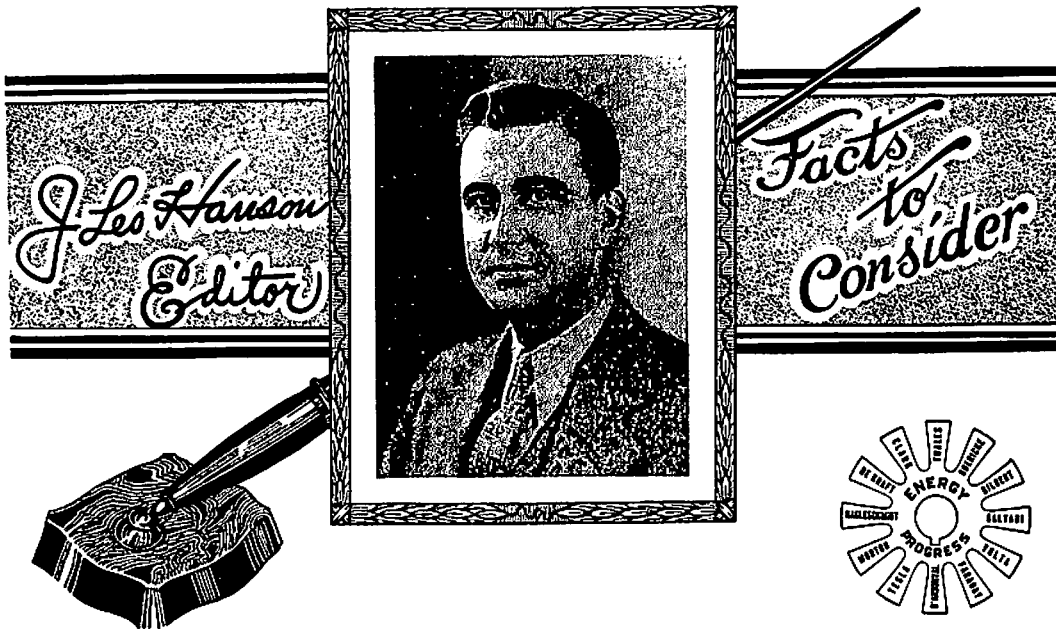
It is always well to follow the local application with general exposure of the body. It is probable that more is accomplished in any condition, with the treatment of the blood stream. Ulcerated conditions, deep-seated or on the surface, are benefitted by improvement of the calcium metabolism, which is accomplished by the treatment of the whole body. The short waves of the water-cooled are distinctly germicidal, hence are useful to disinfect the local sore.

Finale.

I have not enumerated all the conditions in which I have found the ultra-violet ray useful. That would make my paper too long. Suffice it to say that there are few conditions where properly-used actinotherapy is contra-indicated, no matter what other therapy may be used.

AS OTHERS SEE US

"I am quite pleased to see a magazine, so creditable to the Osteopathic profession, and shall watch with interest for each issue. With so excellent starting material, I feel sure future issues will be of increasing merit"—Dr. A. P. Ousdal, Santa Barbara, Calif.



A young practitioner out a few years was becoming discouraged both financially and professionally. A number of his women patients were troubled with cervicitis. His practice was located in a small town where all the medics had first been consulted by these women folks and as a last resort visited the Osteopath for relief without surgical interference. He likewise was unsuccessful.

He realized that 75% of the opposite sex are disturbed with endocervicitis and he appreciated what it would mean to him if only successful with these few patients.

Through the Journal he read about "Copper Ionization" for this troublesome ailment. He investigated the proof offered. Immediately he invested in a small, compact "ionization unit" and notified his old patients who were still anxiously awaiting some new development to cure their ills in that section. In less than three weeks his results were so gratifying to his patients that further recommendation of others brings a new page into his practice.

Older practitioners can also profit by the experience. Younger men will do well taking advantage immediately. Don't give your

locality the impression that Osteopaths are only good for those with stiff backs.

Again unlike electrocoagulation, copper ionization is painless, safe and harmless in the hands of the inexperienced.

EVERY manufacturer of a diathermy machine or physical therapy modality advertises the "superior" qualities over other makes. Business is Business and it is the business of the Council of Physical Therapy of the Society to inform those who ask the "true" advantages of various make modalities for various purposes in our own practices. It is the plan of the Society and Council to save any member many times his dues through discount arrangements and to offer more in material service until the section be second to none in this or any other profession.

“THE Osteopathic Physical Therapist” is here to stay. In less than a year there has been an increase of 42.8% in size—50% increase in advertising space—150% increase in circulation.

The successful completion of its first year closes with the July issue. In view of the

interest being exhibited do you not think that this specialized publication, the only one of its kind, should carry your professional card? Over 10,000 Osteopaths this year have received our publication and they like it.

TALKING about "foot ailments" never in history were there so many people consulting Osteopaths to "cure" them. Never before were there so many reliable manufacturers of adjuncts or foot appliances offering to us their united experience. Why not make use of these services? Saperston Laboratories have something worth investigating. It is yours for the asking.

RECENTLY a doctor told me how he believed in colonic therapy but said his main reason for not practicing it more was neither himself or associates had a colonic outfit due to the cost of installation as well as lack of space. Now doctors can have their patients at home give their own colonics by purchasing an outfit that costs less than half of a course of some office treatments. The technique is that of Dr. F. D. LaRochelle, of Springfield, Mass. and it will be gladly sent you on request to the National Surgical Co., 207 South 10th Street, Philadelphia, Pa.

SOME one recently asserted that Osteopaths don't believe in medication but said: "Give them a state license to practice medicine and you will find out if they believe it or not". Probably they were right but there are D. O.'s and Osteopaths, M. D.'s and pill dispensers.

Hydriatics is a broad subject and the Information Bureau of the Famous German Health Resorts, 164 Fifth Avenue, New York City can offer the attestation of numerous physicians and patients that have been cured with their drinking waters that are now bottled at their respective springs and delivered to the home of the individual. Drinking waters are not drug medication—they come under the category of natural therapeutics.

STATIC electricity applies to electricity at rest as stored up and held in Leyden jars or on the fields of a Holtz machine. No other electric current has greater, if as great kineticactively moving properties—as the static currents when discharged.

Static has the distinct action of removing exudations recently accumulated in the tissues before hyperplasia or fibrosis has intervened. It has a decided effect on metabolism. The static brush discharge has proved its value in treating many ailments that do not respond to other methods.

NEARLY everyone you meet now that has recently purchased a diathermy tells you he is removing tonsils by electrocoagulation. Many have improved "ideas" and tell you how they removed the tonsils in three or less treatments. Most of these practitioners rarely looked in a throat before they were sold a diathermy. Few and very few ever removed tonsils surgically before they were "sold" electrocoagulation and of much more importance is that few ever served "apprenticeship" in any out patients nose and throat department. To carefully remove the average size infected tonsils it can't be performed in less than six treatments on each side at weekly intervals. Fifty per cent of adults are unsatisfactory to work on. Children in most instances are unsatisfactory. Doctors who contemplate using this new and sane procedure in their offices should first understand the anatomy of the throat and have some surgical training, then understand the basic principles of diathermy, because there are more hemorrhages occur than you hear about.

Mortalities don't make interesting reading.

IF triple distilled water sold for five dollars an ounce more doctors would investigate the value in the treatment of disease, especially those in which the immunization factor can be called into play to antagonize the disease.

Improper Technique Causes Poor Results

By E. M. SCHAEFFER, D. O.
Grand Rapids, Mich.

AFTER eight years practice including most every kind of modality, I am convinced that our results could be far superior should we remember and adapt the rudiments of technique. I heard a marvelous address not many weeks ago by the Fire Marshall of this city and by the way, this city has, for several years, rated highest in fire prevention in the U. S. A. This Marshall took a unique way of stressing fire hazards by pointing out in very emphatic words the ridiculous side of the question trying to teach us how easy it is to precipitate a fire rather than stressing in great and glorious words how to prevent a fire. As this lecture captivated me and had a little time to ossmoss into the system, it struck me that probably that method of stressing Physical Therapy technique, might get better results than some of the fine highly technical papers we are accustomed to read. This with the advantages I have had of witnessing others in technique and talking to them of their seeming failures is responsible for the present article.

I shall not cover every modality nor do I expect to cover all the essential points in any one modality but without notes I shall attempt to recall some of the many mistakes I have seen and even made, yes and some mistakes I may make even in this little article.

I know of no adjunct of healing art where fine technique gets the handsome rewards as in Physical Therapy. I have gotten astounding results in gall bladder infections in some cases and in others have miserably failed, not because the system was a failure, but because I either failed to locate accurately the gall bladder or because after a proper location, I failed to apply the electrodes so that the maximum dosage would penetrate the sack. I believe poor technique is not so much the fault of the physician directly, as to his unskilled or uninterested nurse. I saw a supposedly gall bladder treatment on several occasions applied with the electrodes so high that they would do well even to penetrate the dome of the diaphragm. I have also seen them applied so far to the left that the uninformed

physician would suspect a myocarditis. I am not blaming the nurse either, particularly, for I think we should have a way of teaching our nurses better technique if we are unable to pay a salary commensurate with the services of a highly skilled technician. Therefore, I would suggest sections on the National, State and sectional programs solely for the training of our nurses and office girls. Too often the Physician himself would make a poor office girl, hence he is unable to train office girls in even the rudiments of their duties.

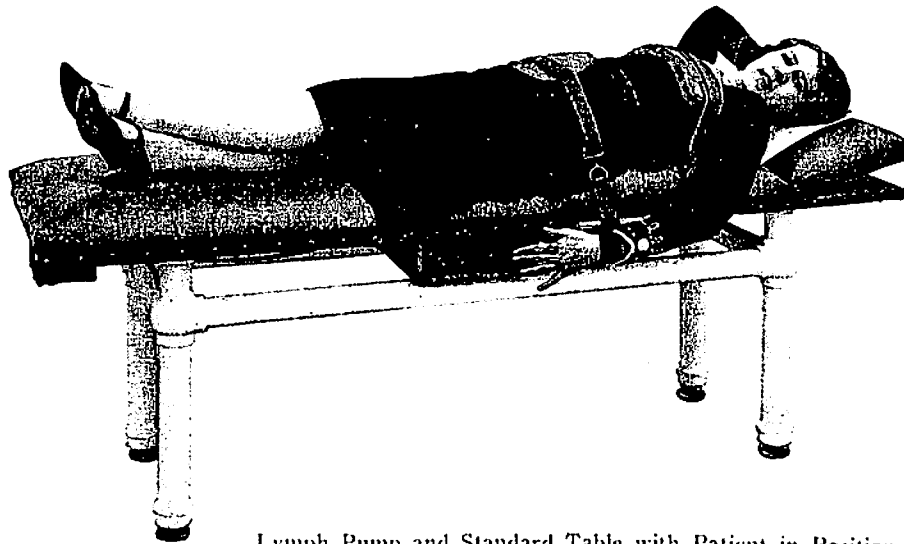
Another common error in technique which I have often noted, is in treating a joint for deep seated lesion, such as the knee or elbow. Electrodes are passed around the effected member above and below and the skin gets warm as pie and we shout success but we forget that the current passes to the nearest opposing contact and therefore only heats the skin rather than the deeper portions.

Even greater, however, is the error in treating broken bones too soon after the fracture, when we forget that our D'Arsonval current dissolves callouses and therefore prolongs union rather than hastening it. In diabetes, we have known to fasten our diathermy electrodes to the kidney which of course, is fine, but we neglect to think of the seat of the trouble, the pancreas. I have treated through the kidneys without the slightest change in the output of sugar but have never treated through the pancreas without excellent results.

Great criticism is due us for lack of a good variety of electrodes. Rather than getting a mental picture of the lesion and picking our plates to suit, we hastily apply the nearest we can find when lack of precision has shown the almost inevitable, the lack of results.

Another common fallacy I have noted, in several offices and clinics, is lack of precision in making appointments and rotating our patient from one modality to another not because of super judgement but because of convenience in getting our patient out of the way at the ear-

PHYSICAL MEASURES SUCCI



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SOME THERAPEUTIC USES

The Lymph Pump rapidly drains the watery fluid (lymph) from every cell of the entire body and reduces edema (dropsical swelling) within 5 to 15 minutes. It will even drain free fluids from the joints and cavities of the body.

Is a specific cure for bacterial diseases: (1) By causing the bacterial toxins to be absorbed (auto-vaccination) and carried to the cells which produce the anti-toxins (cells of the spleen, liver, bone marrow, etc); (2) A second drainage draws the anti-toxins and the toxins together, in the blood stream, which results in the neutralization of the toxins and the cure of the disease.

Relieves Paralysis and prevents pressure atrophy in apoplexy and infantile paralysis, during the acute or sub-acute stages, by relieving the fluid pressure from the affected areas of the brain and spinal cord. Patients frequently show improvement within thirty minutes.

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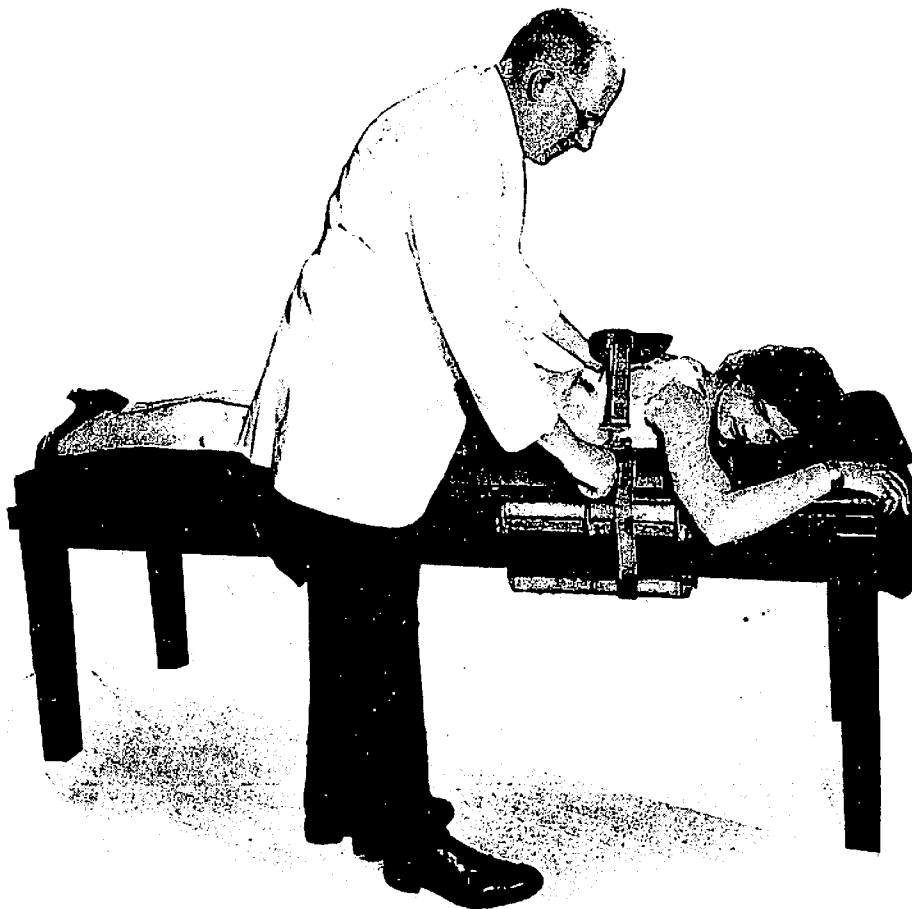
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liest possible moment. We should not change modalities except for the good of the patient. Only last week I treated a patient that quit another physician because the physician could not seem to set his mind on the proper modality for the particular ailment. While the physician may have had the best interest of the patient at heart and the rotation of modalities may have been advisable, yet in this particular case the physician at least did not take the pains to inform the patient that rotation of modalities was decidedly important in her type of lesion.

Not so long ago I heard Dr. Ireland of Physio-Therapy fame make the statement in a medical gathering that during his experiences as Chief of Physio-Therapy in the World War, his best results were obtained with his Osteopathic Assistants, claiming that to be a good Physio-Therapist, sound knowledge of anatomy and nerve centers was paramount, and he has found out through contact that the Osteopathist was superior in that respect, so that with a boost like that, it behooves us to apply our knowledge, and make our technique as infallible as our knowledge of anatomy and physiology. I am reminded of a recent case where a physician applied three stimulative four minute actinic ray treatments on successive days to a case of advance pulmonary T. B. You need not ask why the other physicians were changed, nor why it was my good luck to benefit with the other physicians mistakes and change modalities, but first of all, to establish an accurate diagnosis. That leads me to the important point that considerable poor results are experienced, due to lack of proper diagnosis rather than inability to apply the proper modality with the proper technique.

I worked a short time in an office where the physician (now deceased), had taught the nurse that to obtain the best results, the spark gaps had to be as far apart as possible. The more noise they made the more sure and quick the results. He was an intelligent physician and, I hasten to lay the blame on an inexperienced salesman who was not qualified to teach technique. I think every wholesaler now realizes that to make sales followed by results that dependable information must accompany the modality

in the person of the salesman, therefore, I think almost without exception the salesman should be properly trained in technique that is his for the asking.

I am well acquainted in one office where the actinic is only used as a sedative. No appreciation seemed to be given at all to the stimulative, and the knowledge of destructive possibilities. It only spells capital going to waste. From personal knowledge and heresay, I fear we overestimate the auto condensation treatment for hypertension, not in overestimation of the good but rather a lack of appreciation of the fact that hypertension can be reduced too far and also can be reduced too fast especially is this true following a stroke. Very mild or no treatment at all, for several weeks is far superior to quick decisive treatment.

In our sine wave technique through haste or thoughtlessness, we neglect to choose the wave rate normal or adaptable to the organ in question. Seven years in college athletics has taught me that the constant winners in any contest, were the athletes that could set a hard steady pace and hold it through the race. The flashy start generally resulted in no finish. The laggard, while he might sprint and regain lost ground, and even advance to the lead for seconds or minutes, inevitably must be eliminated by the hard even pace of the runner with rhythm; so in treating the stomach, liver, colon or other organs, we must first appreciate the normal rhythm of contraction and apply our sign wave with the same degree of rhythm, remembering the old axiom that over stimulation means normal function.

To be alert to our common advantages, to administer careful technique, and to make a careful diagnosis, will give our profession positive prestige in Grand Rapids in this excellent therapeutic field.

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Colonic Therapy in Simplified Form

By DR. F. D. LA ROCHELLE
Springfield, Mass.

WHAT is the object of colonic irrigation. The aim of this treatment is to empty the whole colon, in the first place, and then to wash the mucosa and lastly to apply medicaments, when indicated. If this is to be done in an efficient, safe and convenient manner it is necessary to have suitable equipment. There are many instruments offered today for accomplishing this purpose, but their very multiplicity clearly proves that no one possesses the advantages of all. If an apparatus is to gain favor with practitioners it should be simple and inexpensive and must without question accomplish the desired results.

A colonic irrigation in a bed ridden patient and an ambulatory one are distinct and separate procedures and it is necessary to select instruments best adapted to each. Our experience with this problem has convinced us that for a patient in bed the Lindsay all rubber two-way tube (1) is entirely dependable. This apparatus is to be used only for irrigation, evacuation of the rectum and sigmoid should be first accomplished by the standard enema. It is manifestly impossible to evacuate large, faecal masses through a tube with calibre small enough to spare the patient all discomfort during the treatment. Once the rectum and sigmoid have been emptied with an ordinary enema, the tube is lubricated with a water-soluble jelly and introduced into the sigmoid and ascending colon. The fluid is then forced into the colon either by gravity or by means of a bulb and by repeated filling and emptying through the tube, the colon is thoroughly washed and lastly, if desired, medicaments can be added to the solution and thereby applications made to the mucosa of the whole colon.

If the patient can sit up the problem is much more simple and better results can be obtained with the apparatus that we have designed. There are two models; the portable (2) and the Hospital model (3). The principle of both is the same; the portable instrument is fed by a

bulb while the Hospital one is connected to a three gallon reservoir. This apparatus differs from conventional colonic irrigators in that the patient's own sphincter acts as a release valve and the instrument itself only functions as an inlet tube.

The technique is simple, no preparation of the patient is necessary and the contraindications are such as would apply for an ordinary enema. With the patient sitting on a standard toilet seat, the tip, anointed thoroughly with vaseline, is gently introduced through the anus by the patient himself by sense of touch only, without any exposure of the parts. When the tip passed into the rectum the sphincter closes about the tube and all is ready for introducing the liquid. The sense of touch of the rectal mucosa is poor and one scarcely perceives the presence of the instrument. The liquid is forced into the colon until a sense of fullness with a desire to move the bowels is experienced, the sphincter is then relaxed and the abdominal muscles are contracted and the bowels moved in a very nearly natural manner without removing the tip which should remain in place throughout the procedure. When evacuation has taken place the sphincter contracts again round the tube and the process is repeated until such time as the colon has been completely washed with soap and water. This should all be done gently and slowly. The tip is then removed by the patient and the colon, instrument and toilet will be found thoroughly clean from being washed with a large quantity of cleansing fluid. For ordinary purposes soap and water are all that is necessary, but glycerine, an ounce to the gallon, may be added to increase the effect, or any other medicament added as desired, as with an ordinary enema. It is well to use cool water towards the end to prevent congestion of the rectal mucosa. Five gallons of fluid is the usual quantity necessary for cleansing the whole colon. The technique for the Hospital model is essentially the same as with the portable apparatus

and differs only in that the fluid is forced into the colon by hydrostatic pressure. The standard quantity of soap is 2 oz. of castile soap to the gallon and this should always be dissolved first by boiling. No solid should ever be added directly to the water in the reservoir for if it is heavier than the water it will pass out first and might reach the colon in too high concentration.

Indications: Of course the indications for this treatment vary but in a general way colonic irrigations may be depended upon for treatment of constipation, intestinal fermentation, colitis, faecal impaction and before X-ray examinations and abdominal operations.

An indication not usually mentioned but one that has given us great satisfaction is in preparing persons for unusual effort. If one is to attend a prolonged conference, or indulge in strenuous physical exercise or make a tiresome voyage, what is more disturbing than a full colon? Cathartics and laxatives are of course out of place; colonic irrigation in such instances adds immensely to one's comfort.

While irrigations are of great value in treating colonic conditions, adjuvants are often necessary. For this purpose we have found Rayminol, a mild laxative, and Psyllium Seeds of great value. An occasional dose of castor oil before the treatment or oil added to the irrigation fluid itself will oftentimes enhance the effect.

What is to be the attitude of practitioners towards colonic irrigation? Many have disregarded this treatment entirely. This is wrong; of course it has been overdone and exploited like many other procedures; used intelligently however it will often give satisfaction that rivals other successful modalities and since the apparatuses here described are so inexpensive and convenient there is no excuse for a physician not being prepared to give his patients advantage of this treatment. If indications are clearly kept in mind and treatments given thoroughly and not too often, gratifying results can be expected.

The Lindsay tube and the portable apparatus can be carried in the practitioner's bag and treatments given in the home if necessary while the Hospital Model is reserved where a large number of treatments are to be given.

We wish again to stress the advisability of not making exaggerated claims for this treatment which, after all, is nothing more than a convenient method of giving the old fashioned enema.

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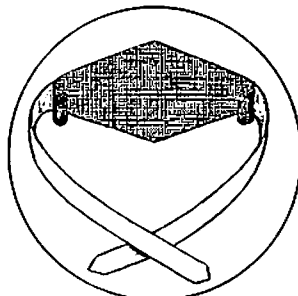
Lindsay Laboratories, Ashland Place, Brooklyn, N. Y.

Am. J. Phys. Therapy, February, 1930.

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NEW SINUSITIS TREATMENTS BY PHYSICAL THERAPY

(Continued from Page 112)

familiar with the fact that X-ray helps a great deal in the conquering of infections elsewhere. Last month, April, we had occasion to use the X-ray on three cases of acute mastoiditis. The films all showed hazy mastoid cells. All three of these cases responded to the X-ray and ultra-violet ray in a very definite manner. None of them had to go to operation and they obtained relief within the first 24 hours.

A few months ago we had occasion to apply X-ray therapy to a student in our college who had been fighting sinus trouble all winter, with repeated colds, etc. After the one treatment with infra-red and X-ray his trouble ceased and has remained so. This is not the only case. We have treated dozens of such cases, and the results have all been very definite and quick in comparison to the old line of treatments.

We do not hesitate for one minute in advising the physiotherapy treatments which have been spoken of above and with the addition of a little X-ray therapy where such can be had. We believe that this treatment offers more to the acute and chronic sinus sufferer than any other method of therapy, provided such conditions as infected tonsils, enlarged turbinates, polypi, and such conditions are also properly taken care of.

We hope that the information outlined above may prove of some value to the readers of the same in our profession and of much more value to those who have been chronic sufferers of sinus infection.

DIATHERMY IN PYRETOTHERAPY OPENS NEW FIELDS OF RESEARCH

(Continued from Page 110)

of the experience of others may be considered from other angles. In the first place while many of the experiments and procedures have been accomplished in and by staffs of hospitals there are results which have been given ambu-
lantly.

Also reference in reports to "high milliamperage" may be somewhat confusing. Amperage after all is the rate of the transfer or flow

of electricity, and is not to be confounded with voltage. Voltage is that which moves current over a conductor, while amperage is that which is moved. Water flowing over Niagara Falls is equal to amperage while the distance it falls is equal to voltage, or a river could be compared to amperage, and the swiftness with which it flows to the voltage. We may have a large river flowing slowly or a small stream flowing swiftly. In the final analysis the total is wattage which is volts times amperes so that a high amperage and low voltage may be less in volume than a higher voltage and a lower milliamperage.

In his experiments Dr. J. Cash King has noted that the largest amount of electrode space should be employed and that by beginning with low amperage and gradually increasing the volume, skin blistering can be prevented.

The same procedure from another viewpoint is contained in the article "Treatment of Dementia Paralytica" by Drs. Clarence A. Neyman and Michael T. Koenig in a recent issue of the Journal of the A. M. A. There conclusions, eight in number, are most interesting:

"The application of malaria and sodoku requires a culture of these diseases maintained in vivo. Diathermy offers a method that is easily available. It does not give and dangerous reactions, has no death rate, can be applied with the exactness of medical dosage and does not necessarily demand the hospitalization of the patient except on the days of treatment.

1. A comparative study of therapeutic results obtained in a series of clinically similar cases of dementia paralytica treated with malaria, sodoku and diathermy has been made.

2. "The remission and improvement rate of diathermy exceeds that of malaria and sodoku.

3. "The death rate with the diathermy method is nil.

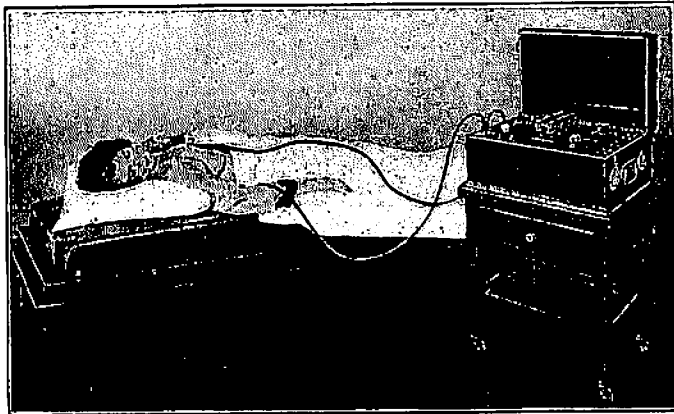
4. Diathermy offers a hope of remission in types of dementia paralytica which seemed to be unamenable to treatment of any kind.

5. The serologic changes produced by any form of hyperpyrexia do not coincide with the clinical changes.

6. "Diathermy permits the treatment of cases in which the use of malaria or sodoku is contra indicated.

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"7. The use of this method is easily accessible to any physician trained in the technic.

"8. In many cases the treatment can be given ambulantly."

The Technique.

One of the most successful forms is that as devised by Dr. William J. Schmidt and his associates at the Jefferson Hospital in Philadelphia and outlined at a session of the American Physical Therapy Society in Philadelphia on June 9th. Dr. Smith says in part:

"Our technique is to go over the patient very thoroughly, noting the physical condition, blood chemistry, basal metabolism and urine and blood study.

"We find it advisable to use as large an electrode surface as possible. We use two electrodes, one covering the chest and the other covering the abdomen, connected with wires. On the back we use one large electrode. In certain instances we have used a large spinal electrode about eight inches wide, running the entire length of the spine from the neck to the pelvis. The electrodes have been fenestrated to permit the absorption of perspiration.

"After putting the electrodes in place, they are covered with cotton, and a large abdominal binder placed around this. Underneath the patient we place a rubber sheet and blanket. They are folded over and the patient wrapped snugly therein. The temperature is taken by means of a resistance thermometer which is placed in the rectum. A rubber-covered wire lies over this thermometer to a binding post and then to a recording apparatus. This does away with disturbing the patient at any time to take the temperature. The temperature is recorded on a revolving chart which gives a permanent tracing of the temperature over 30 seconds. The recording apparatus will take care of three thermometers at one time. It usually takes two hours to raise the temperature to 104. The machine is then turned down and the patient kept between 104 and 105 for two or three hours, after which time the blankets are carefully removed and the patient is allowed to cool off gradually.

"We have treated a number of cases of paresis. In the first case which we have been able

to follow with a 4 plus blood and spinal Wasserman with neurological and mental symptoms, following the treatment, the blood and spinal fluid became negative without any anti-syphilitic treatment. The neurological and mental symptoms cleared up entirely and the patient is back at work.

The treatment is not altogether without danger. Too great care cannot be taken in the application of the electrodes, and particularly in making them tight so that they will not move when the patient becomes restless as they do when the temperature goes up to 105. We have had several burns. It must be borne in mind that some of these cases have areas of anesthesia. The physical condition of the patient must also be taken into consideration. When the patient does not react well, or shows signs of acidosis or other toxic symptoms, the treatment should be discontinued until such time as the patient recovers. We have noticed hiccoughs in some cases, and if persistent, it is a sign that the treatment should be stopped."

Electrodes as in most diathermy treatments



VAY-PORE
The Modern Method of Administering
MOIST HEAT
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are of block tin. In certain experimental cases of my own observation a slight modification has been made which seems an improvement. This is in substituting cellu-cotton for holding the electrodes to the body as the rubber covered ones often used are rather expensive and not so sanitary. This material is inexpensive and fresh can be used on each treatment which is a consideration when the amount of toxins eliminated in the treatment are considered. The cellu-cotton has the further advantage of being very absorbent.

It should be mentioned also that it is usually necessary to administer some opiate at some stage of the treatment. In addition to relieving the discomfort certain combinations aid the temperature rise by partially stopping the sweating.

The form of treatment by the use of the better diathermy machines, one which can function at capacity for a long period, is the one which will attract the interest of the greatest number of physicians for it is one with which most of them are generally familiar and which they can use in their own practices.

This leaves but one method of treatment which is still somewhat in the experimental state.

First steps to this end were begun when it was noticed that men working in close proximity to vacuum tube oscillators delivering six to eight kilowatts of five or six meter waves experienced a rise in temperature.

This is now employed with a high frequency broadcasting, set in effect, and a combination of hot air. The patient is enclosed in a kind of box of heat insulating material, the head protruding. This is placed in the high frequency field of the machine and eddy currents are set up in the patient's body which produce a rise in temperature. In the first tests the intensity caused drops of perspiration to boil and steam. This was later overcome by a current of air at about 130 degrees being forced through the box. Reports to date however, do not indicate the varying efficiency as of the hot air and the wave currents and for the present this form is for the larger clinics to perfect.

All of the data to date shows that we seem to be reaching a new age for the successful treatment of some of the most serious diseases which have faced us in the past. The result as an anti-syphilitic therapy is worthy of much thought and study.

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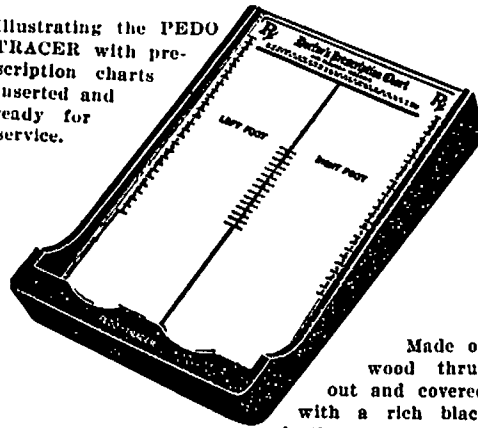
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Book Reviews

PHYSIOTHERAPY: ITS PRINCIPLES AND PRACTICE by F. Howard Humphris, M. D. (Brux), F. R. C. P. (Edin.) M. R. C. S. (England), D. Md. R. and E. (Camb.) Hon. Consulting X-Ray Physician and Electrotherapist to the London Clinics; Late Officer in Charge X-Ray and Electrotherapeutic Departments, 3d London General Hospital; Capt., R. A. M. C. (T. F.); Late Consulting X-Ray Physician to the Force in Egypt; Major, R. A. M. C.; Past President of the American Electrotherapeutic Association; Past Vice President of the Section of Electrotherapeutics, Royal Society of Medicine; and R. E. Stuart Webb, M. B., B. S. Johnthan Cape, 30 Bedford Square, London. 15s. Net.

Dr. F. Howard Humphris for over 25 years a recognized leader in Physical Therapeutics, in his new book conveys a simple scheme of the working mind of the physiotherapist, so that the rationale of the treatment may be more readily grasped. The first part of the book concerns itself with the principles of physical therapy and with the apparatus used. The second part with the practice of physical therapy—the conditions and diseases in which it is most generally useful, and the rationale and technique of the treatment.

Special chapters by masters in such modalities as "Massage and Manipulation" by Frank Romer, "Hydrotherapy and Spa Treatment" by A. Gordon Watson, "Radium" by A. E. Hayward Pinch and many others help to make this new work one of the most valuable of its kind to all interested in any phase of Physical Therapeutics and allied subjects.

One great importance of his work is he does not attempt to convey that physical therapeutic measures are a "cure all" rather he makes clear the way to discriminate and explains the class of ailments which are pre-eminently suitable for those valuable agencies.

In doing so, many unnecessary details have been omitted, but enough are retained to enable the general practitioner or consultant to realize the class of case suitable for physio-therapeutic treatment and enable the practitioner who contemplates using physical measures to realize the measure appropriate to the malady and to use it with skill and success.

The book closes with a full glossary, the study of which is in itself a liberal education in physical therapy.

We are proud to say that Dr. Humphris is a member of our Society. You will be proud of his book. Secure it today if you wish to understand physical therapy properly.

TEXT BOOK OF PHYSICAL THERAPY by William Benham Snow, M. D., Author of "A Manual of Electro-Static Modes of Application, Therapeutics, Radiography and Radiotherapy," "Currents of High Potential of High and Other Frequencies," "The Therapeutics of Radiant Light and Heat and Conventive Heat," Editor-in-Chief of "Physical Therapeutics" and Late Instructor in the New York Post Graduate School, Author of Chapters in leading publications and Encyclopedias. Past President of The American Physical Therapy Association (American Physical Therapy Association); Honorary Member of the New England Association for Physical Therapeutics; Honorary Life Member of The Western Association of Physical Therapy; Member of the American Medical Association, the American Medical Editors' and Authors' Association, New York State and County Medical Society, New York Physical Therapy Association and American President and Fellow of the International Congress of Physical Therapy at Liege, Belgium, and First American President of the Association Medecale Internationale pour Alder a la Suppression de la Guerre. Scientific Authors Publishing Co., New York. \$10.00.

Dr. Thomas Benham Snow, one of the foremost figures in American and international circles, the Dean of Physical Therapy, ended his great career after a brief illness on November 29, 1930.

Active until the last in the great therapy for which his years of study, research and example have done so much in the development of Physical Therapy in the United States fortunately he was able to complete his text book of Physiotherapy before leaving us.

All phases of physical therapeutics are dealt with—Constant Current and Static Current covering over 350 pages, High Frequency currents and Electro-surgery are equally explained in detail as well as outstanding treatments and illustrations of applying proper techniques in various diseases. It is more than a text—it is a small encyclopedia. Beginners should own it. Older practitioners will welcome it, because it is backed by a practical experience during a period of over forty years as a practitioner, teacher, editor and author. This work fills a long felt want by our profession.

CELLS OF THE BLOOD by Louisa Burns, M. S. D. O., Dean of the Education Department, the A. T. Still Research Institute, The A. T. Still Research Institute, Chicago, Ill. \$8.00.

This volume is one of the series of Studies in the Osteopathic Sciences and is an unusually attractive and interesting work. The book is based on some 27 years of study upon some 10,-

000 animals and patients. Fourteen color plates illustrate this 400 page publication.

It is most complete, treating as it does with the various reactions to Osteopathic treatment, the items of a blood report the various diseases which affect the blood cells and the best methods of treatment. Many new methods of technique are presented and all in all no member of the profession should be without it for it is not only a treatise of unusual merit but it contains an epitome of the technique as advanced by Dr. Still and its development and perfection.

DIATHERMY: MEDICAL AND SURGICAL IN OTO-LARYNGOLOGY by Dan McKenzie, M. D., F. R. S. E., Consulting Surgeon, Central London Throat and Ear Hospital; Oto-Laryngologist to the French Hospital, London. The MacMillan Co., New York City. \$4.00.

Dr. Dan McKenzie as an outstanding laryngologist needs no introduction in this country or Europe. His experience affords him an authentic background and Osteopaths specializing in diseases of the ear, nose and throat will do well to consult his present text which has incorporated the very latest work done in respect to diathermy applications to Oto-rhino-laryngological practice.

CLINICAL SESSION FEATURE OF STATE CONVENTION.

With a large attendance of Physicians from all parts of the State as well as others from New York and New Jersey, the annual convention of the Pennsylvania Osteopathic Association was held at Wilkes-Barre, May 15-16. A number of topics of interest featured the program and the various demonstrations, exhibits and the like attracted many.

Following the session the Physical Therapy Research Society held a clinical session in surgical diathermy and allied subjects for members. Tonsil coagulation was featured by Dr. Hanson presenting the techniques by both the conventional and the newer single electrode method. Assisting were Drs. F. C. Humbert and Charles W. W. Hoffman, of Syracuse.

This is the second of a series of meetings of this kind, the first being held at Syracuse, New York last fall. The next will be held at Seattle at convenient times while the National Convention is in progress.

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(Continued from Page 108)

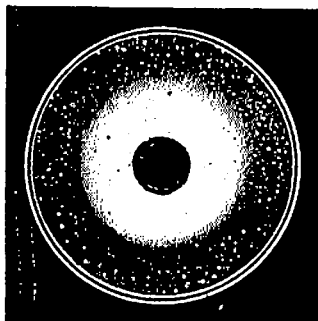
These effects and the manner of their production may be roughly tabulated as follows:

- | <i>Effects</i> | <i>Produced by</i> |
|----------------|--|
| A. MECHANICAL | 1.—Massage and manipulation with exercises active and passive, mechanovibration. |
| | 2.—Electricity—Static Electricity—Faradic Electricity—Interrupted Galvanic Electricity—Sinusoidal Electricity. Low voltage currents. |
| B. CHEMICAL | 1.—Galvanic or constant current. |
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| | 3.—Convective. Radiant Heat. High Candle Power Lamp. Drowsing System. Infra-Red Rays. |
| | D. ELECTROLYTIC Galvanic Current. |

These methods of production must of necessity overlap one another in any attempt to classify them, for instance—the whirlpool bath is both thermal and mechanical in its effect—the galvanic current may be used for its chemical, mechanical or electrolytic consequences.

The above scheme is given in order to convey the general idea of the working of the physiotherapeutic mind, so that the rationale of the treatment may be more readily grasped.

(Turn to Page 138)



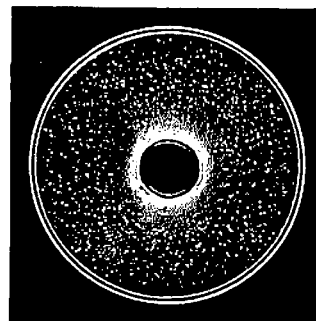
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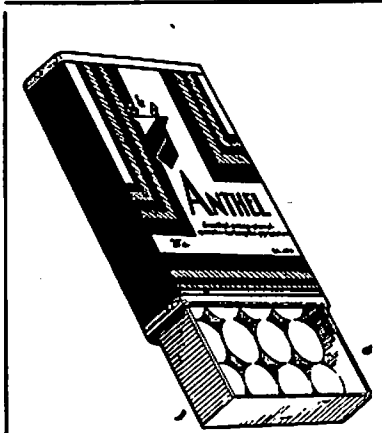
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 RHEUMATISM
 NEURALGIA
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 MIGRAINE
 MENSTRUATION
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 CARCINOMA
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 and
 POST-
 OPERATIVE
 PAIN

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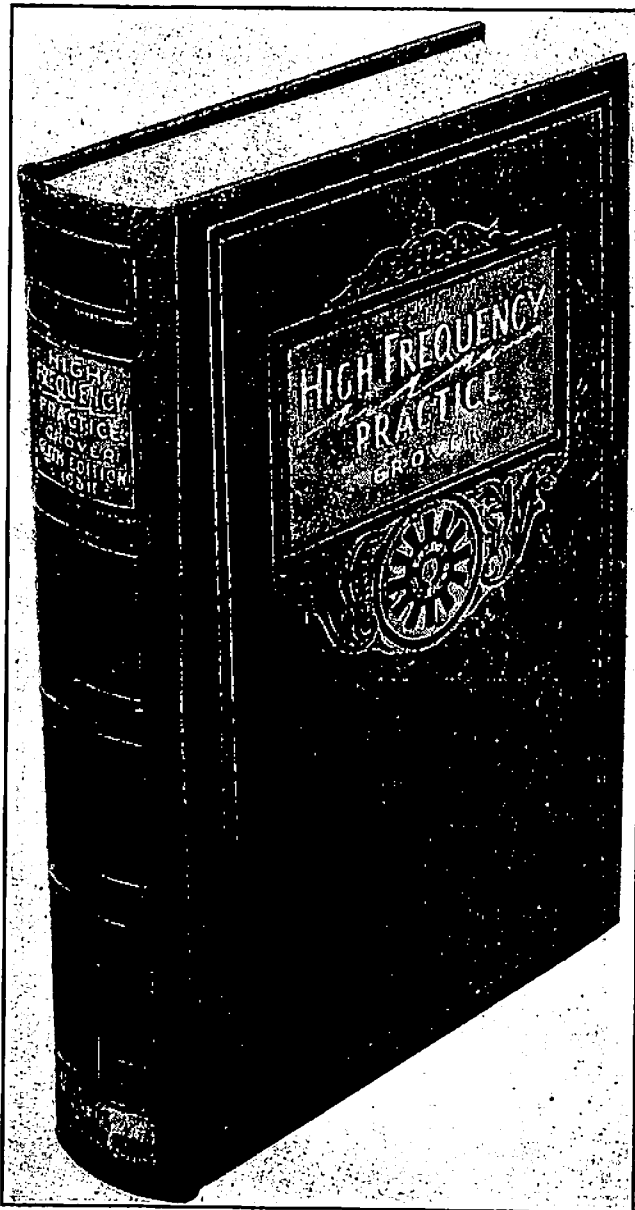
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(Continued from Page 133)

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ABIOTIC RAYS: ABIOTIC RADIATIONS: RADIATION opposed to or incompatible with life.

ACTINIC: Possessing, or capable of producing chemical reactions.

ACTINIC RAYS: Those portions of the spectrum which are predominately active in producing chemical reactions.

ACTINOLOGY: The science of chemical activity in light.

ACTINOLYTE: An apparatus designed for use as a source of actinic rays.

ACTINOMETER: An apparatus designed for the determination of the intensity of actinic rays.

ACTIONOTHERAPEUTICS: RADIOTHERAPY: The treatment of disease by means of radiant energy, e. g. rays from the sun, electric light, those from radium and other radioactive body, or X-rays.

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ACCUMULATOR: (1) A secondary or storage battery; (2) a Leyden jar or condenser.

ACTUAL CAUTERY: A cautery produced by the agency of a substance physically hot, i. e. not a chemical caustic or fulguration.

"ALIVE": An active wire or circuit.

(To be Continued)

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BALNEOTHERAPY COMING TO FORE IN UNITED STATES

The European development of balneotherapy dating down from the Romans is becoming more marked from year to year and in sections of America the science is being more widely practiced.

However, it is not always convenient or possible for sufferers to go to distant and costly resorts for treatment, so that it has been found necessary to provide sick people with such ingredients as are found in natural springs and other elements extracted from plants for their use in local health institutions or in the home.

Among these are sulphur for rheumatic conditions, skin diseases, etc. Tar for chronic skin affections. Oxygen baths for heart and kidney disorders as well as being valuable in the treatment of anemia and arterio-sclerosis.

Various salts such as sodium-bicarbonate, borax, epsom and sea salts, are also used with benefit in a number of ailments.

Pine needle extract (Lacpinin Balsam) is a new product which is gaining tremendous popularity and is most successful in the treatment of nervous disorders and insomnia.

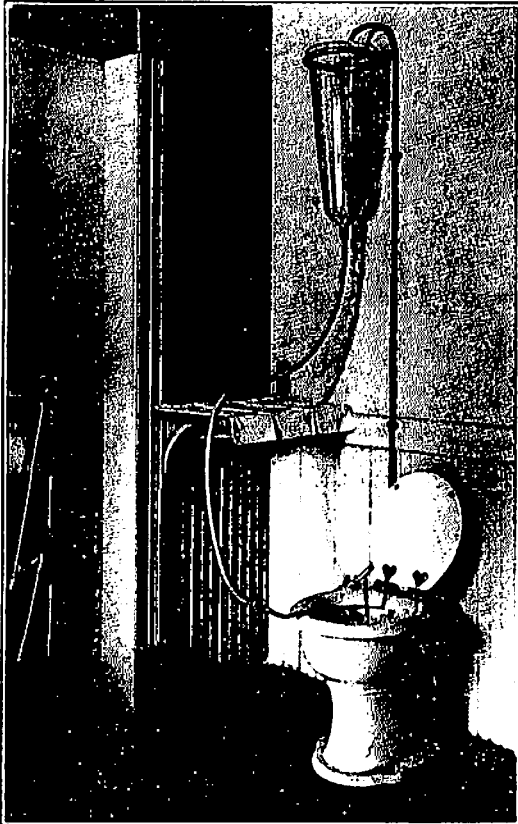
Bran and corn starch are also prescribed by dermatologists with whom they grow in ever greater favor.

In this short article full justice cannot be done to this growing more of therapy, nor can all of the remarkable and successful cases be enumerated, but it seems that it is keeping pace with the lightning strides of physical therapy of which it is an integral part.

Americans has so far lagged behind Europe in the use of this valuable branch of the healing arts but it is fast gaining ground and the day will soon come when with her customary alertness for progress, she will again prove to be the leader in a new field.

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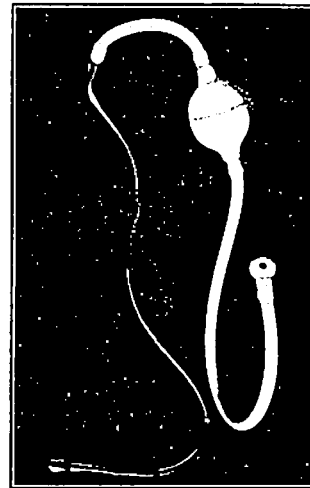


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