

would be both reasonable and beneficial. The change was first tried on the male side, and, having worked satisfactorily, was subsequently adopted on the female side. I can now report in very favourable terms of the new departure which has been highly appreciated by the nursing staff, in whose interest it was made.

Yorkshire. South.—The Committee have sanctioned some reduction of the working hours of the male attendants, and a necessary increase of the staff to admit of this being carried into effect. It is to be hoped that this arrangement will be extended to the nurses as speedily as possible.

At the urgent recommendation of the Commissioners the Committee decided to grant to patients discharged on trial a weekly sum equivalent to the cost of their maintenance in the asylum. Dr. Mitchell hopes that such beneficial results will justify this plan of assisting patients at a most critical time, as are stated to have followed its adoption elsewhere.

York Retreat.—This institution shows signs of continued success. A Convalescent Home has been opened at Scarborough for ten lady patients, and also for those patients who every summer visit the sea side. From personal inspection we can speak highly of the arrangements made to secure the comfort and the safety of its inmates.

York Lunatic Asylum.—This asylum has been vastly improved by the alterations recently made under Dr. Hitchcock's supervision. An excellent bowling alley has been added. The improvement in the appearance of the asylum is quite surprising to any one acquainted with it in former years.

2. *Scandinavian Retrospect.*

(Continued from p. 482.)

II. *Medical Gymnastics or Movement Cure.*

By ELLEN F. WHITE, Certificated by the Royal Gymnastic Central Institute at Stockholm.

The term "Medical Gymnastics" is used to express the treatment of disease by movements. Ling, an officer in the Swedish Army, and the originator of this system, received his first inspiration on the subject by finding that fencing cured the lameness in his own arm. From this simple fact he was drawn on to think, why should not other affections be also cured by means of movements. So he went through a complete course of anatomy, physiology, and pathology, and gradually evolved the whole of his system, which embraces, not only medical, but also military and hygienic or educational gymnastics. The object of hygienic gymnastics is to preserve the balance of power in the body; that of medical gymnastics is to restore the balance when it has been

disturbed by loss of proportion between the parts. The blood is the carrier of life and of disease. If the stream to any part be above or below the normal supply, disease is the result. Can the flow and the actual quality of the blood be regulated by gymnastics? The experienced gymnast at once answers "Yes." The very fact that the hands and feet become warm through exercise shows that the sluggish circulation has been quickened, and that more and fresh blood has been brought to them from some other part which has in consequence become poorer, perhaps to its own benefit. Ling, by his marvellously clear insight into anatomy and physiology, was able to think out and arrange movements for all parts of the body, by means of which the supply might be decreased or increased, or the nutritive quality improved, all according to the exigencies of the case. Nor is the control of the circulation the only weapon in the hand of the gymnast. By constant pressure the form and direction of the parts may be changed, and swellings caused by accumulation of matter may be reduced and absorbed.

Movements are of two kinds—active and passive. The active movements may be "free," that is without any extraneous help; or "compound," that is with the assistance of the operator. The nature and the amount of required assistance varies with the strength and capacity of the patient. In "free" movements the patient has only himself to depend on, and unless he has already had some gymnastic training the result will be a wavering, uncertain exercise, lacking form and concentration. The touch of a practised hand giving support or resistance where, and only where and when actually needed, at once guides the refractory limb in the right direction; and firm and decided movement is the result. Slow and quick movements act differently, and the operator can regulate the time and strength of a movement by the way in which he weighs, lengthens, or shortens the natural levers in the body. Take, for instance, "double plane-arm bending." The patient's arms are stretched forwards, with the hands the same height as the shoulders, and rather more than shoulder breadth apart. The movement to be executed is to move the arms in the same plane, without bending the arms, as far back as they will go without bringing the shoulders forward. The gymnast places his hands behind the wrists of the patient, giving more or less resistance. By placing the hands behind the patient's fingers the force required for the movement is much increased.

Apparatus also is used, chiefly as the means of isolating the movements to a certain part of the body; or as the means of obtaining complete relaxation of the muscles under a passive movement.

Passive movements are described as absorbent in their effects, and belong peculiarly to medical gymnastics. In these the patient must not contract his muscles at all, but let himself be perfectly "limp." For most people this is not at all easy. At the first

touch the muscles contract, building up a barrier between the operator and his work, rendering the operation far more difficult, and sometimes nullifying entirely the effect to be produced.

"Massage" forms one part of the passive treatment. It is given on the bare skin, and is resorted to chiefly for rheumatism and for swellings of all kinds, in conjunction with active and other passive movements for increasing the circulation. Important as massage is, it forms only a part of the passive treatment. Other passive movements are percussions, vibrations, frictions, slapping, kneading, &c., with nerve and vein and artery pressures. Most of these have a stimulating effect on the nerves. I saw one little girl who had no power of dorsal flexion in her right wrist. As the doctor pressed firmly upon the radial nerve the hand lifted itself for a few moments and then sank back to its former position, lifting itself again under renewed pressure. The doctor told me that when she first came to him the lifting of the hand had been very feeble. She had now begun to lift it herself a little after each nerve pressure, and he hoped to effect a complete cure after a few months.

Compression of the jugular vein is sometimes used for headaches. By pressure on the pneumogastric nerve palpitation of the heart may be checked. Percussion is given either with the half-closed fist as "sacral" percussion, or with the ulnar side of the hand, as on the head or spine.

In the treatment of the patient the whole system is considered, and not only the local evil. Thus headaches would be treated by specific movements, but also by movements directed at the root of the evil, whatever it may be. The health of the whole body depending on the blood, the organs concerned in preparing the blood for use, and for regulating its circulation, are first to be considered. Each prescription begins with a respiratory movement to increase the amount of air inspired, and consequently the quantity of oxygen in the blood. Hence it is important that the air to be inspired should be as pure as possible. Then comes a movement for the circulation, bringing all the muscles of the body into play. Then the local disease is attended to; and, lastly, the digestive organs, to stimulate secretion and absorption in the alimentary canal, and to strengthen the action of the bowels. By different positions and points of support, an infinite variety of movements may be produced suitable to all ages and all degrees of strength. The same movements may be taken standing, sitting, reclining, lying, or kneeling. And even these five fundamental positions may be very much modified and varied. In most cases the simpler the movement the better, for the action is then more concentrated, and the form is more easy to watch.

Indigestion is most effectually cured by gymnastics; it is one of the diseases most frequently handled in the gymnasium. Dr. Classon, Professor of Anatomy in Upsala, says, in relation to this

subject :—"It is from the digestive and other mucous membranes and glands that the blood supply to the working muscles is obtained. Gymnastics can also be made, in the sense alluded to, to regulate the blood quantity and the function of these organs. The increased waste and repair in the working muscles afford means of reacting on the digestive apparatus. It has been said that in gymnastics is to be found the only true stomachic we possess. This expression becomes more correct, nay, almost literally true, if we take into consideration the muscular coat of the stomach and intestines. An increased activity in the voluntary muscles produces, for example, a similar activity, and consequently greater development, in the involuntary muscles."*

Many patients with obstinate constipation have been effectually cured, as well as those with diarrhoea, a fact which might be of some value as a preventive in cholera, but only, perhaps, if given immediately upon the appearance of any premonitory symptoms. I am told that Mr. Bampffield, who was a Navy surgeon in the early part of this century, had great opportunities of observing the symptoms of Asiatic cholera in Calcutta, and he found that the cramps attending its attack could always be entirely relieved by pressure; by which, also, he used to cure ordinary cramps.

Patients with disease of the heart apply frequently for relief, which can be given in almost all cases. Of course, where there is organic disease of long standing cure cannot be expected; but great relief may be given, especially where the movements can be repeated many times a day.

Hypertrophy of the heart and the nervous palpitations so frequently following general debility are almost without exception cured by gymnastics. The movements are "derivative," thus lessening the pressure on the heart. "Derivative" or "Abstractive" movements are those which conduct the blood away from any part. Thus foot rotation is a derivative for the head, arm movements for the chest, especially if they be passive and do not increase the action of the heart. Vibrations, percussions, and passive movements with feet and under arm, and very gentle respiratory movements are the chief exercises used in such cases, the operator keeping very strict watch that the action of the heart is not increased.

We have now a little girl under treatment for valvular insufficiency, caused by rheumatic fever, and curvature of the spine. After every trunk exercise a "derivative" movement is given to quiet the action of the heart. The peculiar whistling sound is now scarcely audible, and her back is nearly straight. [During the four or five weeks since the foregoing was written a complete cure has been effected. The girl has been again examined by her

* From "Kinetic Jottings," by Professor Georgii (p. 252).

father, Dr. Södermark, and he declares that he cannot now trace any sign of valvular insufficiency or other disease in her heart.]

In the early stages of consumption a complete cure may be effected. In this disease great pains are taken to widen the chest and to improve the digestion and circulation. A gentleman of consumptive tendency after six months' treatment had gained three inches in width across the chest, with a corresponding improvement in health. He now hopes to be able to settle down at home instead of wandering about the Continent in search of health.

Something ought now to be said about spinal complaints. In cases of acute inflammation no active movements can be even attempted; and where the bones have grown together the back cannot be straightened again. But the chest can be widened, the general health improved, and the patient enabled to hold himself up instead of depending on artificial support.

The treatment for curvatures, where there is no complication with inflammation, has for its object to make the muscles contract on the convex side, thereby stretching the too strongly contracted muscles on the concave side. The exercises must be most carefully watched, and should never be taken save with bare back, so that the operator can see the effect of each exercise and watch the progress made from day to day. There is a very great variety of movements for this deformity and all its complications.

In his Fothergillian Prize Essay on the spine Mr. Bampffield gives movements, both active and passive, with and without the aid of the elaborate mechanical contrivances then in use for the cure of curvature by the active exercise of the muscles. The movements were to be continued "till fatigue be produced," which was to be succeeded by an interval of complete rest in the horizontal position.

By the use of stays and other supports the back may be held straight, but no strength can be given by them to the weakened muscles, which grow weaker day by day from disuse. The length of time necessary to effect a cure depends very much upon the strength and capacity of the patient, and also on his degree of stiffness. Two or three months are often enough to strengthen the back if the curvature be slight, and the patient bring his will to help in maintaining a good position out of the gymnasium. It is better to give milder movements twice or three times a day than to tire-out the patient with strong movements once a day.

Here, also, attention must be paid to the general health and the style of the clothing. The female clothing is quite as inconvenient in Sweden as in England, with stays and improvers, buttons, bands, and strings almost endless, and the dress tight across the chest. One little girl now under treatment for a double curvature was told to make her things fasten down the back to facilitate exposing the spine to view under the exercises. She simply turned

them round and put them on, hind-before, thus giving at the same time more room for her chest.

Rheumatism, sprains, and stiff joints and swellings of all kinds are treated by massage in conjunction with active and other passive movements, given while the muscles are pliable from the massage, thus slowly accustoming them to contract freely.

Sprains may be cured very quickly. The manipulation should begin at once, and should be repeated twice or three times a day. For stiffness after a fall the remedy is rapid. I was calling one day at a friend's house and found the little boy on the sofa, very unwilling to move. He had slipped on the polished floor and bruised his leg, so that it was painful to walk. Much against his will, I began to rub him, and in a quarter of an hour sent him back to play in the nursery, much to the amazement of his father.

In disorders of the thumb, arising very often from writing and from various mechanical pursuits, massage is used with active and passive movements, rotations, bendings, and stretchings for the whole arm and for each individual joint. This being a local affection of the muscles, they require strengthening by improving the circulation and action of the nerves.

Adhesions, whether with rheumatism or otherwise, are broken up with more or less powerful massage, succeeded by a forcible bending of the joint as far back as possible. A cure is thus effected by slow degrees, depending very much upon the nature of the case, its cause, and the length of its duration.

Hip disease in like manner is very successfully treated even when the abscesses have formed and are actually open, improvement often being visible almost from day to day.

In nervous twitchings and convulsions very great benefit is derived from the movement cure. In this case the muscles are gradually brought under the perfect control of the will.

Hypochondria, hysteria, and other nervous affections are frequently treated in this manner with good result. Under such rational occupation, and exercise of the mind in conjunction with the body, the mind also recovers its balance, its health improving with that of the body.

In cases of insanity, on the other hand, the body often seems to retain its healthy condition. But seeing how seriously in many persons the state of the optic nerve, for example, is said to be affected by a slight disturbance of the spinal balance or other condition from so apparently trivial a cause as that of wearing high-heeled boots, it would be but reasonable to expect that some other of the brain-nerves also may be brought into a healthy condition by operating upon the spinal system through properly directed movements. How far the other sensory nerves may be influenced by spinal action remains yet to be investigated; but other brain-nerves which are connected with the internal organs of respiration, circulation, and digestion, and with certain muscles also, may in

any case be influenced by improved spinal action through the aid of properly directed movements.

We must always keep in mind, and here especially, that the use of gymnastics, whether hygienic or medical, is *not* to develop or strengthen the muscles or the muscular system, but to preserve, or it may be to restore, the proper balance between all the vital functions of the body. When these are in proper order the proportionate strength of the muscles is a natural consequence.

Unless the movements are perfectly passive they involve a systematic expenditure of brain power in order to execute the movements correctly. This expenditure must be specially and carefully provided against. An ill-directed energy of the brain may be then guided to other more wholesome channels, as one might set a child with a so-called "mischievous tendency" to some manual labour to prevent its spending its energies in doing mischief.

Nervous irritability is often a precursor of settled madness. But the effects of gymnastics on insanity, arising from organic disease of the brain, have been, as yet, but little studied. It is unlikely that any relief in such disease would be afforded by working upon the cerebral nerves. Where, however, the insanity is known to have arisen from pressure, from imperfect circulation, or from derangement of some other parts which may be reached and handled by gymnastics, a cure is often effected, the madness disappearing with the removal of the physical derangement; the quieting effects of the movements on the nerves assisting the cure. There is evidently a rich field open for investigation in both these directions, with the prospect of great results, if taken up as a special branch of the system. The same may be said as to the application of gymnastics to specially female disorders, which is, as yet, much questioned by the medical faculty. Still, there are some gymnasts who make this branch their speciality with more or less success.

Chronic diseases are those which come, at present, more frequently under treatment, but the practice of treating acute cases by gymnastics is gaining ground. It is expected that in course of time medical gymnastics will be almost entirely under medical control.

Young medical students are encouraged to go through the course of instruction given at the Institute. Students are not admitted under 20 or over 30 years of age. The qualifications required of all students who apply for admittance to the Institute are: (1) A certificate of health and freedom from organic disease and deformity, flat foot, or other defect. (2) A good school certificate; and, for native candidates (3) A certificate of confirmation, or failing that, as in the case of some foreigners, a personal recommendation from some clergyman. A foreigner must, of course, have mastered the language to enable him to follow the given course of instruction readily and accurately.

Sweden is now over-run with so-called gymnasts who have been a few months, or it may be a few weeks, under some teacher, and who then begin to practice on their own account, bringing great discredit on the whole system by their faulty and inefficient work. It is to be hoped that in a short time no one will be allowed to practice without a diploma.

On leaving the Institute the student has acquired a certain amount of practical as well as theoretical knowledge. But he (or she) still lacks the requisite experience, and it becomes advisable for him to work for a year or more under some able gymnast before depending entirely on himself.

In medical gymnastics the brunt of the work falls upon the hands and arms, and a large firm hand is a great advantage. Delicate, tapering, flexible fingers are quite the reverse. Height also is an advantage if strength be in proportion. A short gymnast has some difficulty in handling a large and heavy patient. The eye also must be trained to watch accurately the effect of the movements, and, in conjunction with the hand, to detect the slightest deviation from the correct form.

Anatomy and physiology are needed for the educational branch. How much more so are they required for the medical. Some little knowledge of pathology also is imparted, but more careful instruction is given in the treatment of diseases. The diagnosis is commonly given by a physician, the treatment then being prescribed by the gymnast. The more expert and experienced gymnasts often draw up their own diagnosis. If trained assistants having no theoretical knowledge are employed very careful supervision is necessary.

A certain amount of apparatus is requisite, but this need be neither elaborate nor expensive. Two wooden stools, a bench, over which the patient can sit astride, a couch with a hinged back, which can be placed at any angle, or lowered to a level with the seat, and a horizontal bar, which can be raised or lowered to any height, are all that are really required in ordinary cases. The usual furniture of a room, a sofa, music stool, &c., can all be used if the gymnastics are given in the patient's home.

It would be impossible in such a cursory sketch as this to go into further details. But I would add that Professor Georgii's "Kinetic Jottings" will be found to contain much interesting matter on the subject of the "Movement Cure." I have but indicated some few of the many ways in which the system may be applied. It will be seen from what has been said that the course of instruction must be tolerably severe, and indeed I was cautioned seriously against attempting it. The requisite skill of hand and accuracy of eye can be acquired only after long and persevering practice. It is not until after a year spent in daily practice upon one another that students are allowed to help with patients. The daily practice in educational gymnastics is of great assistance in training the eye to take in different forms with accuracy.

A great future, I hope, is before us in England if only the leading members of the profession can be led to look carefully and fully into the working of the system, and to test its true value by their own observation of its results. I have shown what is required of those who come to learn. Should there be any who are disposed by similar training in this Institution to devote themselves to the relief of those many cases of bodily suffering which cannot be reached so readily or effectually by the ordinary modes of medical treatment, I cannot but commend to their notice the farewell words addressed by Professor Törngren to myself: "Should any other countrywoman of yours feel inclined to come she would be most heartily welcomed."

Some apology may seem due for my thus venturing to urge this subject so strongly upon the notice of medical men and women in England. I am quite aware that massage has been much used, and with great success. I am aware that something has been done in the way of medical direction of movements for the restoration of the action of the muscles in cases of rheumatism, adhesions, or injury; and there is now in London an institution for giving passive movements by mechanism. But I believe that, comparatively speaking, few have known at all of gymnastics hitherto as more than a mere series of stereotyped exercises, given by persons absolutely without medical qualification or any proper anatomical or physiological knowledge, and given for the exercise of the limbs and the development of the muscles, often it may be to the detriment of the general health, and almost certainly to failure in the case of any special ailment. But impressed as I have been with a deep sense of the value of the system as carried on in the Institute at Stockholm, I would with much deference invite inquiry into its merits, being most anxious that its highly scientific nature should be investigated, and that the true reasons for its highly scientific study should be pointed out, and more generally known and understood.

P.S.—Since the foregoing was written the practice of medical gymnastics has been placed under strict medical supervision, and the course of instruction is becoming more severe. Young medical men taking it up will now have to give two years to the preparatory course, and then one year to the medical. They that have obtained their certificate are now entitled to the prefix (not as it would be in England the suffix) of "Gymnastik Director."

No one may now practice without the certificate of the Royal Central Institute, and no patient may be treated without a declaration or recommendation from a physician that the patient may receive medico-gymnastic treatment. The first offence will be punishable as "quackery," the second will be visited with a prohibition to practice, which will be a deprivation of the benefits of that certificate. So that they who attempt to take patients with-

out a doctor's declaration, as well as they who have not passed the examination, are alike restricted. The propriety of this must be apparent to all who have made themselves acquainted with the system, for they will see that great and irremediable mischief may be done by an ill-advised application of this mode of cure.

3. *French Retrospect.*

By D. HACK TUCKE, F.R.C.P.

Reports on the administration of the departments for Epileptics and for Idiots and Imbecile Children at the Bicêtre.

We regret that a notice of these admirable Reports which have appeared yearly under the auspices of the *Progrès Médical*, has not found a place before now in our Journal. With a limited space at our command, and an unlimited material making demands upon that space, we are compelled to omit much of which the intrinsic merit calls for notice.

The reports consist each of two parts, the first of which deals with the history of the development of the above-named departments, and in particular records the patient, untiring endeavours which the *chefs de service* have brought to the improvement of the administration of these departments, including the formation of a separate department for the treatment of children who are weakminded and idiots. This part has, of course, a special interest for the great People whom it concerns, and it will suffice for us to express our hearty sympathy with the movement and our pleasure at the progress made. To us as Englishmen it is most gratifying to find that our own institutions of Earlswood and Darenth have such commendation from our neighbours.

The second part is clinical, and contains much that interests the specialist in nervous diseases, much that interests the worker in general medicine. An exhaustive critique of this part would take us beyond the limits assigned, but we may select here and there from the 1885 volume. The records of twenty-one cases of epilepsy treated by means of curare are given. The treatment was by subcutaneous injection, and was maintained for periods of three and six months. The conclusions are that the drug is not amongst those serviceable in epilepsy. Of the twenty-one cases one only was distinctly benefited. With these results, it is scarcely worth while giving details as to doses, etc.

Twelve cases of epilepsy treated with sclerotic acid, either by the mouth or subcutaneously, derived benefit in five cases. Four of these cases were under treatment more than a year. The results are described as "peu encourageants," which probably means that, in the cases benefited, the benefit was not striking. A foot-note points out that these negative results accord with the experience of Dr. Gowers as to the uselessness of sclerotic acid in epilepsy.

An outbreak of röheln at the Bicêtre furnished the materials for an inquiry into the nature of this specific exanthem. It is pointed out that