represents the pupillary margin; this margin, from the varying width of the remaining seam of iris, is not regularly circular. There is a small patch of greyish-white opacity upwards and outwards, and a similar dot inwards and downwards, upon the capsule of the lens. Otherwise the latter is perfectly transparent, and its margin can be distinctly traced with the ophthalmoscope throughout the entire circumference. With the movements of the eye the lens as well as the visible remnant of iris is sometimes seen to shake a little. The anterior capsule further presents the following phenomenon, in reflected as well as in refracted light. About the centre of the pupil, three plait-like figures are seen, nearly vertical, resembling elongated cells; in focal light they can only be distinguished when the eye is directed inwards; they noways interfere with the transparency of the crystalline body. The whole contour of the lens, as dividing the latter from the surrounding hyaloid membrane, being so distinctly traceable, we naturally look for the ciliary processes. But nothing can be made out at all resembling these. When the eye is turned either extremely inwards or outwards, a dark figure is, indeed, observed beyond the outline of the lenticular margin, but that figure, far from presenting anything like the beautiful and regular design of the ciliary processes, appears rather like a uniform and slightly tremulous mass, somewhat shaggy in its outline. The vitreous body presents extensive floating opacities when seen with the ophthalmoscope. The optic papilla and the retina are in no wise abnormal in their appearance. The tension of the eye is somewhat increased.

The patient reads No. 4 of Jaeger's types from four to nine inches. His acuity of vision is about one-thirteenth, with — 16 it is one-fifth. Through a stenopaic aperture he reads, with some difficulty, No. 1 Jaeger, and the acuity of vision, with — 16, is nearly two-sevenths. He states that he never could see well at a distance, but he never tried the effect of glasses, and that he could read the newspaper at a greater distance from his eye than at present. Neither atropine nor Calabar are found, in an appreciable way, to affect the results as stated. After the instillation of atropia, however, the seam of iris appears to become somewhat narrower still. (The patient states that he sees black specks floating before his eye, even more when the latter is closed, and that he finds his sight somewhat improved since his admission.)

As the investing membranes of the eyeball were evidently not injured in the accident, the question naturally presents itself, as to what has become of the bulk of the iris. From the appearances described, the necessary inference seems to me to be that, in the concussion caused by the accident, a displacement of the vitreous body must have occurred, sufficient to allow the iris to become folded back upon itself. Apart from the support lent to this view by most of the phenomena described, I have only further to state that the inner free edge of the iris-seam, when examined in focal light with the aid of a magnifying lens, far from appearing sharp or torn, rather gives the decided impression of such an increase of thickness as must necessarily arise from a doubling of the membrane. The black figure, which I have described as seen beyond the equator of the lens, I hold to be the image of the backfold of the iris reflected from the hyaloid membrane. If my interpretation of the phenomena be correct, the case is one of those to which Von Ammon has directed attention in his elaborate article in the first volume of the *Archiv für Ophthalmologie*. Instances of traumatic retrusion of mere segments of iris I have seen ere this, and presented at the Manchester Medical Society.

TRAINING FOR THE TRIPOS.

By J. M. WINN, M.D.,

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THE vast importance of rigid attention to the bodily health, whilst preparing for an examination, was forcibly brought to my mind by a recent occurrence at the College of one of our Universities. A young friend of mine, of great mathematical talent and unwearied industry, lost the first place at his college examination, simply from the effects of indigestion caused by his having incautiously eaten some articles of food at lunch, just before he went in for his examination, which disagreed with his stomach. On the first day, he was so confused from the malassimilation of the food, that it was with great difficulty he got through his work; on the second day, he rallied, and ultimately came out second, losing the first place by only one mark. Who can doubt that, but for the unfortunate lunch, he would have come out first?

Whilst so much has been written on the subject of training for bodily

contests, how little has comparatively been done towards furnishing anything like a systematic guide as to the best rules to be followed in order to maintain the brain and nervous system in their highest state of integrity, at a time when both are strained to the utmost, not only by the efforts of the will and intellect, but also by the hopes and fears which are excited by a trying ordeal. The question whether our Universities have raised the standard of their requirements too high, and induced an amount of study under which the health of those who are determined to distinguish themselves often fails, is one that I will not enter upon now. My present object is to offer a few medical suggestions, which may possibly lead to an improved system of hygiene, for those who are training for academic honours.

If we keep in view the difference between the structure of the nervous and muscular tissues, it becomes evident that a somewhat different kind of diet is required for the nutrition of the former from that of the latter. In order to develop and support the muscular organisation, a large proportion of animal food is requisite; not so, when the object is to supply the waste of the more delicate and subtle tissue of the nervous system. Fatty matter and phosphorus enter largely into the composition of the brain. It has been estimated that the former (brain-wax, or brain-fat, as it has been called) amounts to about one-third, and the latter (phosphorus) to one-twentieth or one-thirtieth of its solid substance. It is now generally believed that exertion of the will and reasoning powers causes an expenditure of the brain-material, and a corresponding exhaustion of the nervous force. However, it must not be forgotten that prolonged bodily exercise exhausts the nervous force, as muscular contractions are commonly brought into action by nervous influence; hence the importance of a student's avoiding excessive bodily efforts, which expend that nervous energy so essential for brain-work. Whilst "training for the tripos," he should, however, take gentle exercise for at least two hours daily in the open air, and his diet should be light, simple, and nutritious. Large quantities of animal food and malt liquor conduce rather to somnolency than to mental activity. There is a common saying that "fish feeds the brain," which may depend on the phosphorus it contains; certainly there can be no doubt that some sorts of fish, such as soles, whiting, plaice, etc., are peculiarly suitable to a weak digestion. I may incidentally observe that I have found a fish diet especially serviceable for those predisposed to phthisis. A certain amount of rest and sleep, as well as a due supply of healthy blood, are absolutely necessary to maintain the brain in a working condition. Above all, the amount of mental work must be in proportion to the physical strength. I knew an instance of a gentleman who attempted to read ten hours a day, and, whilst doing so, his competitors got ahead of him; he then wisely reduced his time of work to eight hours. He then recovered his lost ground, and came out a wrangler. There are men of iron constitution who can afford to laugh at these precautions, and who can excel both in mental and bodily exercises. A friend of mine who went in for a public examination, surpassed most of his contemporaries, who were his equals in mental capacity, by sheer power of physical endurance. The suggestions I have offered are not for such as these, but for men of less physical stamina, and I hope they may lead to an improved system of academic hygiene.

THE HOSPITALS OF CHRISTIANIA AND COPENHAGEN.

By HENRY S. TAYLOR, Esq., Guildford.

HAVING recently visited the hospitals in two of the Northern capitals, I send a few notes of observations made therein, hoping that they may interest the readers of the JOURNAL.

In the Royal Hospital at Christiania, I had the good fortune to find Dr. W. Boeck going round, who took the trouble to explain to me, in my own language, the nature of the more important cases under his care. The practice of syphilisation, which has had so zealous an advocate in that distinguished physician, is still pursued by him exclusively in all forms of constitutional syphilis, and was being carried out in a great number of the cases before me; and, as I was told, with unvarying success. His plan is to inoculate the patient in the first instance with virus from a fresh sore, and then to continue the inoculation every third day with discharge from the sores thus artificially produced, until it ceases to have any effect, when the cure is considered complete, the constitutional symptoms having disappeared *pari passu*. The parts selected for inoculation are the chest and abdomen, and the operation is performed with a large lancet, which, after being charged with h

virus, is placed vertically with its point on the skin, and twirled round so as just to penetrate the cuticle; the point is then wiped on the puncture. As two or three punctures are made every time, and as the treatment may extend over a period of several months, it follows that the patient's trunk is sometimes diapered all over with cicatrices, as happened in more than one instance among those in the hospital. In one man the resulting sores had an ugly aspect from phagedænic ulceration, but in the great majority no undue action had followed, and the constitutional symptoms had certainly declined or disappeared altogether, whether from the influence of syphilisation, or from the natural cure effected by time, it would be hard to decide. As no other treatment, local or general, is allowed, except the light application of nitrate of silver to ulcers, the inoculation plan is credited with the cures. Notwithstanding this apparent success of syphilisation in Dr. Boeck's hands, it is not practised by any of his colleagues in the hospital, nor by the profession in general. The objection I heard made to it was that it was "too cruel."

In the female wards I saw two examples of the *Spedalskhed*, or Norwegian leprosy. In both women the lower part of the face had been attacked, and was covered with large red elevations, like those of inflamed psoriasis; the features were also much swollen from infiltration, causing great disfigurement. Dr. Boeck informed me that in severe cases the whole body may be affected, the eyes dropping out, and the joints of the fingers and toes falling off. Although the disease is said to be disappearing, it still prevails on the western side of Norway, where the coast is deeply indented with fjords and ravines, and elevated into lofty plateaux. Bergen, which is the centre of this region, has a special hospital for lepers. While the disease is said to be endemic in certain districts, and even in particular farms, it is attributed to exposure to cold and wet, and also to unwholesome food, as stale fish, which is often eaten by preference in a putrid state. Dr. Boeck and other high authorities maintain that the disease is hereditary, upon evidence which seems incontestable.

The theories of the causation of *spedalskhed* appear not to harmonise with all the facts of its history. It is undoubtedly the same disease as the eastern leprosy, which is not attributable to cold or bad weather, and questionably to bad food. The only case of leprosy I had ever seen, was a young gentleman from the Mauritius, in whom none of the above causes had been in operation. In that instance the skin of the lower part of the face presented the same appearances as in the women at Christiania, and several joints of the fingers had been lost from a sort of necrosis.

Beside its pathological importance, this singular disease possesses an antiquarian interest in the fact of its having once overspread the whole of Europe. In many parts of France remains of the old *leproseries* may be seen, generally in the form of a quadrangle with separate cells and a chapel dedicated to St. Lazarus. That it was well known in England is proved by many evident traces of its presence; for example, in Guildford we have a street still bearing the name of the "Spital" or leper-house, which once stood there; and in the old church of St. Mary, in this town, a small square window was brought to light some years ago, which is believed by archaeologists to have been the "leper's window," from whence the sacrament was administered to the lepers outside.

Chronic inflammation of the large joints, here called "arthroitis", formed a large proportion of the cases, and were treated generally by shampooing, after the method of Dr. Metzger of Amsterdam. This treatment, as I saw it applied by Dr. Boeck, consists in simple friction with the hand, at first gentle, then hard, both circular and in the direction of the long axis of the limb. Swelling from effusion and thickening are said to subside more quickly under its use than by other modes of treatment; and joints stiffened by disease and long disuse soon recover mobility and strength. Great efficacy is also attached to the practice of flapping the muscles with the backs of the fingers as a means of restoring the tone of the debilitated limbs.

In the surgical wards I followed Dr. Nicolaysen, who is in great repute as an operator and scientific surgeon. His treatment of injuries and surgical diseases was conducted on the same principles as with us. The plan of extension by a falling weight was generally adopted in scrofulous affections of the hip and knee, which seem as common in Norway as in our own country. This method was sometimes combined with counterextension, which was effected by raising the foot of the bed some six or eight inches by means of blocks placed under the casters, and by wedge-shaped cushions under the patients' feet. The weight of the body is thus made to oppose the extending force at the foot. One application of this principle struck me as ingenious, if not original. It was in a case of amputation of the leg, which had been followed by sloughing and great retraction of the soft parts. The bones had

protruded considerably, but were now nearly covered over by the skin, which had been coaxed down by four strips of adhesive plaster attached by their free ends to a falling weight.

Lister's antiseptic treatment of wounds and suppurating cavities does not seem to have found its way to this hospital; carded oakum being the dressing in general use. The only cases of operation under treatment were two excisions of the hip-joint, which appeared to be successful; and one of vesico-vaginal fistula by Dr. M. Sims's operation, which had completely closed the opening.

My next visit was to Copenhagen, which possesses two large hospitals—the Fredrik's Hospital, connected with the School of Medicine in the city, and the new Commune Hospital outside the walls. The latter is in the best position, and is a truly palatial building both in style and proportions, containing eight hundred and fifty beds, with wards of various sizes, well lighted, and affording ample cubic space. It is built on the corridor system, which, whatever may be its sanitary defects, is unquestionably superior to the pavilion-plan in convenience of administration, as well as in architectural effect. In both hospitals, as in that of Christiania, the cases of chronically inflamed joints and scrofulous diseases of the hip and knee outnumbered all others in the surgical wards. Here the treatment chiefly consisted in fixing the joint with splints and gypsum bandage, while extension was kept up by falling weights. Some cases of fracture of the leg were put up in a splint of peculiar construction, devised by Professor Stein of this city, which appeared to act efficiently in cases attended with lateral distortion, as in Pott's fracture. The apparatus consists of a wooden fracture-box, of greater width than the leg, having a sliding foot-board and three binding screws in each side-piece, which can be made to press against the sides of the limb at its centre and both extremities. Small hollow side-splints are first applied to the leg, and receive the pressure from the screws, which are tightened at the points most requiring it. This application of pressure, acting from points unconnected with the limb, nearly resembles the action of the surgeon's hands in rectifying displacements, and is not effected by any other splint with which I am acquainted.

At the Commune Hospital, I found Dr. Holmer in the surgical wards, who kindly pointed out to me the cases of chief interest. In a case of ununited fracture of the humerus, Dr. Holmer had cut down on the fragments, sawn off the ends, and tied the bones together with silver wire, which was passed through holes drilled in them on both sides. In order to ensure perfect quiet of the limb, an ingenious form of swing had been erected, made out of lengths of small gas-pipe: two uprights at the head of the bed, and two at the side next the arm, supported two cross-pieces, from which the splint was slung. Three weeks had elapsed since the operation without any untoward symptoms showing themselves.

Two resections of the knee-joint which I saw had turned out unfavourably: one in a middle-aged woman, the other in a young girl, and amputation had been performed in both cases by the circular method. (Dr. Holmer uses the silver-wire sutures for fastening the ends of the bones after excision, and leaves them in six or eight weeks.) The woman had a narrow escape from death by secondary hæmorrhage a fortnight after the amputation, and owed her life to the tourniquet having been left on loosely, so that the nurse could screw it up on the first occurrence of bleeding—a precaution which is always taken in this hospital. I found Lister's treatment of wounds carried out here in all its details with scrupulous exactness, the surgeon himself applying the dressings. The cotton-wool which is used so largely in this mode of treatment is all carded by the patients.

After visiting the wards, we adjourned to the operating-theatre, a spacious room lighted by a large window at one end, and with benches for spectators at each side. The only case for operation was a man with epithelial cancer of the tongue, which Dr. Holmer excised with great dexterity and neatness. The patient being chloroformed, and an assistant having drawn the tongue forward with forceps having the blades covered with linen, the operator seized the sore, which was at the side of the organ, with a vulsellum, and removed it with a few cuts of a scalpel. The bleeding, which was copious, was restrained by syringing with iced water while the edges of the wound were being brought closely together with six points of suture, which were inserted with small curved needles carried by forceps of the kind used by Mr. Spencer Wells.

I cannot conclude this hasty sketch of the Northern hospitals without expressing my obligations to the accomplished surgeons whom I met there. Their command of modern languages, and intimate acquaintance with the medical literature of other countries, combined to render a stranger's visit both agreeable and profitable.