

A text-book of mental and sick nursing : adapted for medical officers and nurses in private and public asylums / by Robert Jones ; with an introduction by William Job Collins.

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ROBERT JONES, M.D.

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SCHOOL OF MEDICINE.
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A TEXT-BOOK
OF
MENTAL AND SICK NURSING

LONDON: THE SCIENTIFIC PRESS LIMITED

SCHOOL OF MEDICINE.
UNIVERSITY OF LEEDS.

A TEXT-BOOK

OF

MENTAL AND SICK NURSING

ADAPTED FOR MEDICAL OFFICERS AND NURSES
IN PRIVATE AND PUBLIC ASYLUMS

BY

ROBERT JONES

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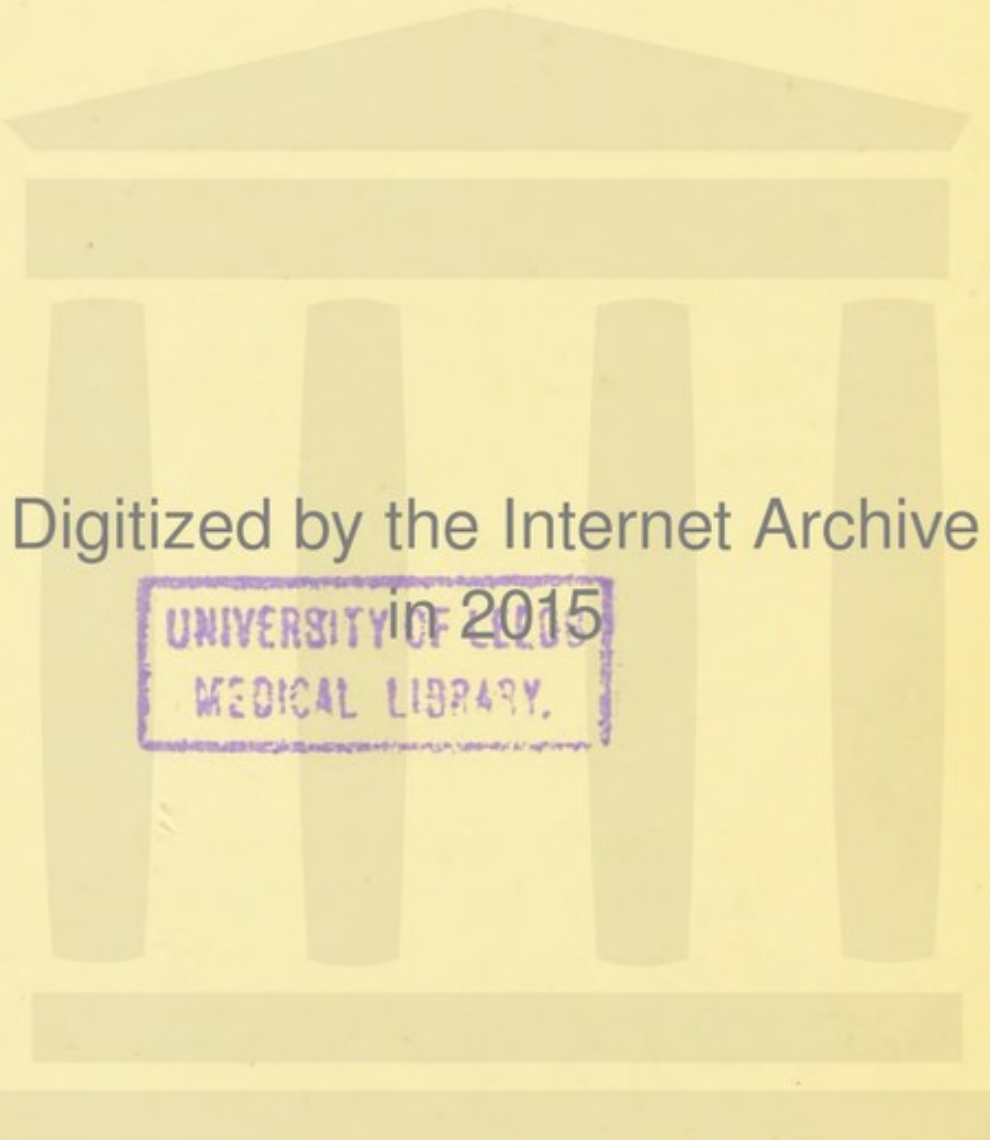
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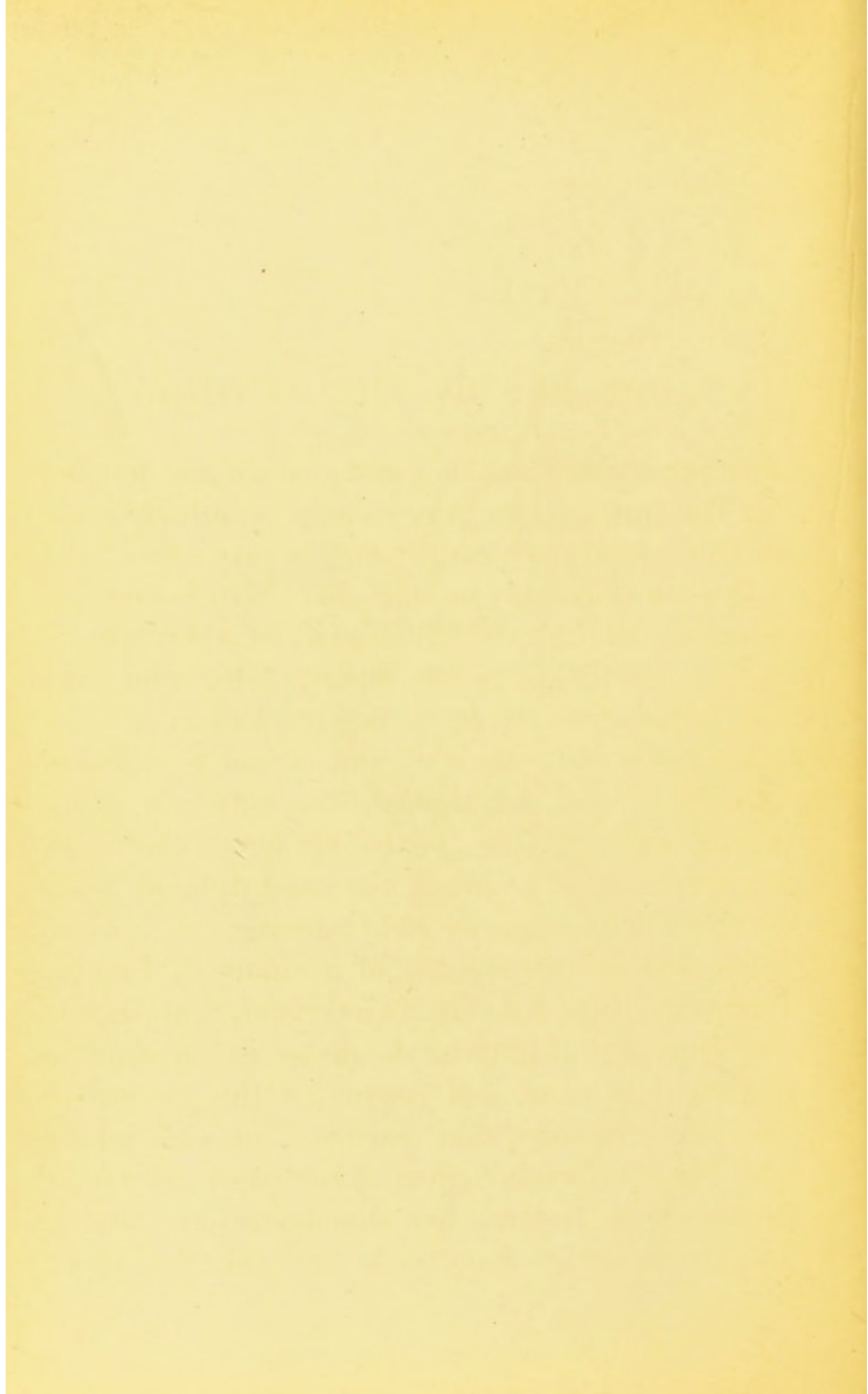


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THIS VOLUME ON MENTAL AND
SICK NURSING IS DEDICATED BY GRACIOUS PERMISSION TO
H.R.H. HELENA AUGUSTA VICTORIA,
THE PRINCESS CHRISTIAN,
WHOSE BENEVOLENT PATRONAGE AND WARM AND SYMPATHETIC
PERSONAL ENCOURAGEMENT HAVE DONE SO MUCH TO RAISE THE
STANDARD OF NURSING THE SICK AND POOR,
BY HER MOST FAITHFUL,
MOST RESPECTFUL, AND
MOST OBEDIENT HUMBLE SERVANT,
ROBERT JONES.



REMARKS BY THE AUTHOR.

THE proper training of nurses (male and female) for the care of the insane, only seriously began in this country within the last twenty years, and I think it may truly be said that there is now not a single medical superintendent of a private or public institution in the British Isles who does not, either himself or by deputy, lecture to and train his newly elected staff so as to become efficient nurses for cases of insanity; in other words, who does not adapt his new material to undertake what is one of the most difficult tasks in the whole range of sick nursing. I believe, from personal knowledge of asylums in France, Germany, Italy, Austria, Switzerland, Scandinavia and Russia, that nursing the insane in our country is second to none, and credit for this is due to the zeal, interest and earnest concern which the Medico-Psychological Association of Great Britain and Ireland has demonstrated: firstly, in producing a handbook for this purpose;

secondly, in establishing a syllabus for a three years' training; and thirdly, in granting certificates for proficiency in mental nursing to those who have complied with the necessary standard after a common examination.

I do not minimise tact, judgment, patience and good humour as indispensable equipments for the asylum nurse, but I do think that knowledge properly applied, and experience well directed by a course of training in a person of average intelligence and mental capacity, tend to increase "perfectibility". I believe that training helps the resourcefulness and confidence in emergencies, features and qualifications which distinguish a good mental nurse, and by means of which she achieves and retains the confidence of those under her care. I feel convinced that an interest in the training of nurses is essential if they are to do good work. Moreover, it secures a more exalted ideal of the nurse's duties, and commands a higher class of service.

I have known it to be raised as an objection to training that when members of the staff in an institution obtain the certificate for proficiency in mental nursing, they leave the service; but so also do the indifferent and the unambitious, the contrast being that the well-qualified nurse leaves for promotion and to better her position, whilst

the other leaves for no reason other than the mere love of change.

Mental disease is bodily disease, and whilst I have entered somewhat fully into the psychology of mental processes, I have also dealt with the physical aspect and with sick nursing. In any analysis of the mind, the use of technical terms beyond the nurse's range is unavoidable, and it is in this analysis that I appeal to the medical officers of asylums for further explication. This volume, which has formed the substance of lectures delivered at Claybury Asylum on various occasions, and which, with some modifications, has also appeared in the columns of the *Hospital* journal, will, I trust, serve as a note-book during the medical officer's demonstrations and class lectures, and it is interleaved for this purpose. It is designed to be auxiliary and not to replace the few text-books that are available for the mental nurse of either sex.

The proofs have been revised by my late colleague, Dr. G. F. Barham, now Senior Medical Officer of the London County Council's new asylum at Long Grove, near Epsom, and with much labour he has compiled the Index. I desire to express to him my sincere obligations.

My friend Sir William J. Collins, M.D., M.P.,

now President of the British Asylum Workers' Association, and formerly Chairman of the London County Council—whose keen interest in the scientific investigation of insanity originated the Neuro-pathological Laboratory for the asylums of London—has very kindly consented at my request to preface this small volume with an Introduction, and I have the much-esteemed honour and privilege (by gracious permission) to dedicate the volume to Her Royal Highness The Princess Christian.

INTRODUCTION.

It has been wittily remarked that a specialist should be a good general practitioner, and something more, but that he is very often something else. In my opinion, the care and nursing of the mentally afflicted should be regarded as a specialised department of general nursing. To be a good nurse or attendant on the insane, then, it is requisite to be a good general nurse, and something more, if being that "something else" is to be successfully avoided. It may not under present conditions be always possible to realise this ideal, but this is the ideal which should be kept before those who seek to minister successfully to the mind diseased. To this end, knowledge and character, certain qualities of mind and certain qualities of heart are not less but more essential than is the case with the general nurse, whose concern is with ordinary medical and surgical patients. Given the requisite quality of mind and a fair preliminary

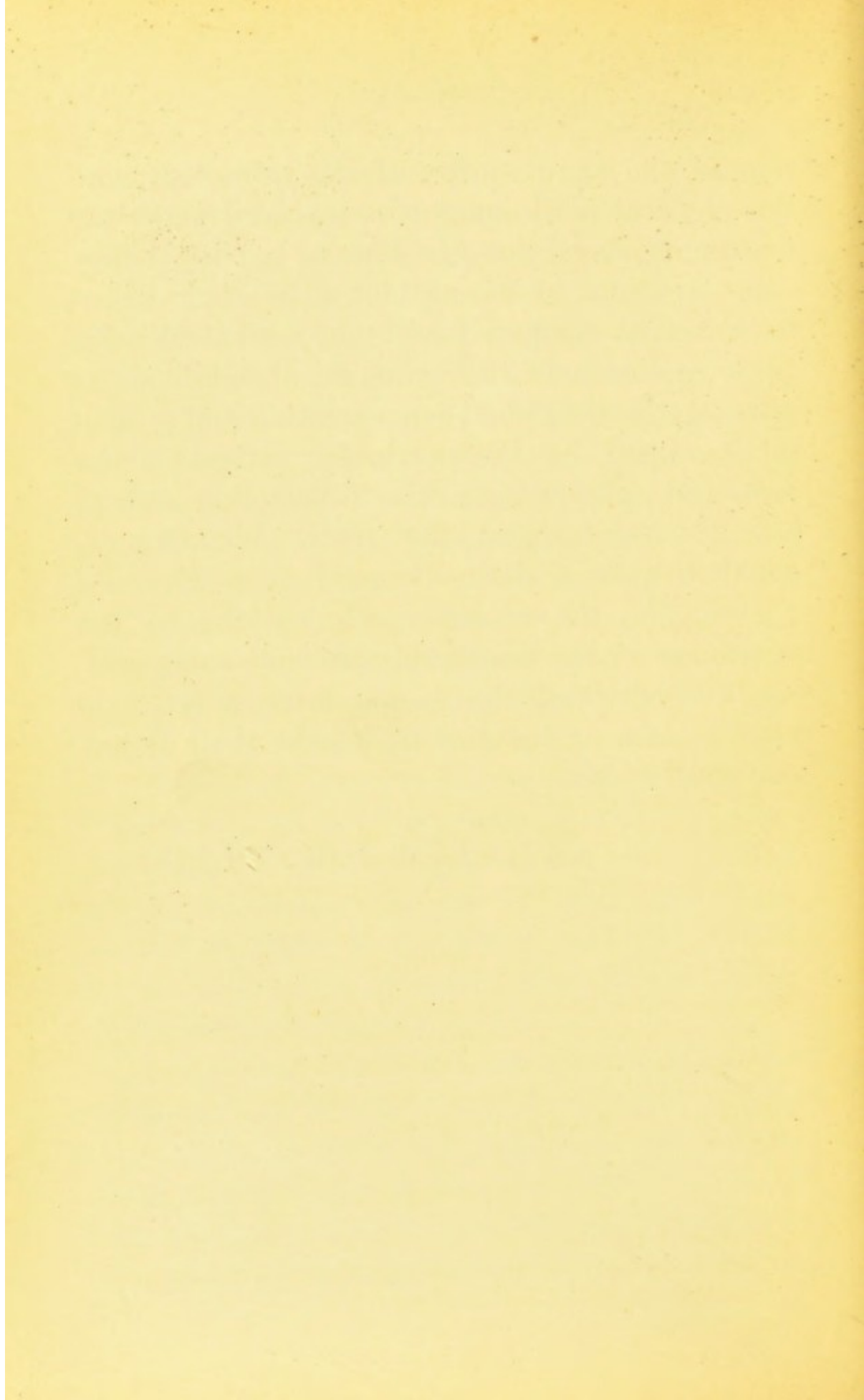
education, this manual should prove a useful introduction to the nursing of mental cases. Dr. Robert Jones, alike by capacity and experience, is well qualified to teach and to train those who minister in that branch of medicine to which he has devoted, without stint, his thought and powers. But here, as elsewhere, knowledge may come but wisdom linger, and no book or manual can supply the self-discipline essential in any nurse or attendant, but absolutely indispensable in those who have chosen the care of the insane as their vocation.

No manual of the dimensions of this one can do more than serve as an introduction to further study. A good reference library should be at the disposal of asylum nurses and attendants. A habit of reference to larger works or monographs should be encouraged, and indisposition to rest satisfied with not knowing should be fostered by those in command, who will doubtless be willing to promote such research and satisfy laudable inquiry.

The inherent difficulties of treatment of the insane are sufficiently considerable to justify every effort at reducing extrinsic and adventitious impediments to the thorough training of those who nurse them to the smallest dimensions. The monotony of routine, the disappointment of

relapse, the exasperation of the refractory, and the physical peril sometimes involved make the asylum workers' lot not always a truly happy one. I know of no antidotes to such drawbacks to be compared with the zeal-awakening study of the facts and problems of mind and its diseases, the individual concentration and sympathetic regard for the particular patients under care, and an ever-vigilant self-discipline such as has always inspired the truly philanthropic, whether it be a John Howard or a Florence Nightingale, the reformer who works in the public eye or the unostentatious and conscientious worker whose desire and interest is to do what in him or her lies to benefit their fellow men and women.

WILLIAM JOB COLLINS.



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FOR nursing the insane it is necessary to have sympathy, tact, and patience. It is further necessary to have a good and comprehensive knowledge of ordinary sick nursing. Before this knowledge can be satisfactorily attained, an acquaintance, more or less full, is expected with the structure and the functions—the anatomy and physiology—of the human body, the latter of which will be dealt with in detail, but the present course is in no way intended to supplant—but rather to supplement—the many excellent nursing hand-books on this subject, and it is presumed that many of those to whom these chapters are addressed have received competent training in ordinary medical and surgical nursing, and having become efficient in this experience, are now proposing to qualify for mental nursing. The combination

of hospital and asylum experience is strongly advocated, and will do much to raise the *status* of mental nursing; but the time involved will, it is feared, prove a hindrance to many.

In well-organised hospitals and asylums for the insane, both private and public (county, borough, or district), mental nursing is taught by lectures, demonstrations, and ward or practical bedside work, over a period of three years, and in much the same manner as ordinary sick nursing is taught in hospitals.

The study of mental diseases, although the highest—for it deals with mind, man's highest attribute—is also the most difficult to understand, for there is often no bodily disease to treat, and no indication of a physical ailment. Still, the more minutely scientific investigation is carried out, the more changes are discovered in diseases involving the structure of the *cortex* of the brain. It becomes advisable, therefore, and even necessary at the outset, that we should know something definite about the anatomy and physiology of the nervous system.

The group of organs which come under this system comprise (1) the *brain*, (2) the *spinal cord*, (3) the *nerves* and their terminations, and (4) the *sympathetic system*—so called because some of the fibres from this system supply the thoracic and abdominal organs; those going to the heart exciting it to beat faster, whilst those supplying the intestines moderate their contraction, and those to the blood-vessels maintain their tone.

The brain, which is the only organ of the body that will be described in detail in this course, lies within the skull cavity—the vault of which protects it from injury. It is enclosed in three membranes, called the *meninges*,

which may become the seat of an inflammatory disease called *meningitis*. The outermost membrane, the *dura mater*, is tough and fibrous, and forms a lining membrane to the bone. The innermost, the *pia mater*, forms a supporting membrane to the brain, dipping into all the inequalities of its convolutions and supplying it with blood; whereas the middle membrane, the *arachnoid*, more or less lines the other two, but passing over the convolutions and not dipping in between them. It thus forms a kind of bag or cavity. This cavity contains a fluid, the cerebro-spinal fluid, which acts as a soft cushion, moistening the surface of this cavity, preventing concussion of the brain, and to some extent regulating the amount of blood within the brain. For the spinal cord the cerebro-spinal fluid acts as a water-bed to prevent jars or blows.

The brain (fig. 1) is divided into the (A) *cerebrum* or great brain, which includes by far the largest part of the brain of man, and which comprises two equal halves, the cerebral hemispheres, the (B) *cerebellum* or little brain, which is in less well-marked halves, joined in front by the (C) *pons*, a bridge of nerve fibres. The brain continues into the *spinal cord* by means of a stem called the (D) *medulla oblongata*. From the spinal cord nerves—31 pairs—go all over the body.

The most important part of the cerebrum is the outside grey matter, or *cortex* or rind. It contains millions of nerve cells, each of which is provided with many interlacing processes called *dendrons*, and with one nerve filament, the *axis cylinder* which conveys nervous impulses, and which is the essential part of a nerve fibre—like an electric bell wire.

The cortex of each cerebrum (fig. 1), which is divided generally into four lobes—(a) the *frontal*, (b) *parietal*, (c) *occipital*, and (d) *temporo-sphenoidal*—is crinkled into folds or convolutions, as seen in the figure, and the greater the brain power of a man the more convoluted, it is surmised, is his brain cortex.

The cortex is the seat of *motor* areas, as shown on

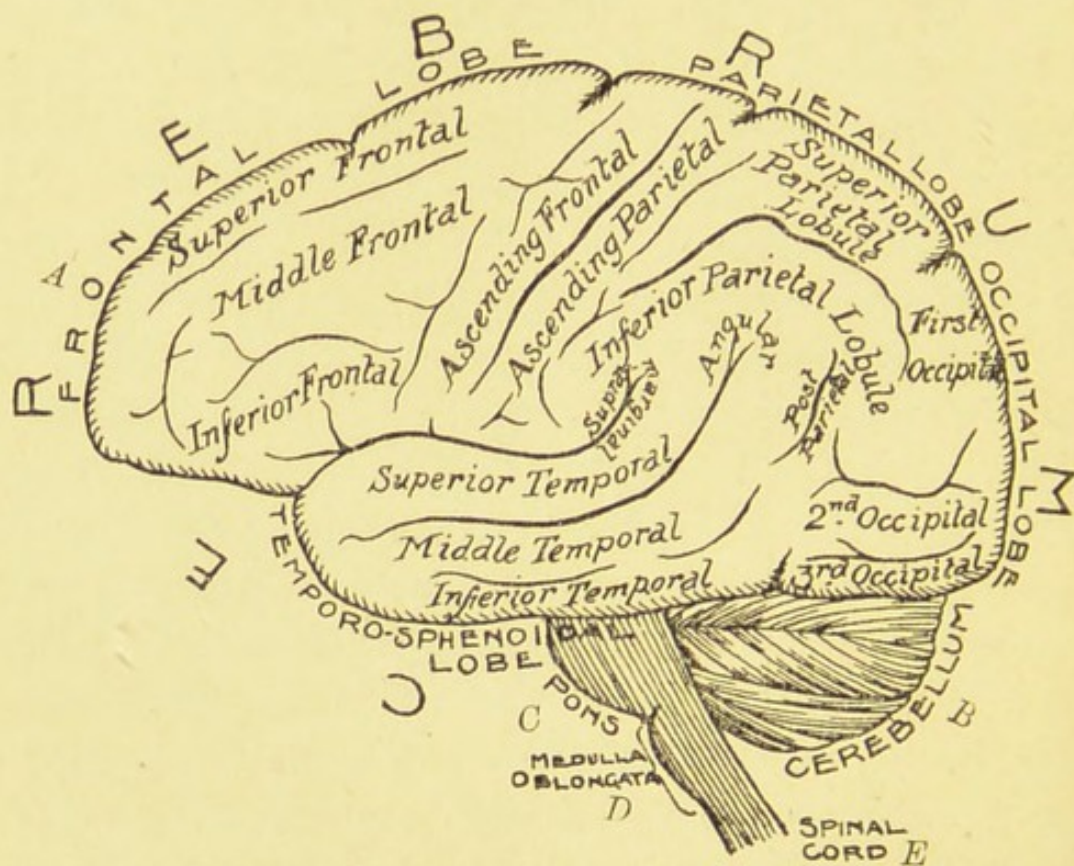


FIG. 1.—A, cerebrum; B, cerebellum; C, pons Varolii; D, medulla oblongata; E, spinal cord. The names are applied to the cerebral convolutions.

figs. 2 and 3, where the centres are marked for the head, arms, lower limbs, and the trunk. These motor areas or centres have been successfully mapped out in the brain of the monkey.

The cortex is also, probably, the seat of consciousness and of the different sensations (figs. 2 and 3), *i.e.*, auditory or hearing, visual or sight, olfactory or smell, tactile

or touch, whilst sensations arrive from the surface of the body. The cortex both receives and gives out nerv-

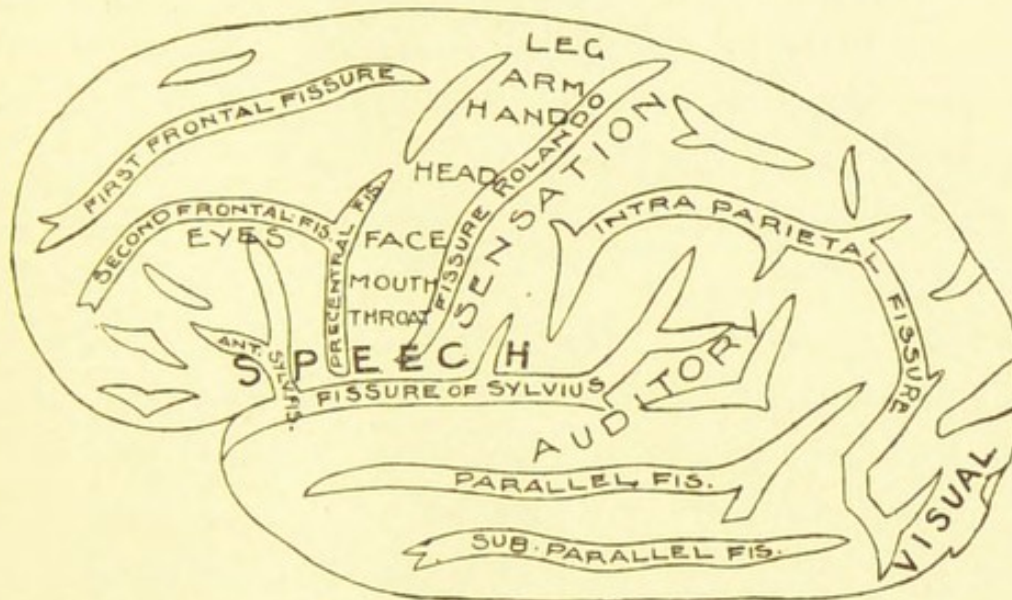


FIG. 2.—Outside view of one-half (left side) of a cerebral hemisphere, showing motor centres for the head, arms, legs, face, mouth, and eyes, one for speech, hearing or auditory, and sight.

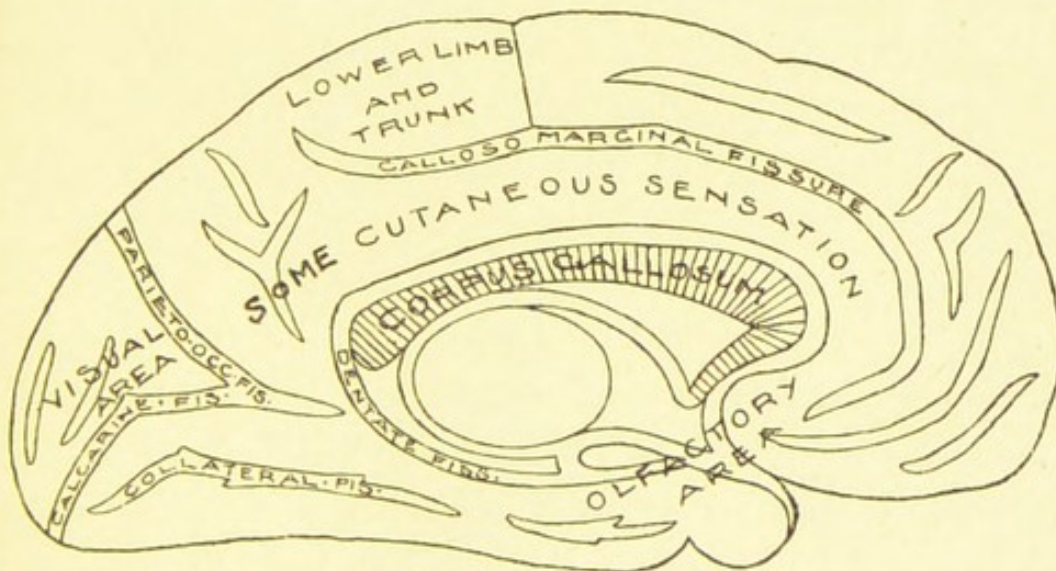


FIG. 3.—Inside view of same half (left side) of cerebrum, showing motor area for leg and trunk, as also those for sight, smell and touch, or visual, olfactory and cutaneous sensations.

ous impulses. Those travelling to the brain (such as, for instance, from the special sense organs, the eye, ear,

etc.) are called *afferent* impulses, which, as a consequence of changes set up in the nervous substance of the brain, proceed from thence to the muscles, glands, and other organs, as *efferent* or outgoing impulses.

Nerves carrying sensation to the brain are called *sensory* nerves as well as afferent, and those carrying outward impulses—efferent nerves—are also called motor, because their principal effect is to produce movement. When afferent impulses fail to give rise to sensation—such as when a child's foot is tickled during sleep, and it does not wake, but the foot moves responsively, the resulting movement is called a *reflex* action. Swallowing is a reflex action, the food stimulates the back of the throat and is swallowed without conscious effort. Walking may become a reflex action, when two persons walk together engrossed in conversation and unconscious of their paces. The action of the pupil of the eye is reflex, and highly acquired complex movements, such as when a person plays the piano and is at the same time more or less engrossed in conversation, may, for the time, be carried out reflexly and without rousing consciousness. If independent of *attention*, such actions are often spoken of as *automatic*.

The *sympathetic system* consists of small masses of nervous structure called *ganglia*, mostly on either side of each vertebra in the thorax and abdomen. These ganglia are connected with the other nerves, motor and sensory, already referred to. It is important to remember that efferent nerves from these ganglia proceed to the different organs in the chest and abdomen, and other nerves from the organs carry impulses to the ganglia and are afferent in their nature.

The average weight of the brain is about 48 ozs. (1,360 grammes) for men, and 43½ ozs. (1,230 grammes) for women, although some eminent men have had much heavier brains. The brain grows very quickly until the fifth year, then very slowly. After twenty growth is not perceptible. In proportion to the size of the body, man's brain is pre-eminent in complexity and weight. A whale, 70 feet long, has a brain weighing only 80 ozs., and an elephant's brain is only about 128 ozs.—only three times as large as a man's.

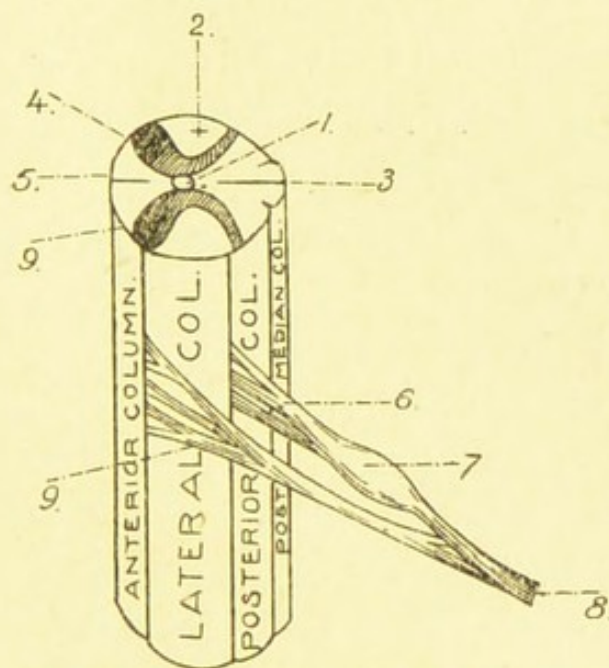


FIG. 4.—Spinal Cord. Side view plan of the Fissures and Columns. 1, central canal; 2, white matter; 3, posterior median fissure; 4, grey matter; 5, anterior median fissure; 6, posterior root; 7, posterior ganglion; 8, spinal nerve; 9, anterior root.

The Spinal Cord (fig. 4) is that part of the nervous system which lies in the spinal canal. It is thicker in the cervical (neck) and lumbar (loin) regions than in the dorsal, because in the thicker portions the great nerves to the arms and legs come out of the cord and thus enlarge it. The cord itself ends in a fine extremity, called the *filum terminale*, but at the lower end the pairs of nerves

already referred to as coming out between each vertebra travel down some distance in the spinal canal, forming a bundle of nerve fibres called the *cauda equina*, or horse-tail, owing to its appearance.

There is a slit, or fissure, in the middle line of the cord in front, all the way down, and another at the back, called respectively (fig. 4) the (5) *anterior* and (3) *posterior* median fissure. At the bottom of each fissure is a bridge of nervous tissue surrounding the (1) *central canal*.

Like the brain the spinal cord consists of grey and white matter, but—unlike the brain—the grey matter in the cord is inside, and the white matter outside. The latter is mostly nerve fibres, whereas the grey matter consists of nerve cells, as well as very fine fibres. The section, fig. 4, shows the two crescents of grey matter, back to back (4).

Each spinal nerve is connected with the cord by two roots, the (9) *anterior*, or motor, and the (6) *posterior*, or sensory root. Just before they unite the posterior root is enlarged into a swelling called the (7) *posterior root ganglion*. The (6) posterior root conveys sensory impulses to the cord and brain (*afferent*) and the (9) anterior conveys impulses (*motor*) from the cord to the muscles (*efferent*). Each spinal nerve is thus composed of both kinds of nerve fibres.

Besides *sensory* and *motor* fibres there are also *secretory* nerves to the various glands and *trophic* nerves, which control the growth and well-being of the parts of the body to which they are distributed.

This much seems necessary before we commence with the functions of the brain, and the disturbance of these functions such as occurs in disease.

Notes by the Nurse.

Notes by the Nurse.

CHAPTER II.

Brain controls the different Functions of the Body and is capable through the Nerves of modifying Nutrition—Different Stages in the process of Nutrition—The Blood, its Constituents—Especial value of white Blood-Corpuscles—The Lymph, how it Circulates and gets into the general Circulation.

It is presumed that those for whom these chapters are prepared have a satisfactory acquaintance with elementary anatomy, and we shall not describe in great detail the structure and relation of the organs connected with the nutrition of the body or the building up of its tissues, but shall refer mainly to the physiological processes involved, commencing with nutrition through the blood and lymph circulation, followed by respiration, digestion, and secretion. In regard to these activities a simple but an accurate knowledge is essential.

The brain is the "organ" of the body quite as much as it is the organ of the mind. It is through the nervous system that man feels and moves; eats, breathes and excretes his waste material; grows, develops and propagates his kind. The activities of the body have to be provided for by taking in raw material in the form of food, and this food has to be reduced into simpler and more soluble substances before it can be taken into the blood. There is thus a continuous assimilation, and a continuous destruction taking place simultaneously in the

human organism. This activity involves the production of heat, the regulation of the body temperature, and the liberation of energy which characterise life. This waste and repair is constantly going on, and the process by which living action is supported is termed *nutrition*. The conversion of raw substance into soluble and usable material proceeds through the aid of digestion. The products of digestion are taken into the blood and used by the cells of the body in the presence of oxygen, which is brought from the lungs into the blood and lymph streams and thus placed in contact with the cells. The waste material is carried away by the blood to the excretory organs, such as the lungs, which give out carbonic acid, the skin which yields perspiration, the kidneys which excrete or discharge the waste products of the urine, and the bowels which remove material unsuited in the office of nutrition. All these functions are under the control of the nervous system, and each or all of them may be affected in insanity. The term nutrition is thus applied (*a*) to the digestive processes which occur from the mouth to the alimentary canal; (*b*) to the taking up by the blood of these products of digestion; (*c*) to the distribution to the cells by means of the blood and lymph, of the nourishing material, and (*d*) to the building up of the cells of the living body into protoplasm, by means of these soluble materials. The nutrition of living tissues in man is effected through the *circulation of the blood*. A special term—*metabolism*—has been applied to define the complete series of changes which food undergoes to form protoplasm, and the decomposition of this protoplasm into more elementary waste products which are excreted.

The Blood, which forms 1-13th part of the weight of the body, is made up of solid *corpuscles*—white and red—floating in a fluid *plasma*. Blood is fluid in the living body, but when shed it clots into a jelly, the clot shrinks, so that when in a vessel the top part of the blood will be more fluid and transparent (serum) than the bottom (corpuscles and fibrin), for the corpuscles are heavier and fall down entangled in the fibrin. The fibrin has coagulated from the *fibrinogen*, which is fluid in the living blood, the coagulation being due to the breaking up of the white corpuscles. The *plasma* consists of water with salts and proteids (of which *fibrinogen* is one) in solution. When solidified, as occurs in drawn or shed blood, the liquid fibrinogen forms solid fibrin, and the clotting is due to this formation of fibrin. *Serum* is plasma without this fibrinogen. As stated, there are two kinds of corpuscles in the blood, the red, called *erythrocytes*, and the white, called *leucocytes*. There is only one white corpuscle to about 500 of the red. The red cells are essentially oxygen-carriers, and they carry oxygen owing to the presence in their structure of a complex fluid substance containing iron, called *hæmoglobin*. The oxygen is taken up by this substance to the lymph, which conveys it to the different cells in various parts of the body. When the red blood-corpuscles have parted with their oxygen, the hæmoglobin is thus *reduced* and the corpuscles must get fresh oxygen from the air of the lungs. The heart and the brain have been proved to use a larger quantity of oxygen than any other organ, and they can only take up the oxygen through the presence of blood. The colour of the blood depends upon the amount of oxygen held by the

hæmoglobin. When there is little oxygen, the colour of the blood is dark purple or venous; when fully charged with oxygen the colour is bright red or arterial. The red blood-corpuscles are formed within the marrow of spongy (cancellous) bone. They are constantly being destroyed after circulating for a time, and the red material in them is then changed into pigment which colours the bile, urine, etc. The red blood-corpuscles die in the spleen and the liver. The white blood-corpuscles or leucocytes are somewhat larger than the red. They are capable of independent movement, and they multiply in the blood by the division of each white cell into others, this being their usual mode of growth. They arise in the lymphatic glands and are the scavengers of the body. They can assume all kinds of shapes, and can slip through the walls of the smallest capillary blood-vessels into the lymph spaces and into the tissues. They eat up dead tissue in a wound, which is the way that the slough of a wound or bed-sore is separated from the living tissues. They clear off the dust and smoke breathed into the lungs of town-dwellers, carrying these sooty particles out of the air cells into the next lymphatic glands at the roots of the lungs, which are often seen to be quite black. They carry tattoo marks on the arms or hands into the glands of the armpit, and they also carry infection, such as that from the genital or other organs, into the glands of the groin, etc., which may break down and suppurate, leaving scars in consequence. It is the white cells that oppose the bacteria which invade the body, for these white blood-corpuscles devour the bacteria, and for this reason are occasionally called *phagocytes*. Leu-

cocytes differ in size and in substance, and varying functions are allotted to the different kinds, of which about five varieties are usually described. The condition and the number of the blood-corpuscles, both red and white, are important factors in regard to health. The sallow look of women suffering from the insanity of child-birth is probably due to blood changes induced by poisons absorbed into the blood. Blood changes occur in cases of general paralysis of the insane, for after congestive seizures, a definite nerve poison called *cholin* has been isolated and identified. The brittleness of the bones in the insane may also be due to blood changes brought about through disease of the nervous system. The conditions known as anæmia, leukæmia, and chlorosis need only to be mentioned as conditions caused by abnormalities in the blood-corpuscles.

The *lymph*, which is the fluid outside the capillaries, and which has really exuded from the blood-vessels into the tissues, forms a most important medium in the nourishment of the body. There are very few red corpuscles in the lymph, but many white, and a constant change goes on between the lymph in the lymph spaces and the blood in the capillaries. This change is very greatly influenced by the living cells which form the walls of the capillaries. If a poisonous insect sting the hand, lymph is immediately poured out around the wound and the white corpuscles battle with the poison, carrying it to the nearest lymphatic gland, which becomes enlarged and tender. If the poison passes through the gland it then enters the veins and circulation, causing infection and a general disturbance. The lymph

spaces surrounding the cells — which spaces are all connected into one great lymphatic system—end in fine tubes called *lymph capillaries*, and these unite into larger lymphatic vessels which follow the same course as the veins, having also valves like the veins. The lymphatics of both legs and of the abdomen collect together into a wide receiving vessel called the *receptaculum chyli*, which continues on into the angles of union of the veins of the left side of the neck and arm, whose lymph they also collect. The lymph of the alimentary canal is called *chyle*, and it is conveyed by the *lacteals* to the thoracic duct. Anatomically the *lacteals* are not different from the lymphatics, although two absorbent systems are described by some writers. In the chest this vessel is called the *thoracic duct*. The lymph from the right side of the head and neck and upper part of the trunk is collected by the *right lymphatic duct*, and opens separately into the right vein of the neck. The lymphatic glands are situated in the course of the lymphatic capillaries which join freely with the spaces of the glands, and into these spaces the white blood-corpuscles enter, and by this means get into the general circulation. The quantity of lymph in the lymph spaces is greater than the amount of blood in the body, and it circulates mostly by the movements of the body and the contraction of the muscles. The permeability of the capillary wall and the rate of the diffusion of lymph depends upon many things, such as warmth, which increases molecular movement and favours what is termed *osmosis*—the flow from one side of a membrane to another; pressure, moisture, and the passage of an electric current also tend to help molecules to pass through a membrane. This is probably one

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of the reasons why electric baths and the general application of electricity are so beneficial in the insane; electricity also stimulates the nervous system to increased *metabolism*. The fact that the tissue cells are bathed by lymph, and are separated from the blood by the capillary wall, shows that in all interchanges between the blood and tissues the lymph must act as the medium of communication, and it has been demonstrated that the giving up of diffusible nourishment by the blood to the tissues and the taking up of the waste products through the intermediation of the lymph is carried out in the same way as are the gaseous interchanges, *i.e.*, by *diffusion*. The giving up of the proteid food from the blood to the tissues is different, for this does not diffuse, but oozes and transudes to the cells from the blood with the lymph. Marked disturbances of nutrition occur in the insane; there is a great and rapid wasting, for instance, in acute mania and acute melancholia, whereas, in one stage of general paralysis of the insane, a great increase in the weight of the body takes place.

CHAPTER III.

Circulation of the Blood—Nerves of the Heart—Effect (through Vaso-motor Centre) of Nerves upon the Arteries—Pulse, Arterial and Venous Blood—Control of Hæmorrhage.

CIRCULATION of the Blood.—This is very greatly, indeed we may almost say completely, under the control of the nervous system, for through the brain the heart can be made to beat quickly or slowly, it can get relief from overstrain by the action of its own centre in the medulla oblongata, and each organ can thus obtain the blood it requires during activity, or when at rest. Two nerves called the *vagus* nerves—one on each side—run down the neck and supply the lungs, heart and stomach. They arise in a “centre” in the medulla oblongata which is quite close to another, the “vaso-motor centre,” to which we shall presently refer. The *vagus* nerves contain nerve fibres—the *inhibitory*—which cause the heart to beat slower when the needs of the body require it. From the sympathetic ganglia, mentioned in the first lecture, particularly those which are situated at the root of the neck, another set of nerves enters the heart and causes it to beat faster and stronger. These are called *acceleratory* or *augmentary* fibres. They arise in the medulla and run down in the spinal cord, emerging in the thoracic portion of the cord with the roots of the spinal nerves. In addition to these two kinds of *efferent*

nerve fibres to the heart, there arise also in the heart a series of *afferent* fibres which travel up the vagus nerves to the vaso-motor centre in the medulla. A stimulus passing from the heart along these fibres to this centre can cause the small arteries all over the body to dilate, and by thus lowering the blood pressure, the heart can expel the blood with less effort, so that when feeling strained it can get relief. We see now that the controlling of the circulation through the nervous system may occur in two ways, by a regulating action upon the heart itself—the central and chief organ of the circulation—and also upon the distant organs of the circulation, *viz.*, the blood-vessels. The fine nerves known as the vaso-motor, controlled by the centre in the medulla already referred to, end in a network over the arteries. There are two kinds of vaso-motor nerve fibres, called *vaso-dilator* and *vaso-constrictor*; the latter are always acting to keep up the tone of the blood-vessels, that is, to keep them always in a state of tonic contraction. They pass to the sympathetic ganglia, which lie on each side along the front of the vertebral column, and then out from these ganglia over the arteries. The *vaso-dilator* fibres run with the ordinary nerves (cranial and spinal), and from these are likewise distributed over the walls of the arteries. The vaso-motor centre in some way continually and constantly keeps the vaso-constrictor fibres acting, so that the brain, through the constriction of the small arteries of the body, is well supplied with blood. When the vaso-motor centre in the brain is destroyed the vaso-constrictor fibres are paralysed, all the small arteries of the body dilate, and there is scarcely any blood pressure in

the arteries. There are many mental conditions which affect or disturb the vaso-motor mechanism; blushing is an example of vaso-dilatation. Fear produces pallor and constriction of the blood-vessels. In epilepsy and general paralysis of the insane there is a disturbance of the vaso-motor apparatus.

The circulation of the blood takes under two minutes to complete a whole circuit of its course, although some of the blood—such as that in the middle of the tube of the blood-vessel—completes the circuit in twenty seconds, so that a blood-corpuscle is said to be able to pass over the whole circuit in that time. The blood flows faster in the narrower channels than in the large arteries, but as these divide and spread out into other smaller arteries and capillaries the flow is slower—the channel being wider. In the aorta the flow is at the rate of about fifteen inches in a second, in the capillaries it moves not more than about one-sixteenth of an inch—the size of a pin's head—in the same time, whereas in the large veins the blood moves about ten inches in a second. The united area of the capillaries arising from an artery is much greater than the contents of the artery they spring from, or the vein they collect into, hence the flow is slowest in the capillaries.

The pulse is the “wave” from the distension and the contraction of the artery caused by the expulsion of blood at each contraction of the heart. This wave travels much more rapidly than the blood; it is estimated to be eighteen times as fast. The contraction of the heart is called *systole*; the period of rest or pause during which the heart is refilling is called the *diastole*. The heart alternately works and rests. The pulse in-

dicates whether the heart-beat is strong or weak, regular or irregular, frequent or infrequent, and it thus forms an important guide to the condition of the heart. The pulse normally beats about seventy to eighty times a minute. In the new-born child the beats are about 120 to 140 a minute, this rate gradually diminishes up to the thirtieth year of age, and then rises somewhat slightly again in old age. The heart, we know, is completely divided into two halves by a muscular partition, and there is no communication between these except in a roundabout way through the lungs. The cavities of the heart are four, each side being divided into two—a receiving and a discharging cavity. The auricles receive and the ventricles discharge the blood. These cavities are separated from each other by openings guarded by valves, the *tricuspid* on the right side and the *mitral* on the left, and there are also valves, called *semi-lunar*, separating the ventricles from the arteries—the pulmonary artery and aorta—which convey the blood from the ventricles to the lungs and the body. When these valves are diseased very serious and definite symptoms are produced. The blood makes two circular tours, one through the body generally and the other through the lungs. The size of the auricles when at rest is a little smaller than the ventricles, but when fully distended—and they are more elastic than the ventricles—the cavities of both are about equal. The left ventricle having to drive the pure aerated blood over the body, has three times as much work to do as the right, which only drives the blood through the lungs. The pressure used by the left ventricle to drive the blood would raise a column of water to a height of

five feet, and at each contraction about three ounces of blood are driven out of the ventricles. The two ventricles fill together and empty together in a perfect rhythm, working day and night, contracting and resting alternately, and in this way keeping up the circulation of the blood. The arteries and the veins are the conducting tubes, the capillaries are the distributing apparatus, and where the greatest activity prevails there the capillary network is most developed, as in the brain, the muscles, and the glands. The movements of the heart are quickened by heat, by muscular action during exercise or excitement, such as that of mania, also under the influences of fear or other painful emotions. The rate of the pulse is slower in some mental states, such as that of melancholia, and in the condition described as stuporose insanity.

If serious damage or injury is done to any part of the body the circulation will cease therein, because an alteration has taken place in the capillary wall, and the corpuscles will stick to it, thus impeding the flow of blood. When the circulation stops in this part, the tissue dies, and can only be removed through the action of the white corpuscles, which, as stated, ooze through and creep in from the capillaries of some neighbouring parts. The circulation can be stopped artificially, as by tying something tight round a limb. This is how hæmorrhage is stopped in a severed artery, pressure being applied above the wound, that is, nearer to the heart. The blood flows in jerks from a wounded artery. If hæmorrhage occur from a wounded vein the flow is steady. The blood in the veins circulates mainly by the contractions of the heart, in part also by muscular

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CHAPTER IV.

Oxygen necessary for Life—Respiration—How Hæmoglobin purifies the Blood by acting as a carrier of Oxygen—Digestion: effect of the various Juices upon Food.

OXYGEN is a necessity of life. It must be supplied to protoplasm in order that the energy we call life may continue. Oxygen is supplied to the tissues through the circulation of the blood and by means of the oxygen-carriers in the blood, *viz.*, the red corpuscles. The blood not only carries oxygen and food to the cells of the different tissues, but it also removes the waste products of cell life, such as carbon dioxide, urea, and other salts.

Respiration.—The act of respiration is very distinctly under the control of the nervous system, more especially that portion of it called the medulla oblongata, in which lies the respiratory centre, close in situation to the vaso-motor and the cardio-inhibitory centre. The word “centre” merely means a special collection of nerve cells with their fibres, situated in any portion of the nervous system and governing certain definite functions. When the respiratory centre is destroyed respiration ceases. This centre acts in a rhythmic manner. It is excited by afferent stimuli from the lungs through the vagus nerves—the chief stimulus being the expansion of the lungs in

inspiration and their collapse in expiration, and efferent messages are taken down the phrenic nerves (which supply the diaphragm) and the inter-costal nerves supplying other muscles. Respiration can be quickened directly by variations of the blood supply to the respiratory centre. If the blood supply be deficient respiration is more frequent and deeper. Respiration becomes laboured when the pressure of the air is about four times that of the atmosphere, and also when it is reduced to about one-third that of the atmosphere; also, when the oxygen falls to about 7 per cent. in place of the 21 per cent. in the atmosphere, or when the carbonic acid limit reaches 15 to 20 per cent., even though the oxygen is plentiful. The closeness of crowded rooms is due to an accumulation of carbon dioxide, as also to the diminution of oxygen, hence the necessity of free ventilation and free access of light and air, to which we shall refer later. The act of respiration consists in inspiration and expiration, and the normal rate is about 15 to 18 times a minute, although this rate is subject to many fluctuations, caused by the time of day, season of the year, the weather, occupation, the state of the emotions, attention, and muscular effort—all of which influence respiration, either accelerating or retarding it. Each time that air is drawn into the lungs about one pint enters, and an equal amount is expired. This is called *tidal* air. With the deepest forced inspiration probably about three pints more enter. This is called *complemental* air. After ordinary expiration, which expels the tidal air, a certain quantity remains in the lungs, which may be expelled by a forcible and deep expiration. This is called the *reserve* or *supplemental*

air. When forced expiration takes place after the deepest possible inspiration about eight pints of air are breathed, *viz.*, the combined tidal, complementary, and supplemental air. The total quantity of this air is called the *vital capacity* of the chest, and machines are often seen at shows and fairs which register this. After the deepest expiration some amount is still left in the lungs, this is the *residual* air. During natural, quiet respiration there remain about five pints of impure air within the chest. This mingles, by diffusion, with one pint of pure air, inspired into the lungs, to which we have already referred. Thus we see that only a small proportion of the air within the lungs is changed at each complete act of respiration. The secretion from the air passages is just sufficient to keep the mucus surface moist. The bronchial tubes, the larynx, and nasal cavities are all lined with wavy moving cells so as to get rid of the secretion, and in certain states of ill-health the quantity and disposal of this secretion—which when in excess is called *expectoration*—may become a serious matter. At each expiration a certain quantity of carbon dioxide and water are got rid of, and it is also warmer, which makes the difference between inspired and expired air. The result of respiration upon the body is that arterial blood, by the aid of hæmoglobin in the red blood-corpuscles, is able to take up oxygen, with which it parts through the lymph to the protoplasm of the tissue cells, which is always most ready to combine chemically with the oxygen. The reduced hæmoglobin takes up fresh oxygen from the air and again becomes oxy-hæmoglobin. This takes place in the air cells of the lungs, the oxygen of inspired air passing—by dif-

fusion—through the walls of the air cells and the capillaries direct into the blood, and being thus picked up by the reduced hæmoglobin. The carbon dioxide formed and set free in the tissues passes from them by diffusion to the lymph, then through the walls of the capillaries and into the blood, where the sodium salts of the plasma readily combine with it. It reaches the lungs, where it is at a higher pressure in the blood than the carbonic acid of the inspired air in the lungs, and by *osmosis* passes through the capillary walls and diffuses with the air contained in the lungs, being again expelled at each expiration. The total area of the air spaces in the two lungs, if laid out flat, would be larger than the area of a “single room”—about 100 square feet, the floor area of a “single room” being 63 square feet. The chief seat of combustion and the formation of carbon dioxide is in the muscles. When at work the muscles take up more oxygen and give out more carbon dioxide than when at rest, and in cases of acute mania the respirations are often quickened, and fresh air and free ventilation become very necessary. When at rest less oxygen is used, and respiration in cases of melancholia or stuporose insanity becomes retarded. When respiration ceases, death occurs, for the prolonged absence of oxygen is incompatible with life.

Digestion.—The whole process of digestion from the mouth to the large intestine is under the control of the nervous system. The food is ground in the mouth by the teeth and there mixed with saliva from three pairs of glands, sublingual, parotid, and submaxillary. The saliva owes its chemical action to the presence of an unorganised ferment or an *enzyme* called *ptyalin*, and its

property or influence is *amylolytic*, that is, it converts the starchy food, such as bread, potatoes, rice, or grain, into soluble sugar, which is then absorbed. The time the food is kept in the mouth during mastication is not sufficiently long for the saliva to act chemically upon the starchy constituents. The ptyalin of the saliva can only act in an alkaline medium, so in the stomach the process of starch digestion is suspended, and it is only when the food gets from the stomach into the small intestine that the ptyalin begins to act again, and this it does in conjunction with the pancreatic secretion. Whilst in the stomach the food is acted upon by the *gastric juice*, which also has its ferment or enzyme termed *pepsin*. This pepsin, at the body temperature, acts upon all proteids such as the white of egg, cheese, casein of milk or meat foods, converting these into soluble *peptones*, which are then absorbed. The movements of the stomach are constant for three or four hours during the time digestion is going on, and these movements help to churn the food and to bring every part of it into relation or connection with the gastric juice and its enzyme. After some hours the contents of the stomach—now called *chyme*—are discharged into the small intestine, there to mix with the *bile* secreted by the liver and the *pancreatic juice* secreted by the pancreas. The latter has two kinds of ferments, one *amylolytic*, like the ptyalin of saliva, which together complete the process started in the mouth, and the other *proteolytic*, called *trypsin*, which is similar in action to the gastric juice with its pepsin. Trypsin acts upon the proteid matter, but it can only act in an alkaline medium, and the contents of the stomach are acid. To render these alkaline

the pancreatic juice has a third quality, *viz.*, its alkalinity, which, together with the same quality of the bile, enable the ferments named to act in an alkaline medium. It is owing to the alkalinity of the pancreatic juice and bile that both of these are enabled to act upon fats, which are emulsified or saponified. The food by this time is rendered into a state whereby the *lacteals* of the *villi*—the villi being very fine projections of mucous membrane within the small intestine, and which are composed mainly of blood-vessels and lymph-vessels—can take up the emulsified fats and pass them on through the lymph-vessels to the lymph system in the intestines and then into the *receptaculum chyli*, from which they discharge into the venous circulation. The *blood-vessels* of the intestine take up all the food which has been rendered soluble by means of the ferments, in contradistinction to the lacteals, which only take up saponified fats. The soluble food, such as the sugars and the peptones, which are taken up by the blood-vessels do not enter the circulation at once, but they are collected together into a large vessel, the *portal vein*, and then carried to the liver, where the portal vein once more breaks up into capillaries. The foods to some extent are stored up by the liver as *glycogen*, the liver allows the remainder to pass through into the lungs and into the general circulation. The glands of the small intestine, which are here only just referred to, also produce a secretion containing a ferment, which, however, is not proved to be of much importance in the process of digestion. In addition to these glands there are in the body a number of other *ductless glands*—*viz.*, the thyroid, the parathyroids, thymus, and suprarenals—

which need not be studied by nurses, although they may have important functions. They are probably capable of marked reaction in the human organism, but little is at present definitely known concerning them.

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CHAPTER V.

Excretion by the Kidneys: their Structure; the Urine; attention necessary in Mental Cases—The Skin: Structure; Functions.

REFERENCE has been made to the balance between repair and waste, to the continuous assimilation and destruction which proceed—so to speak—simultaneously in the human organism, the processes being attended by the liberation of energy and the production of heat. We have already dealt with “nutrition,” *i.e.*, the building up of protoplasm, through the agency of the physiological processes of absorption, digestion, and respiration. These functions constitute one-half of metabolism, the other half being concerned with the excretion of useless and waste material not required in the process of growth. In addition to the lungs, as organs of excretion for the discharge of carbon dioxide (carbonic acid gas) and aqueous vapour, there are also the kidneys and the skin. All three organs eliminate a certain amount of water with various salts in solution. While the lungs expire and the skin exudes, the kidneys excrete noxious waste material. The kidneys, consisting of long, coiled tubes which are lined with cells, perform a double function. They act in part as filters, in part also as secretory organs for urea—the great waste product of the tissues—and mineral salts which are

yielded direct from the blood. Thus the kidneys perform a physical as well as a physiological office. Moreover, it has been proved that they control the waste of the tissues, besides excreting the urea. The blood from the renal arteries, which are very large, flows into the capillaries, these terminate in the outer part, or cortex of the kidney in exceedingly small clusters called *glomeruli*, so that each glomerulus has a little artery, a loop of capillaries and a little vein, but after the vein emerges it breaks up again into a further set of capillaries round the convoluted tubes. These tangled knobs of blood-vessels in the glomeruli are pushed up against the end of a tubule which then stretches over it like a little cap, hence called a *capsule*, and as the pressure of the blood is greater in the capillaries than it is within the capsule of the kidney tube, an oozing or filtration takes place, and the watery constituents of the blood, with certain soluble salts, pass through the renal tubules into the pelvis of the kidney and thence along the ureter to the bladder—where they are accumulated as urine until voided.

The tubules of the kidney are exceedingly fine thread-like pipes, and their course through the kidney itself is peculiar. Beginning round the glomeruli in the cortex or outer part—seen to be dark brown by the naked eye—where they coil and twist, they run down the medulla or striated inner portion of the kidney, then turn back to the cortex—where they are surrounded by the capillaries from the dividing little veins of the glomerulus already mentioned—here again they loop and come straight down the medulla into the pelvis of the kidney. These tubes in their course have two kinds of epithelial

cells lining their walls. Those round the glomeruli (formed, as stated, of a cluster of capillaries) are flat, and they act as filters. The other cells lining the tubes lower down are spherical or cubical in shape. It is these that especially secrete the urea and other substances from the blood. The cells of the kidneys do not manufacture urea from the blood. This has already been done by the liver cells from the ammonia salts which are given out into the blood by the muscles and other protoplasmic tissues. Urea exists in the blood (although in very small quantities) before it circulates in the kidneys, and is collected by the cells of the kidneys, which pick it out, so to speak, as the blood circulates in them, for urea can accumulate in the blood after both kidneys are removed. It is not filtered or diffused through these cells. Urine contains a hundred times more urea than the same volume of normal blood. In disease of the kidneys these cubical cells do not act efficiently, and blood, albumen, bile, or sugar may in consequence pass into the urine.

The quantity of urine secreted varies much. In winter the vaso-motor nerves cause the vessels of the skin to contract, preventing loss of heat, and the blood from the surface of the body flows in consequence into the interior of the body, and the kidneys, owing to this greater blood flow, secrete more freely. In summer, on the contrary, the kidneys are less active, but the skin more so. The drinking of fluids causes more secretion from the kidneys, for it increases the flow of blood through them. Certain medicines when absorbed into the blood excite the cells of the tubules to secrete; these are called *diuretics*. Other medicines may act on the

heart or the blood-vessels, raising the pressure within them and so promoting an increased flow of urine.

When the blood stops for a long time in the veins and the circulation is retarded—as occurs in disease of the heart—the water and soluble proteids of the blood ooze out or filter from the capillaries into the tissues, causing dropsy. When this occurs measures are taken to get the skin to act more freely and to compensate for the deficiency in the kidneys.

When the urine reaches the bladder it accumulates there until this receptacle is full. The distended bladder in sane persons excites the nervous system to put into action a certain mechanism by means of which the urine is voided. The sensory nerves in the wall of the bladder are stimulated into action by the distension; this stimulus is carried up by the afferent nerves to a spinal reflex centre in the spinal cord from which an efferent impulse is dispatched along other nerve fibres causing the sphincter muscle of the bladder to relax and the muscular wall to contract, when the urine is expelled and the bladder emptied. This sensation extends to the brain in healthy persons and is under the control of the will. When certain great tracts of nerve fibres are destroyed through disease of the spinal cord, or when the mind is affected through disease of the brain, the person loses control over the sphincters of the bowel and the bladder, and these organs void their contents upon unfitting occasions and without rousing consciousness. Patients thus afflicted should never be reproved for what they cannot prevent. It is a symptom of deficient nervous control, and care should be taken that they are properly attended to so often as

occasion for this occurs. Care should be taken that the voiding of urine—the “dribbling” as it is called—is not the effect of over-distension of the bladder. The bladder is sensitive to the smallest accumulation of urine in healthy persons, but in cases of general paralysis of the insane and the dementia resulting from epilepsy, as also in cases of profound melancholia, the senses become so blunted that the patient is unaware of the accumulation, or if aware may not have the intelligence to set the nervous mechanism into action to expel the contents. Serious and fatal consequences may take place, and indeed have taken place, in patients thus affected, through rupture of the bladder. In many mental cases the nurse has to be most alert and attentive to change patients wetting their bed or body linen, more especially in helpless, bed-ridden, feeble, terminal cases of insanity. Melancholy and demented patients should be raised at fixed intervals during the night. It is well to encourage mental patients, who are not too feeble, to void urine at stated intervals, *e.g.*, upon rising in the morning, after each meal, and at bed-time, as it is by repeated attention to habits of body that self-neglectful patients may be roused to decency and self-respect. Such attention not infrequently starts regular habits or processes of thought which serve as motives for conduct, and such attention becomes an important part of a nurse’s duty when nursing mental cases. Care to keep such patients clean prolongs their lives, and when bed-ridden, care in this direction prevents the formation of bed-sores, and, in consequence, death from blood-poisoning, through the invasion of bacteria acting upon the sodden and broken skin. The nurse should never

attempt to draw off urine from a male patient, but she is expected to use the catheter in those of her own sex.

The Skin, another important secretory organ, is developed morphologically from the same layer of embryonic tissue whence also the brain grows. Every portion of the skin is represented centrally in the brain. The skin has an upper or superficial layer of *epidermis* or cuticle, and an inner one, the *dermis* or true skin. The outer, which is bloodless, is subdivided into the scaly, hard, horny or *corneous* dead cell layer, and the inner, the *Malpighian*, which, owing to the deposit in it of pigment or colour, gives the blackness to the skin of the negro. The dermis is ridged into folds, contains blood-vessels (capillaries) which make it extremely vascular. It is from these capillaries that lymph exudes to nourish the soft under-surface of the epidermis, and it is owing to exudation from damaged capillaries that blisters occur after burns, injuries, and through nervous influences such as occur in the last stages of general paralysis. The dermis is the seat of the nerve endings or *touch-corpuses*, which give the power to estimate sensations of touch, *e.g.*, rough or smooth, hard or soft, sharp or blunt, and heat and cold. Beneath the dermis is a layer of fat, which acts in part as a soft cushion, and in part also as a non-conductor to prevent the loss of heat. Underneath the fat are the muscles encased in connective tissue-sheaths. The dermis is thick on the back and shoulders to adapt it for carrying burdens, but on the tips of the fingers it is very thin. The skin bears hairs in the hair follicles, and nails on the digits; and all of these may reflect special conditions of the nervous system.

The hair may turn white suddenly, or gradually, or may be shed through emotions of fear, grief, or other nervous influences. It is asserted by some that partial and even complete baldness occurs less through nervous influences than from the invasion of the hair follicles by hurtful parasitic bacteria. Each hair has a small secreting gland (the *sebaceous*) which pours into the follicle an artificial pomade to keep the hair-shaft smooth and glossy. Each hair has (markedly in some animals) a small muscle fibre (the *pilo-motor*) attached to the follicle, which enables such animals to raise the hair erect under the influence of emotion. This feature may occasionally be noticed in man. The other glands of the skin are the sweat glands (*sudoriporous*). They open by the so-called "pores" of the skin in the intervals between the little ridges of the epidermis; and in the palm of the hand there are no less than 3,000 of these in every square inch of skin. It is calculated that in every person there are about 2,000,000 of these glands, and that their tubes would extend to a distance of ten miles if placed end to end. The ridges referred to have a peculiar appearance on the pulp of the finger tips, being arranged in concentric whorls which never change their form, and which has enabled them to be used as a safe and reliable method for the identification of criminals. The secretion of the sudoriporous glands is the perspiration. It is chiefly water and common salt, with traces only of some other bodies. There is a deterioration in the secretions of the skin in insanity, which is made evident to the sense of smell, although the patient be well bathed and cleansed with soap and water. Carbon dioxide likewise occurs in the perspira-

tion as it also occurs in the urine, saliva, and bile. It is estimated that one-fiftieth part of the total carbon dioxide excreted is discharged by the skin. The skin can allow of the passage of water (and also of some salts) from without, inwards into the blood, but the quantity is exceedingly small unless the epidermis is removed, for sailors immersed in salt water may die of thirst, and we are able to handle poisons freely if the skin is unbroken. The perspiration is secreted continuously and passes unconsciously by evaporation from the "pores" into the air. This is called *insensible* perspiration, and normally in adults it amounts to about one pint per day. In hot weather the perspiration is poured out faster than it can evaporate, and it collects and runs down the skin as *sensible* perspiration. The total quantity of the perspiration varies inversely with the amount of urine secreted. In hot days when muscular activity produces increased heat, the skin is flushed with blood and the perspiration is greater, whereas the renal secretion is scanty. The circulation and amount of blood in the skin are controlled by the vaso-motor nerves through the vaso-motor centre under the influence of nervous excitation, and instances of these have already been given in the blushing of the face and in its pallor under emotions, whereas the secretion of perspiration, on the other hand, is controlled by a special nervous apparatus of its own; the secretion being stimulated by changes in the quality and temperature of the blood, or by sensations of heat and cold, which are carried to the central nervous system through a set of afferent fibres, returning as impulses to secretion through another set of effer-

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ent fibres. It is thus seen how important a structure the skin is, and how necessary it is to understand the treatment of nervous, mental, and other diseases by massage, electricity, and hydrotherapy when applied through the skin.

CHAPTER VI.

Sources of Body Heat ; its Control ; Foods, their Varieties and Digestibility.

THE Heat of the Body.—However cold the outside temperature may be, and whether man lives within the frigid zone or in the tropics, the human temperature does not vary. It is always in health 98.4° . There is an accurate balance kept between the gain of heat to the body and its loss from the body. When the gain to the body through the assimilation of food is balanced by the waste material excreted, the equilibrium of the body heat is maintained. The sources of heat to the body are physical and chemical—the resolution of energy into heat affording an example of the former, and oxidation of the latter. Heat is produced by the process of oxidation which goes on in every living tissue, especially in the muscles, which, when contracting, cause a chemical decomposition—a breaking down of complex chemical tissues and the formation of simpler waste bodies, such as carbon dioxide and water. The energy resulting from muscular contraction appears as the heat of the body. It is probable that there is no “thermic” or heat centre, and no special heat nerves.

The liver is a great producer of heat, for the proteids brought into it are broken down into urea and glycogen ;

the latter is deposited in the liver, but in certain diseases, or through the action of the nervous system, it can be specially called upon for use.

The heart also in its contractions produces heat, as well as driving the blood over the body.

In cold weather heat production is increased. There is increased muscular activity, and the vessels in the skin can be controlled by the vaso-motor nerves to contract and to diminish heat loss. Also there is less secretion of perspiration with reduced evaporation, and thus less cooling in consequence. To prevent loss of heat, use is made of the fact that dry air is a bad conductor of heat, and layers of clothes are worn to ensure the presence of layers of air. Clothes which entangle the air in meshes, such as flannels, are thus warmer than closely woven linen. Damp air is an excellent conductor of heat, and it is in this way that damp air or wet or moisture is so injurious; for the heat of the body is insensibly carried away, and the temperature unduly cooled. Dry heat or dry cold is healthy and stimulating and invigorating; but it is the reverse with moisture, as any one knows who has experienced the effect of damp days in summer or winter. Some of the heat of the body is lost in warming the clothing, and it is thus conducted away (*conduction*). The air, especially when wet, takes some heat and the rest is radiated from the body also into the air (*radiation*).

Of the total heat of the body at any one time, one-third is used to raise the temperature of the food, air and drink, taken into the body or lungs. Five-sixths of the effect of food is used in maintaining the temperature or the heat of the body, and one-sixth to produce energy.

Fat food is calculated to be just twice as valuable for producing heat as proteids or starchy foods called carbohydrates. It is thus that fat is easier and better taken in cold weather. It is not known how the excess of proteid or meat food is stored up in the system—other than being incorporated in the living tissues.

As to supplying the energy and heat of the body, something definite should be known by the nurse in respect of the amount and varieties of food. The anatomical structure of man adapts him to select his food from both the animal and vegetable kingdoms. His teeth and the whole alimentary canal—the stomach and the intestines—are constructed for a mixed dietary; and the following divisions into five categories sums up the classification of foods, without one or the other of which, for any lengthened period, ill-health results.

1. *Water*, which enters more or less into the composition of every kind of food, is a daily requirement. The average quantity necessary for a healthy full-grown adult is estimated to be about three pints.

2. *Fats*, such as are contained in butter and the cream of milk, meat fat, suet and lard. All these are of about equal nutritive value. It is stated that tuberculosis and typhoid fever may be transmitted through butter, and some recommend the process of clarification by boiling, in order to destroy any possible disease-germs. Vegetable fats, such as olive oil and the oil from poppy-seeds and nuts, are quite equal to animal fats in food value. I am of opinion—but I do not know how far this is shared by others—that the general dietary of the insane needs more fat than does that of the sane, and I am

in the habit of supplementing this with cod-liver oil or dripping, and often with much advantage.

3. *Starches* and *Sugar*, as existing in potatoes, rice, fruit, beetroot and cereals generally, are of good food value, especially when the starch of grain is used as porridge, and taken with milk. The nutritive value of fruit depends mainly upon the amount of sugar contained, but nuts, almonds, chestnuts and other proteid and fat-containing seed are also of great nutritive value.

4. *Albuminous* or *Nitrogenous* foods, or proteids, which all contain the elements of carbon, hydrogen, oxygen and nitrogen, with some sulphur and phosphorus, constitute the greater part of such foods as lean meat, white of egg, the casein of cheese or milk (which also contains some fat). The gluten of flour and oatmeal are also examples of proteid foods. The nutritive value of cheese has been estimated to be two or three times as much as meat. Of vegetables—peas, beans and lentils contain the greatest amount of proteid or albuminous material, and potatoes the least; they are, however, the cheapest form in which starch can be obtained, but they require fat and proteid to form a good sustaining meal. The legumes—peas and beans—are of great nutritive value when taken with fat, as in the country meals of “beans and bacon”.

5. *Salts* of various kinds, such as common table-salt, lime, phosphates, potash and magnesia, also enter into the composition of food, being required in the formation of the blood and tissues. Green vegetables are not of any great nutritive value, but they are wholesome in so far as they are convenient vehicles for conveying salts. The want of these is the cause of scurvy. In the last

stages of general paralysis of the insane the food must always be finely minced; and not only must the meat be minced, but also the potatoes and green vegetables. The latter are a very necessary ingredient in the dietary of those patients ordered to be on "soft" food or "slops". Food varies much in the relative portion of the different ingredients enumerated. Milk alone contains some of all of them. It is an ideal food for the insane, who often refuse nourishment owing to delusions of poisoning. Cases of insanity in adolescents can take milk in large quantities. I have had a young patient taking ten pints of milk per day. Milk is richer in summer than in winter, in the evening than in the morning, and that last drawn is more creamy than the first. Skimmed milk is a very good cheap food, but the poor have a prejudice against it. Buttermilk—that which is left after churning the whole milk and separating the butter—is also an excellent food, the casein having been well divided. Buttermilk is more digestible than skimmed milk. Milk is objected to on the ground that it forms a good nutritive medium for the growth of germs, and it may readily be contaminated and give rise to typhoid, scarlet or typhus fever, and cholera. When not cleanly kept, from a bacteriological point of view, it causes diarrhoea, especially in children. For this reason such germs as cause the diseases mentioned, as also probably the bacillus tuberculosis, should be destroyed by sterilising—*i.e.*, using milk only when boiled or raised to a temperature above the boiling-point in a specially adapted steriliser.

Meat when boiled gives up to form broth most of its salts and extractives, but it still contains the pro-

teids, and has suffered no appreciable loss as a nutritive agent. On the other hand, the broth and also the meat extract have little nutritive effect, but they have a great value as a stimulant. Roast meat, and meat which has been smoked, pickled, or tinned, contain all the nutritive elements, and when made aromatic form important accessories to food, stimulating the mucous membrane to increased secretion; but there is danger from tinned foods, as the food may be improperly selected, in consequence of which the protoplasm of the meat undergoes chemical change, resulting in the production of poisonous animal alkaloids, called *ptomaines*, which are similar in chemical composition to the poisonous vegetable alkaloids, such as aconitia, strychnine, morphine, and others. Almost all kinds of tinned meats are preserved by the addition of chemicals, such as formal, boric and salicylic acids; and it is well known that salicylic acid is closely allied in its chemistry to carbolic acid, which is an active and powerful poison when undiluted.

A great factor to the individual in the nutritive value of the different meats is their digestibility. Some persons are unable to retain or assimilate pork, veal, rabbit, or other meats, and a further important consideration is the mode of preparation. Danger to health may arise from meat when it is undercooked, for the *trichinæ* in pork and the *larvæ* of tapeworms in beef may develop in the human intestine, with serious results. Animals may also be tubercular—that is, their flesh may contain the bacillus of “consumption”; but the supervision and official inspection by medical officers of health, under public control, ensures some protec-

tion, and disease through the medium of meat, when properly cooked, need cause no alarm. The special parts of animals, such as the liver, pancreas (popularly known as the "sweetbread"), and the kidneys are not of such nutritive value as the fleshy or muscular part, but they are often enjoyed by the sick as delicacies. Fish is of nearly equal value with the flesh of animals as a food, and is much appreciated as a change of dietary by sick persons. Care should be exercised in respect of shellfish, as cases of typhoid fever have been traced to oysters, mussels, cockles, and other varieties through contamination of the water of rivers or estuaries in which they grow, with sewage, or even the water in which they are kept in shops pending their disposal.

Eggs, when soft boiled, constitute an easily digestible food, and the white, which forms two-thirds of the egg, is chiefly water, but it contains albumen and another proteid called globulin which are very nourishing. The remaining one-third—the yolk—contains double the amount of albumen and also a fourth of its volume is fat. When beaten up with milk an egg forms an excellent food; but, for invalids reduced through alvine discharges and with a low vitality and feeble digestion, albumen water (made by mixing the white of an egg with water, and sweetened) is greatly appreciated as a food and beverage. The white of an egg, when boiled, becomes hard, and forms an impenetrable barrier to the action of the gastric juice—hence its indigestibility.

Certain articles used with food, such as tea and coffee, can only be regarded as stimulants; and these, together with alcohol, often cause widespread harm when taken too frequently and in too great quantities.

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Much could be said upon the question of stimulants and luxuries; but with regard to alcohol, it is so subtle and overpowering in its influence, and it is so easy to use it immoderately, and it is moreover of so low and indirect a nutritive value, that it has no claim to be considered as a food. It is further much adulterated by the addition of noxious substances and its effects are so insidious, evil, and destructive to all the organs of the body, that catarrh of the stomach, fibrous growth in the liver, and degeneration of the brain follow its use. For mental cases it should therefore never be encouraged as a beverage. It should be used by such persons solely as a drug, and only under medical advice.

CHAPTER VII.

The Brain as the Organ of Mind—Mind and Matter inter-related—Disorder of Mind caused by Material Disorder—Study of Mind by Observation of the growth of Mind in Children, in Animals, and in those Mentally Deranged—Mind of Man depends on what comes into the Brain from the various Senses—Tendency of all Sensation to go out into Muscular Action—Actions Pleasurable or Painful—Mental Reaction depends on Memory, Association of Ideas, Assimilation and Apperception—Mental Processes controlled by Higher Power called “Inhibition”—Illusions from without, Hallucinations from within, both relate to the Senses—Delusion a Mental Process—Motives lead to Actions—Ideas or Abstract Thoughts act as Motives—Sleep—Dreams—Somnambulism—Affections of Brain accompanied by suspension of Ideas.

ESSENTIALLY the brain of man is the “organ” of his mind. How mind and matter are inter-related is not at all clear, and it is customary to describe the relationship as a parallelism—material action on the one hand, and mental action on the other. The brain does not secrete mind as the liver does bile; and mind, so far as we know, is non-existent without matter. Consciousness or mind in man depends upon a proper flow of healthy blood into the brain. If this be interfered with—as, for instance, by pressure upon the two carotid arteries in the neck, which suddenly diminishes the blood supply to the brain—unconsciousness may result. When a person faints through loss of tone in the blood-vessels, or from sudden failure of the heart, unconsciousness

results from an interference with the blood supply. The same may result from a violent blow on the head, which brings about a disarrangement of the delicate structure of the brain. Certain drugs, such as opium, chloroform, alcohol, etc., may alter the quality of the blood circulating in the brain and produce unconsciousness. Disorder of the brain through disease may in divers ways alter consciousness, so that through disease the mind may be permanently impaired or lost. From a variety of causes, therefore, it is abundantly clear that consciousness, or mind, depends upon a normal condition of the cortex of the brain, and that a man loses consciousness so soon as this part of his cerebral hemispheres ceases to act. The science of the healthy mind is technically termed Psychology, and some elementary acquaintance with this science is necessary before we can consider abnormal conditions.

Psychology, within very recent times, has made great progress, for it is now considered to be the study of mind in its widest possible range, including the minds of animals from the very beginnings of life (*comparative psychology*), up through the mind of children (*genetic psychology*) to that of adult men and women. Of the conclusions found, many have been obtained by experimental and highly scientific investigation (*experimental or physiological psychology*). At one time the only method of investigation in vogue was one which is possible to every person, *viz.*, introspection or self-examination—noting one's own mind, and watching the changes in the emotions, memories, and associations as circumstances occurred from time to time—the only method of examining the mind directly.

Further information in regard to the mind is obtained through the study of mental diseases—a branch of psychology which has been referred to as *abnormal psychology* or *mental pathology*.

Apart from certain inherited tendencies termed “instincts,” and which will be referred to later, it may be definitely stated that our mind depends upon our experience, or what comes into the mind through the avenues of the senses; not only of the five special ones, but also through the muscular and the organic senses connected with the inner vital organs, through the senses of heat and cold, which are probably distinct from that of touch, as also through many others possibly having some special apparatus, such as the joints, giving sensations of pressure and of the equilibrium or proper balancing of the body. It is quite clear that our beliefs, knowledge and opinions must be based, and be dependent, upon the supply of material from the senses; the mind makes up its thoughts and reacts from the supply brought to it through the senses.

It is the tendency of every sensation that comes into the mind to pass out into *action*, and this is very important. Persons born blind cannot have delusions of sight, nor can congenital deaf mutes have aural hallucinations. This reaction of the mind to stimulus is capable of control by a higher power called “inhibition,” which in the main is the result of education. It is this higher controlling power, the power to say “no,” which differentiates man from the lower animals as well as the different races and divisions of men from each other. This inhibition is the basis of deliberation, such as, when one sensation or idea is stopped by

another—a man crosses the road, but a coming danger “inhibits” this movement. He first hesitates, then deliberates, and finally desists. The “holding” process by which the mind retains the material it receives, is through the “memory,” a peculiar feature of nerve cells which we may suppose to be a molecular change in the cells persisting for a longer or shorter time according to the intensity of the particular experience. A further process is “association of ideas,” whereby those things which have been perceived or recognised through the senses (Perception) tend to come up again in the future in the same combination, and based upon which process, the different ideas are combined. For example, our mind associates certain clothes with certain days, such as Sunday suits, certain emblems with certain seasons, holly leaves and berries with Christmas, certain flowers with certain persons who wear them, and so on. The comparing of new materials with past experience is completed through “assimilation,” such as when a scene on the stage recalls a familiar landscape, but the “combining” tendency of the mind, by means of which things that are grouped together through the “association of ideas” come before the mind, is called “Apperception”. This is a word over which much has been said and written, but it only means that special and peculiar activity of the mind which combines all it receives into larger and more definite combinations and higher degrees of perplexity, and to which combinations the name *notion* or *concept*, or *general idea* is applied. “Association of ideas” refers to the mental materials which tend to come up together and not to the mind’s activity. “Apperception” refers to

the mind's activity. The "whole" mind acts in the way we describe. This state of the mind is called the stream of consciousness. This stream always flows on and there are no breaks. Sensations from the vital organs, muscles, sense organs, are always flowing into the mind, giving rise to either comfort or discomfort. This feeling may be associated with some idea or thought in the mind, which is the origin of the "emotions," and we may then be filled with hope, fear, love or hate as the case may be. It is this association of a "sensation with a thought" which constitutes what we call an "emotion". As regards the emotions, the feeling of pain or pleasure enters largely into the attitude which the mind takes in regard to its experience or action. To understand this in others we go back to introspection. We infer this or that thought from this or that action because we know from experience in ourselves that when we act in a particular way certain thoughts or feelings inevitably accompany or precede these actions. Our actions, therefore, are the result of our thoughts, so that whatever our thoughts may be, these thoughts tend to arouse in us their corresponding train of suggested actions. These actions may be brought about by the influence of our perceptions, or the memory of these perceptions, or through the exercise of the imagination—taking these imaginations to be realities. Sometimes things are presented to the mind from within, as in dreams, or in a fantastic manner from without, yet in each case so apparently real as to deceive the mind; when this is the case, and the presentation is untrue, but still believed in, it is an illusion or a hallucination. An illusion points to an

error in "assimilation," the mind is unable to compare correctly a past experience with the present, and an impression appears in consciousness very different from the actual fact. Hallucinations arise when no impression is produced upon any of the senses. They are false perceptions, arising from within and are quite independent of outward objects. If the tolling of a bell be heard and be interpreted as the sound of a human voice, it is an illusion; but when no sound is audible, and human voices are declared to be heard, it is a hallucination. Delusions, on the other hand, pertain to the mind only, and not to the senses. Such a condition is due to some perversion which prevents the subject from realising the falsity of his belief, by the evidence of his own senses. A person calling himself the Saviour, or the Creator, or stating he is 10,000 years old, labours under a delusion.

The highest form of mental action results from *abstract* thoughts. When they lead persons to do anything, they are called *motives*, and when these suggestions for conduct are so clear that we are able to deliberate upon them, acting only after some reflection, they give a sense that the action springs from our own *will* or choice. Hence the phrase "free will". No action can take place without the appropriate thought to suggest that action.

After a certain time of activity, rest is required. The period during which the brain rests is when sleep comes on. All the bodily functions are lowered during sleep, the pulse beats slower, and the temperature is reduced. When all sensations cease to enter the mind sleep is obtained. Sleep is favoured by the feeling of fatigue, which also is a condition of lowered action. Sleep is as

necessary as food, and especially is it necessary when the brain is over-wrought and agitation or restlessness has brought on a disturbance of consciousness, and the functions of the brain are disturbed. Sleep is soundest during the first hour or two. When the brain is in a condition partly awake and partly asleep then is the state known as dreaming prone to occur. In dreaming, some external sensation starts a train of ideas, and these ideas are not under the control of the higher powers of the mind. Dreams are like delusions, except that during wakefulness and on an appeal to reason their unreality is apparent. Dreams are very rapid, a long dream full of adventure often taking only a few minutes. When the dreamer walks in his sleep he is a somnambulist, the balance of the movements being maintained reflexly. The great importance of sleep will be brought to our notice later.

With certain affections such as various forms of paralysis affecting the cortex of the brain—which destroy the memory of how words sound, how they appear when written, or feel to the tongue, lips, or larynx when uttered—speech becomes impossible, although there is no loss of any movement connected with the vocal organs or speech. Such a condition occurs in what is called “word-deafness,” “word-blindness,” or “sensory aphasia,” a condition which causes irritability and loss of control, so that the subjects thereof not infrequently become the inmates of our asylums.

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CHAPTER VIII.

Instincts are inherited—Instincts, if not in evidence, may be easily roused if the necessary Stimulus be present, as all the Nervous Mechanism is present—Influence of “Surroundings”—Insanity marked by perverted Instincts—Appetites—Reflex Actions and Automatic Actions are those without attention—Habits and Conduct: it is necessary to understand these in forming opinion as to Insanity in which those Habits formerly observed are reversed—Alteration of Habits or Perversion of them characteristic of Insanity.

IN order the more clearly to appreciate mental unsoundness, whether of the nature of congenital deficiencies as in those of defective development from birth, or acquired as in the insane—who suffer from alteration, perversion, or reversal of healthy actions—it is necessary to consider in detail those mental endowments or activities which may influence action, and we will deal with instincts, appetites, reflex and automatic actions, habits and conduct at some length.

Instinct is defined as “uneducated ability”. Man and animals have found the performance of certain actions appropriate and useful for the propagation and prolongation of their species, and it is accepted that any intelligent adaptations for this purpose made by the individuals of one generation “sets the direction,” as it is called, in those developed afterwards, and this “direction” in the nervous system tends to the performance of these

actions quite independently of learning. This "setting the direction" has been termed "organic selection". Man has grown to his present state by gradual stages, and not by sudden leaps or breaks; what we see in him we also see in many of the lower animals. Growth takes place under definite laws, and this growth is particularly affected by man's surroundings, which, so to speak, "condition" the physical and social nature of races of men as well as of individuals, hence the habits and customs of coloured people are totally distinct from those of white races. This influence of the "environment" is an important factor in the estimation of mental unsoundness, although it is often overlooked. Sanity implies the capability which the individual has of reacting normally to changing conditions in the environment. The organism (or the individual) and the environment constantly act and react on each other, and any defect of accommodation on the part of the individual is more often an indication of insanity than is the presence of definite mental symptoms or perverted instinct. The environment must always be considered in realising insanity, for as the surroundings become more complex with the progress of civilisation so there must be an increasing power of adaptation on the part of the individual, and herein lies the basis of insanity. There is no existing arbitrary standard of sanity, every person is sane or insane in relation to his own standard and in relation to his own environment.

Instinct is essentially concerned with the preservation of the life of the individual self or directed towards his reproduction and continuation. An instinct is adaptive in its nature, it is relatively complex,

and is inherited. Instinctive actions are witnessed in the maternal attentions of mankind and animals ; pecking for food by the young fowl just emerged from the shell, sucking in the infant, swimming in the young water-bird, and the migrating actions of adult birds and mammals, are all examples of instinct. The preservation of life and the quest of pleasure are human instincts. As to pleasure, it is an almost invariable rule that states of the body that are favourable to growth are pleasurable, whilst those that depress vital activity are painful. In insanity there is often a marked perversion of the instincts, and a reversal of the instinct of self-preservation is exemplified in the refusal of food and the various suicidal tendencies that are met with in many cases of acute melancholia and other forms of mental depression. Disorders of the parental instinct are frequently seen in the ideas of destruction directed against the newborn offspring in the insanity of childbirth.

Appetites.—These are a special class of sensations, defined as uneasy feelings caused by the recurring wants or necessities of the organic life. They are sleep, exercise, repose, thirst, hunger, and the feeling of sex. These several appetites serve as motives for the will to act, and although the appetites are not much controlled by the will, yet when thwarted or repressed they become strong incentives to action. Appetite is not impulse, for it is well-defined and especially seated in different organs. Appetite is distinguished from instinct in that it shows itself at first in connection with the life of the organism itself and does not wait for an external stimulus. The movements by which appetite is qualified are mostly reflex and instinctive. The child has

the instinct of sucking to gratify the appetite for food. In insanity there may be very considerable disturbances of these various sensations, to which we shall refer later.

Reflex Actions are a certain class of living actions maintained through a centre, which acts so that certain movements result in answer to certain stimuli or excitants. Reflex actions are non-voluntary and arise without any feeling, intention, or exercise of the will. Although the stimulus may reach the brain, and although it takes place without the intervention of the will, or even the participation of consciousness, it does not follow that the person is unconscious of it; he may be fully conscious of the whole reflex act. The commonest form of reflex action is muscular contraction following directly upon an irritation of the skin, a blinking of the eyelids when anything approaches the eye, the knee-jerk, etc., but there are many other forms of reflex actions. The flow of saliva at the sight of food is one, flushing of the face at an emotion of joy, and pallor at the thought of fear, are others; also contraction of the pupil when a bright light is brought before the eye. Coughing and sneezing are further reflex acts. Reflex actions are thus not only sensori-motor, *i.e.*, result in muscular contraction, but are also glandular, vascular, and ideomotor. Reflex actions are not adaptive for survival, and they are not complex. Reflex action may be very considerably disturbed in insanity.

Automatic Actions should be distinguished from reflex actions as the latter are distinguished from instincts. These are actions so often performed that the organism has become used to them, and the attention is not en-

gaged in their repetition. They are best defined as a series of acts caused by a series of stimuli which do not necessarily rouse the attention. They are acquired, and not congenital or inborn, as are the instincts. They are either primary, as in the case of respiration, or secondary, as in the more elaborately acquired movements already referred to, such as walking or playing the piano, which can occur without thought or without engaging the attention.

Habit and Conduct.—The term *habit* is used in regard to a mental function, which being performed repeatedly tends through familiarity to be performed with facility. The law of habit is that any function becomes organised by repeated efforts. It is in this way that a function is acquired by the individual, and is sharply distinguished from an instinct which is physically inherited. The habitual routine of life becomes a kind of appetite, and interference with this is exemplified in the mental breakdown of persons who after a busy and energetic career seek repose in retirement, or those accustomed to country life migrate into towns and *vice versâ*. *Conduct* is for our purpose the sum of an individual's actions, but authorities differ as to this meaning; some considering conduct to be the state of mind, or the intention; others deem it to be the outward act. Two phases of conduct especially concern us, *viz.*, the conduct of a person towards him or herself, and that which refers to the environment, *viz.*, to the surroundings or to society. Every self-respecting person is brought up to observe the decencies of life in regard to personal cleanliness and clothing. Man washes if he does not also bathe, and he wears his clothes to hide his nakedness—if not

for warmth, appearance, and comfort. In regard to himself when in health, man also feeds and clothes himself with propriety. He is careful to select nourishing and palatable food, according to his means, and to take it at properly regulated intervals. He gives the necessary attention in the appointed place to the apparatus and organs of excretion. As to sleep, rest, and work, he is careful to observe the required periodicity, remembering that action and reaction are always equal and contrary. In his behaviour to others he returns the ordinary salutations implied in the politeness of the three C's—courtesy, ceremony, and convention. In insanity, however, a complete reversal sets in, and the various acquisitions which characterised his personality undergo modification, if they do not entirely disappear—those last attained being the first to go. His conduct may change, because he may regard food or clothing as being forbidden to him. He may undergo such extreme self-denial that he would starve if left alone. He will resist food with stubborn obstinacy, and refuse to be dressed or to take exercise; and he will surround himself with morbid and unnecessary restrictions. He may, on the other hand, display lavish prodigality, regardless of those dependent upon him, and he may assume fantastic attire or become quite self-neglectful. His habits in regard to personal cleanliness may become defective and even revolting. He may pick up rubbish and harbour dirt so as to be unfit to associate with others. As to his environment, he may exhibit a complete reversal of his previous conduct and avoid the society he formerly courted and appreciated, refuse to work, and show a complete distaste for all forms of exertion, leading a

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passive, dull or listless existence, or even take pleasure in giving trouble, becoming irritable and suspicious, destroying his clothing or property, and becoming quarrelsome and dangerous. The self-restraint of former days may change to aggressive excitement, and he may take a violent dislike and hate to those nearest to him in ties of kinship and friendship. Such are, shortly, some of the perversions to be anticipated. Such are observed in the inmates of our asylums, and it needs strong qualities of head and heart to deal with these in a spirit of firmness and kindness. It is not too much to say, however, that good feeling, watchfulness, and tactfulness on the part of a mental nurse are capable of evolving order out of this chaos, and although the work is always trying and often arduous, women who are bright, intelligent, sensible, and sympathetic, not only can change the character and conduct of one patient, but also those of a whole ward, and there is no department of medicine and no illness in life in which previous experience and training on the part of a nurse are so valuable as in nursing a case of recent acute insanity. A good nurse in such a case is of incalculable benefit.

CHAPTER IX.

Sanity and Insanity, no distinct Delimitation—Conversation and Conduct the essential Symptoms—Reversal of normal Instincts may amount to Insanity—Classification of Insanity according to Age, or Cause, or Symptoms—The one according to Symptoms the most practicable for the Nurse.

IN the preceding chapters we have dealt with the normal functions of the body, but our attention will be devoted now to variations in the healthy performance of these functions and their treatment, as also to the relation which the organism—*i.e.*, the individual, the coherent whole, or the sum total of these functions—bears to the surroundings, or, as these have been called, the “environment”.

The attempt to convey a notion of insanity to a person who has never experienced or seen any cases of mental unsoundness is not an easy task, and this is the more difficult insomuch as there is no definite standard of sanity fixed either by Nature or by any recognised authority, and there is no line of demarcation between sanity and insanity. The phenomena expressed by health on the one side and disease on the other are indefinable. Health and disease are ultimate facts of human experience, and imply something indefinite, like life, and to call disease a “perverted life process” is no assistance. If health may be described as the easy and

harmonious performance of all the natural functions of the body or an absence of those diseases, over a thousand in number, which are entered in the nomenclature list of the Royal College of Physicians, then disease may be defined as a "negation of health". As in bodily health there is no person who is absolutely well, so mentally there is no one perfectly sane in all his mental faculties. Among our acquaintances there are some persons who, although exceedingly able and clever, with ability amounting even to genius, are yet in some ways eccentric or peculiar. They are erratic, and behave in ways that are not those of the ordinary individual. There are wide departures from a fixed standard in the life of every individual, and the mental state of a person, indeed of every person, varies from time to time under different conditions or circumstances. In relation to his enemies the mental state of an individual may be a combative one, in relation to superiors it may be receptive or submissive, whereas in relation to inferiors it may become a controlling and dominant one. The mental state in childhood is different from that in youth; youth is different from maturity; and this, again, from the mental state in old age. We shall later on see the significance of these statements. These variations are not regarded as unhealthy, or as symptoms of insanity, so long as they do not pass beyond certain limits.

Furthermore, social circumstances, employment, education and culture leave their impression upon man's mind, so that in the investigation of insanity it becomes necessary to consider the person's *status* in society, his age, his mode of life, the time and place in which he lives, and his previous conduct and position. Conversa-

tion and conduct which would be consonant with sanity in a "navvy" or a huckster would be strong indications of insanity in an educated and cultured person, or in a man of affairs. Beliefs which in the earlier periods of history would be the natural creeds of the majority would to-day probably be taken as insane delusions. The behaviour of youth, with its romance and exuberance of phantasy, its poetry and its extreme light-heartedness, would in an old person possibly suggest the onset of incipient insanity. Conduct which would be proper and suitable to one person in one place or upon certain occasions would under other circumstances be a symptom of insanity—for example, the language and levity of a music-hall performer would be viewed as mental unsoundness if seen in the conduct of an episcopal dignitary. The portly shopkeeper who, instead of serving his customers, began to play cards upon the counter would be looked upon as mad. The possessor of riches or property who denied himself the necessities of life, or who outraged decency by casting off his clothes in the public streets, would also be an instance of an affection of conduct showing a lack of reasoning power and of a proper understanding of the fitness of things. If a clergyman were to sing or shout comic songs from the pulpit, or a judge were to amuse himself by playing with toys or bits of broken china, or were to play leap-frog in court, such conduct would be most unsuitable and be highly reprehensible. It would be a strong indication of insanity, although under other circumstances and in other places such conduct would call for no comment. Conversation and conduct are therefore the keys to the interpretation of the mind, and it is from these

that we obtain indications of insanity. There are certain factors observed in the individual which help us to realise this want of adaptation to surroundings, and these are, more especially, the expression and the general appearance of our patient, who may be bright and lively, or dull, depressed, and listless. The expression and the posture give us much indication as to the mental state; and especially is this noticed when questions are put to him and the mental reaction is observed. It is then noticed whether he understands what is said to him, and whether he answers intelligently and correctly. It is mainly upon the above data that we judge whether a person is sane or insane, and whether he may be suffering from delusions which control his actions and alter his normal habits. Delusions by themselves are not an actual sign of insanity, although they may be a symptom. There are many noted persons—Joan of Arc, Peter the Great, and Warren Hastings, for instance—who have had delusions which they cherished and in which they believed, yet they were able to carry out—and with distinction—all or most of their particular duties in life.

In the growth and development of the individual, certain instincts are planted in man's nature which are characteristic of his higher development, and these have two aspects as either relating to himself or to his surroundings. The first set of instincts relates to self-preservation—*i.e.*, to his own support and to his search for food, warmth, and shelter; the second relates to his reproduction and to the care of his offspring. These are, again, subordinated to the welfare of the community, and have a bearing upon his surroundings.

A community, or men and women living together in association, have certain conventions, ceremonies, and courtesies which have to be observed, and which are thus indirectly self-preservative to the individual. Society makes certain rules for its own protection, to which all (and therefore each individual) are expected to conform; but when conduct deviates from the standard fixed for it by society, and there is interference either with his fellow-creatures, their property, or their comfort, then the question of law-breaking or insanity, of which there are many varieties, has to be considered.

It is convenient for the nurse to have some knowledge of these different kinds of insanity. One form of classification is according to the cause, such as from epilepsy, alcohol, or the puerperal period. Such a classification may not only cause confusion—for it is not invariably possible to say that insanity is always the result of any one cause—but a knowledge of this may react upon the patient's infirmity, and, by directing special attention to the cause, may aggravate the disease. A reference to the dangers of the puerperal period may excite morbid fears during some part of every subsequent pregnancy, and may not only affect the parent but also react upon the offspring. Further, attention called to fits may bring them on; as worry, anxiety, and fear are known to do. A more convenient form of classification is according to the age of the patient, such as the mental unsoundness which occurs during (1) the developmental period of childhood—and this carries with it some suggestion as to the forms met with, such as imbecility, idiocy, or the effects of epilepsy, and the prognosis in each of these is bad; (2) the insanity of

growth, which occurs during the period of adolescence ; insanity of (3) maturity, and (4) that arising during the climacteric crisis of life, in which all abnormal mental forms are met with, marked either by excitement, depression, or mental impairment, including that special form termed general paralysis of the insane, which occurs at the period of greatest vitality, and to which we shall refer later. Lastly (5) the insanity of senile decay, which accompanies the onset—and may be only an exaggeration—of ordinary and natural old age.

Some have classified insanity as to whether it is curable or incurable ; others have referred to it as acute or chronic. Some have referred to varieties of insanity which have been merely the reversal of mental faculties, such as moral perversion, suicidal insanity, “ will-less ” or impulsive insanity. Whatever system is adopted, there will probably be some cross-classification, and some symptoms are bound to be in each class. The great point is to abridge distinctions, with a view to establishing well-defined groups having a maximum significance ; and of all schemes of classification, that based upon the *symptoms* is the best, and the one we shall adopt, *viz.* :—

- (1) *States of depression or melancholia*, which include simple and chronic cases and those of fixed delusions with depression.
- (2) *States of excitement or exaltation* which involve acute and chronic mania, and cases of fixed delusions which present exaltation.
- (3) *States of mental weakness*, such as idiocy and imbecility in children, and the primary, secondary, or terminal dementias of young persons and of adults.

- (4) *States of stupor.*
- (5) *States of impaired will-power*, which include uncontrollable, sudden, and violent impulses, together with cases exhibiting what are called "fixed ideas".
- (6) *Mental states with epilepsy*, with its consequent loss of mind.
- (7) *General paralysis of the insane*, ending in complete dementia, bodily decay, and death.

The above is a useful and suggestive classification. It will give the nurse some idea as to the treatment required, and will be more helpful as involving less confusion through not using technical terms.

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CHAPTER X.

Hospitals and Asylums—Duties of the Nurse upon the Insane, those general ones for all Nurses.

THE arrangements of an asylum or hospital for the insane and the discipline therein maintained are intended

- (1) to promote the mental recovery of the patients, when this is possible; and
- (2) in cases where recovery does not take place, to make their surroundings as favourable, healthy, and comfortable as may be compatible with their proper custody, safety, and due supervision.

In ordinary general hospitals where persons are treated exclusively for bodily diseases, and where residence is for a limited time, there are none of those intimacies and dependent feelings which result from long-continued association, forced by the personal restrictions of the lock and key, as must arise in asylums, where nurses and patients lead to a great extent a joint life, and where the nurse becomes not only the personal attendant, but the companion of the inmates. In hospitals the patients are expected to conform to the discipline and rules of the place under pain of dismissal. In asylums the patients are expected *not* to conform, and it is only by the influence and through the persuasion and example of the nurse that patients will behave with propriety, see to

their personal cleanliness and immediate wants, and consent to engage in any occupation or diversion. It is by moral suasion, and not by means of compulsion, that discipline and order are maintained in an asylum and the work of the establishment is efficiently performed, so that the asylum nurse and other officers are continuously practising what has been described as "mental therapeutics". As in hospitals so in asylums, the mental nurse has an honourable and a direct course to pursue. Her duties in an institution are generally laid down for her in a book of "Rules" which she receives upon commencing duty, and she should familiarise herself with them and act up to them. She should also make herself acquainted with the general arrangements and regulations pertaining to the particular establishment in which she is serving, and endeavour to carry them out in a loyal manner. The duties of a nurse upon the insane may be classified as—

- (1) general, which is the subject of the present chapter; and
- (2) special,
- (3) personal.

The two latter will be dealt with subsequently. The mental nurse, who is assumed to be a person of intelligence, kindly disposition, and pleasant manner, has the duty in the first place of being self-respecting, careful in her conversation, neat in her attire, pleasant in demeanour, and circumspect in her conduct. She should wear no jewellery or ornaments, for there are many patients who will claim them as their own, and suspect her of appropriating them, which may lead to personal encounters, and one or other may be hurt by

brooches, ear-rings, pins, or the like. She should not make a promise to a patient unless this is to be fulfilled, and when it is necessary to refuse a request no feeling is aroused if the nurse replies that the rules do not permit the request to be granted. No favouritism should be shown to any patient, for the delusions of the insane are often based upon suspicion, and a partiality may arouse special antipathy. There should be no petty jealousy among nurses in attendance, and no appearance of disagreement should be exhibited before patients, as it may prove destructive to all future efforts to control and supervise the patients under their care. The nurse can do much by acts of kindness and by the exercise of tact—that special knack of knowing what to say and to do at the right time—a faculty which, although “inborn,” can always, to some extent, be acquired and cultivated, more especially when there is an earnest desire on the part of the nurse to do the best she can to soothe the restless, troubled, and afflicted spirit. “A soft answer turneth away wrath,” and the duties of a mental nurse call for a pre-eminent amount of self-forgetfulness and unselfishness. In no other capacity is a man or woman brought face to face with such a collection of annoying and aggravating people as those who inhabit the wards of an asylum for the insane, and in regard to whom there is no justification for resentment, and certainly none for retaliation. It is recognised by the tactful and intelligent nurse that the patients are irresponsible and are to be pitied; also, that they have been thus reduced through disease which she hopes to be instrumental in curing.

1. As to the *general* duties, the mental nurse under-

stands that insanity is largely affected by the state of the body, and everything that tends to promote the bodily health has a direct and beneficial influence on the mental welfare. It is necessary to attend to ventilation, cleanliness, and warmth; to see that the clothing is sufficient by day and by night, that food is properly and abundantly taken, that sleep is obtained, and that regular exercise is taken in the open air. She should also be competent to administer to the needs of the sick, to apply massage, and to give electric baths. There are certain special duties in connection with bathing the insane, as also in the case of infectious disease, to which we shall refer in more detail later.

The nurse should have the day-rooms and bed-rooms kept clean, tidy, well-ventilated and sufficiently warm, the bed-clothing dry and aired, and the patients should be encouraged, when possible, to keep their rooms and persons clean and neat, and this to be done in a quiet and simple manner, for occupation diverts the mind from insane ideas and assists in the treatment of sleeplessness. Occupation for the insane is a most important point, and the nurse has great power in this respect by her own example over the patient, and she becomes a means of considerable assistance in carrying out the doctor's instructions. It is not the amount of work done or the value of it which is a consideration, but the fact that occupation, however simple in itself, by exercising alike the bodily and mental powers, has a salutary effect upon both. Occupation tends to quieten the senses and tends to keep the mind from morbid fancies, it places the nervous system in a more normal state of tension, and leaves a pleasant mental and

physical reaction due to acquiring a new attainment. There is a pleasure in the contemplation of something usefully achieved and done; hence it is always desirable, when the bodily health will allow, to try and induce the patient to occupy the time usefully and engage in some work that is congenial and suitable, however simple this may be. The idle should be induced to work, but the willing must not be overpressed. The lives of people shut up in asylums, whether patients or staff, require diversion and relaxation, hence amusements—both indoor and outdoor—are a necessary form of treatment. The manner in which the evening is spent often has much to do with the production of sleep, and discretion in carrying out directions as to amusements and occupation will call for the exercise of thoughtful qualities. The amusement must be adapted to the physical and mental condition of the patient. If reading is permitted, the right books should be carefully chosen, and if cards are resorted to they should not be made a source of excitement, but used to obtain relief. Instructions as to the amount of outdoor amusements or exercise should be carefully carried out, and those in regard to medicines, punctually and accurately observed. As to food, sufficient time should be allowed for its mastication; and plates, knives, forks, and dishes should not be removed with undue haste. The patient should always receive his or her proper amount of nourishment, and be encouraged to behave decorously and properly at table.

The doors of all wards must be kept locked when instructions are so given, and doors leading from one part of the institution to the other are always kept closed.

The law imposes certain restrictions in regard to the letters of insane patients, and the nurse should never post these when addressed by patients to persons outside the asylum ; for the medical officers in charge are under penalties in respect to the disposal of the letters of patients, and all communications should be handed to them directly or through the higher officers of the institution. The nurse must also be careful as to means which patients may make use of to escape from custody. There are legal enactments in regard to the escape of patients, which, if infringed, may lead him or her into much trouble, and no patient should ever be entrusted with a key by any nurse. Ladders, steps, or other means of escape must be carefully put away, as also must any article, tool, or instrument which can be made use of, either for the purpose of escape or to injure themselves or others, nor are any instruments to be used by the patients out of the nurse's sight. Nurses upon the insane should never talk with people outside about the patients under their care, nor of their conduct, as such a course might cause injury to the friends of patients, and may cause the nurse to lose her place. The law is particular about the property of patients in asylums, who through being incarcerated are thus deprived of the power to manage their own affairs, and the nurse is not permitted to take charge of money or property belonging to a patient, nor to sell, to buy, nor borrow from a patient. Some institutions are very particular about nurses accepting presents or gratuities in the shape of money or gifts from the friends of patients, and it is well for the nurse always to decline these.

Nurses in asylums are, like those in hospitals, graded

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in rank, and the senior nurse of a ward is responsible for the stock of the ward, over which she has control and charge. She should be careful to preserve this stock from danger or loss, and from time to time she should check the stock with the inventory handed to her on first taking up her duties. It is most necessary that nurses upon the insane should be absolutely punctual on duty, and special hours are fixed for the day and night staff. The regular hours for rising, taking food, work, exercise, amusement, and retiring to bed are most beneficial, not only to the bodily health, but also to the mental state of the insane, for they help them to regular life and re-educate them into good and regular habits. If the nurse is unpunctual, her remissness may be the cause of loss of life through suicide, for which she must be held responsible. Moreover, her bad example will react upon the other nurses. Strict obedience and loyalty are expected from the mental nurse, but emergencies may arise in regard to any patient which the special experience and the initiative of the mental nurse will qualify her to respond to. This much has been said about her requirements in regard to those committed to her care. There are other duties she owes to herself, *viz.*, the care of her own health; she must have ample sleep, food, and time to take it; exercise and recreation both of body and mind, and regular holidays at definite intervals; also means to enjoy them, without which she will not be able to keep that charm of cheerfulness and resourcefulness which pre-eminently characterise the mental nurse, and which are invaluable acquirements in her work.

CHAPTER XI.

Special Duties of the Mental Nurse—Melancholia or Mental Depression, its treatment by the Nurse—Mania or Excitement—Delusional Insanity—Dementia—General Paralysis—Insanity with Epilepsy—Imbecility or Idiocy—Personal Duties in regard to Delusions, Struggles, Suicidal Tendencies, and Insane Habits.

THE *special* duties of the mental nurse depend upon the class of cases she is called upon to supervise, and the classification of insanity given in a former chapter will be adhered to, *viz* :—

1. Those who are depressed—cases of melancholia.
2. Those who are noisy and excited—cases of mania.
3. Those who have fixed ideas—called cases of delusional insanity.
4. Cases of weak-mindedness following long-continued depression or excitement—cases of dementia.
5. Cases of general paralysis with insanity.
6. Cases of epilepsy with insanity.
7. Cases who from birth have been deprived of their intelligence, such as those suffering from idiocy and imbecility.

In cases of (1) *mental depression* or *melancholia*, the nurse should endeavour to cheer the patients by kindly sympathetic conversation and conduct. She should divert their thoughts from distressing fancies by suggesting pleasant topics and by avoiding the subject of

their delusions. This can often be done by inducing them to engage in some active and light occupation, or some form of amusement which they can share with others. It is found in asylums that, in the treatment of the insane, the full complement of mental reaction is best obtained between the two extremes of excitement and depression, and this is secured by bringing the two extremes together. Thus cases of marked depression do best in the presence of those of a more excitable temperament, and in a well-arranged classification of patients in an asylum cases of mania and cases of melancholia are for this reason associated in the same ward. The one provides the complement to the other. It is well for the nurse to remember that suicidal attempts take place most often among cases of melancholia, and that among them "the means to do ill deeds makes ill deeds done". The appearance of sharp cutting instruments may prompt an unbalanced, depressed patient to a rash act. For the same reason open windows must be secured, bath taps must be locked, strings on the dress, or boot-laces and garters must be removed, and the food must be cut up so that it can be taken with a spoon. Many cases of melancholia are exceedingly restless, and will appear to the nurse more like the exaltation of mania. Such patients with undue motor excitement should never be away from the constant care of the trained nurse. The patient should be carefully watched in regard to taking food, but the nurse can only coax and stimulate, and if her encouragement fails, the doctor will probably administer nourishment forcibly, either by the nasal or stomach tube, or—when the food is pre-digested—by the rectum.

Cases of melancholia are often worse in the early morning than in the evening, being thus unlike cases of nervous depression, called *neurasthenia*, and nourishment in cases of depression is especially required. It is always desirable to give cases of melancholia some liquid nourishment in the night hours to avoid and counter-balance this early morning exhaustion and depression. Massage and Turkish baths are often ordered to stimulate the skin, and when exhaustion has been overcome the patient is encouraged to take gentle exercise in the open air under the direct care of the nurse. To prevent cases of melancholia passing into dementia, general electrical stimulation is often prescribed, which the nurse should know how to carry out. Care should always be taken in "bedding" cases of depression; their bed and bedding, as well as their own persons, should always be examined to prevent their secreting anything that may prove hurtful to them, and on no account is the word of a patient to be taken for granted that there is no means to do bodily harm secreted about the person without verification—not even are those who are convalescing to be trusted without confirmation.

In cases of (2) *mania*, when patients are noisy, excited and turbulent, they should, so far as is possible, be soothed by persuasion and judicious management, kept from annoying other patients, and provided with a healthy outlet by muscular exercise—a method of treatment which is invaluable in severe and long-continued excitement. In some cases much exhaustion results from this condition, and the recumbent posture is retained. Such patients are kept in bed for days together and forcibly fed if they refuse food or take it in insuffi-

cient quantity. Generous feeding is especially necessary for these cases, as the exhaustion is very marked. At times such patients are sent for vigorous outdoor exercise, for they put forth fewer efforts at violence and restlessness in the freedom of a garden or during a walk than when kept in bed. In such cases warm baths may be used continuously for many hours, and if the nurse meets with no resistance it is often a valuable means of procuring sleep. The “wet pack” is at times used to control excitement. The “wet pack” is carried out by immersing a sheet in warm water, then, after a moderate wringing, placing the sheet lengthwise on the bed, from the head to the foot of the bed, having previously stripped from it all clothing except the lower sheet. The patient is then rolled, with the arms to the sides, in the wet warm sheet, taking care that this is not too tight, the head only appearing out of the sheet. The bedclothes are replaced over the patient, who is carefully and continuously watched by the medical officer. The patient is kept in this state from one to three hours, according to the mental and bodily conditions. The same procedure with a dry sheet is termed the “dry pack”. When the patient is taken out of the pack, the skin is sponged over with warm water, and the patient placed ordinarily in bed. Especial care must be taken in the use of this treatment, which is considered to be a form of restraint, and all particulars of its application must be reported by the medical officer to the Commissioners in Lunacy, if the patient is certified, and its necessity for an uncertified case—except for purely medical reasons, such as dropsy or suppression of urine—would be a strong argument for placing

the patient at once under certificates. In chronic cases of mania, the general indications for the nurse are to feed, clothe, and safeguard the patient and to divert the mind with regular occupation or amusement.

The indications for treating cases of (3) fixed ideas (*delusional insanity* as this form is called) are, not to argue with them, but tactfully to divert and give them occupation. More, however, will be said on this point when dealing with the personal duties of the mental nurse.

In cases of (4) *dementia*, the nurse has, more or less, to think for the patient in everything. The object is custodial. She has to see that they are properly dressed and undressed, that they are sufficiently clothed and protected from exposure to cold and other danger, and that they get a due amount of outdoor walking exercise. Many of these cases are very trying to nurses, as their habits are objectionable, and they are liable to hurt themselves without complaining. Constant attention to cleanliness must always be observed, and all demented patients are better up and about than in bed, so long as this is possible, for confinement to bed may mean bed-sores and premature death from low forms of septic inflammation. The nurse should watch for any changes in the patient and report the same at once to the doctor, as frequent physical examination is necessary to detect the insidious onset of lung, kidney, or heart affections; or even to detect such accidents as fractured ribs, so apt to occur in this self-neglected class, and which may otherwise escape notice and be overlooked. Regular hours of meals, adequate warmth, and proper sleep are essential for this class.

In cases of (5) *general paralysis with insanity* the treatment, so far as the nurse is concerned, is to prevent the patient doing harm to others, to keep the patient clean, and that there should be adequate clothing to secure bodily warmth by night and by day. Lastly, but chiefly, that every precaution should be observed as regards the taking of food. General paralysis is incurable, and its duration is a matter of time; long—often many years—in the case of female patients. Speaking generally, this form of insanity is a disease of men, who fall victims to it at least three times as often as women. These patients toward the end of their disease are to the nurse objects of special solicitude, for they eat voraciously and rapidly, and will often steal the food from the plates of other patients, cramming it into their mouths, and there is a great risk of choking as the advancing paralysis causes greater loss of the power of swallowing. There is also a great risk of liquid nourishment entering the lungs and causing fatal broncho-pneumonia. In such cases all food should be given slowly and in a soft form, such as minced meat, minced vegetables, milk, custard, and the soft portions of bread well soaked in milk or tea. Such patients often eat leaves, grass, pieces torn off their clothes, bits of rags which they pick up, or they try to swallow the corners of the sheets when in bed. The nurse must be very careful to prevent such habits or the patient runs a very considerable risk.

In cases of (6) *insanity with epilepsy*, a form different from any hitherto considered, the patients are exceedingly querulous and irritable. They are, however, often peculiarly sympathetic with each other, often they are devoutly religious, and they may be seen in asylums in

the gardens and grounds in groups, reading, talking, and associating together, whereas those suffering from other varieties of insanity are each of them solitary and independent; unlike epileptics the ordinary insane have little or nothing in common. The prevailing feature of ordinary insanity is egotism or selfishness, which for the nurse is protective, as the patients might otherwise combine to overpower her, take her keys, and reverse the order of authority. In the case of epileptic insanity such is not the case, for they not infrequently combine to form antagonistic associations and cabals—which must be looked for and guarded against. Epileptic patients are vindictive, but there is a weak-mindedness as the result of fits which not infrequently turns “king’s evidence” and betrays the intriguer. Epileptic patients are more dangerous just before or immediately after a fit than at other times, but usually they are amenable to reason and can be tactfully managed without trouble between the epileptic seizures. The regulation of the bowels is a matter of great importance in the case of the insane, and especially in the case of the epileptic, for constipation favours the fits, and patients get to know this, and to be relieved may ask for medicine when they need it. The “cry” of the epileptic precedes the fit, or rather is the first stage of it, and the nurse may often save a patient from falling if she can lay her on the floor or the ground when she hears the “cry”. All clothing round the neck should be at once released, a pillow placed under the head, and, when the paroxysm is over, the patient carried indoors or taken to a quiet retreat, as rest is needed for some time after the fit. One often hears of special instructions being issued to

the nurses to prevent the biting of the tongue. I do not consider that any such precautions are necessary, as no precautions the nurse can take will be of any avail, and it is not a frequent or serious accident. She may loosen the teeth and hurt the patient by trying to give doubtful relief. For the rest of the day after a fit the patient is probably irritable, and is best kept as much apart from sources of worry and anxiety as can be managed. All epileptic patients need special supervision by night and hard pillows, for they may sleep on their faces or sides, and may thus die from suffocation in a fit.

In the treatment of cases of (7) *imbecility or idiocy* the mental nurse may have some educational work to do, more especially in regard to habits of cleanliness, self-help in dress, and tidiness at table, and in regard to clearness of articulation and speech. The term *idiocy* is used in regard to the more helpless class of imbeciles, the lower grade who are incapable of speech and who have no ability to dress, undress, wash, or see to their own wants; *imbecility* being applied to cases of weak-mindedness more akin to those described as backward children. Generally speaking, the term imbecility is applied to those who can speak, but where the power of speech is not attained the term idiocy is used. Much can be done to the very low grade of cases by proper nursing and a well-considered system of education specially adapted to their needs. When brought young under the influence of proper training some may be educated so as to be partly self-supporting, and the discipline and treatment applied to these cases may be seen in actual practice at such an establishment as the well-reputed Earlswood Asylum, not far from London,

a visit to which conveys far more information than can be imparted within the scope of a discursive description.

The personal duties of the nurse to individual patients include her duties in regard to—

1. *Delusions,*
2. *Struggles,*
3. *Precautions as to suicide,* and
4. *Habits of insane patients.*

As to (1) *delusions*, the nurse has a special *rôle*, for she should never ridicule a patient's delusions, however much harmless amusement may be derived from listening to them. Delusions result from morbid brain action. They are the consequence of disease and an indication of impaired mental action, and should not be laughed at. It is wiser to ignore them than to argue about or to contradict them. An effort should be made to turn the conversation into other directions, and thus prevent the false ideas from being constantly before the mind. In this way a patient often ceases to refer to her insane ideas and eventually loses them. On no account should "nick-names," founded upon insane ideas, be given to patients, although they may refuse to reply to their proper names when under the influence of delusions of double personality, such as frequently occurs with delusions of identity. When morbid ideas cause patients to dress fantastically, personal efforts should be made to check them, otherwise these ideas become more fixed and may perhaps cause them to become destructive and tear clothing and other property wherewith to ornament their persons in accordance with their delusions. Such destruction and self-ornamentation, if unchecked, tend to encourage their morbid fancies, and to emphasise

the differences between them and other patients which often cause satirical remarks to be made of an irritating or exasperating character. Here one may be pardoned for referring to "teasing," which is a temptation that every nurse should sternly resist. Not infrequently the humour of the situation may prove too much for young and inexperienced nurses, who tend to look upon patients only as eccentric persons whom they may unmeaningly banter. Such a weakness is unworthy of the mental nurse, and is discreditable when applied to the insane. The experienced nurse is never guilty of such a breach of trust and she discountenances such actions in others. It must always be remembered that those who have become inmates of lunatic asylums have already suffered sufficiently for their delusions by incarceration, segregation and compulsory withdrawal from all ties that may be near and dear to them.

As to the duties of the mental nurse in case of (2) *struggles*, especial care should be taken immediately to summon sufficient assistance, as a violent and impulsive patient is often overawed by the presence of two or three nurses, and yields rather than opposes before superior force, which she would not do if the nurse were alone. The insane recognise the moral influence of superior physical force quite as much as do the sane. Struggles are equally a danger to the nurse as well as to the patient, and they should always be avoided if this be possible; moreover, struggles create a bad feeling between patients and staff, and it is wisest and best, rather than run the risk of personal encounters, to leave a patient alone while morbidly irritable and quarrelsome, as so often happens with epileptics after a fit.

If left alone the irritability may pass off without involving a feeling of submission which may leave a rankling humiliation in the patient's mind ; for some deluded patients are very vindictive, and they harbour imaginary as well as real grievances for long periods of time.

The precautions in regard to (3) *suicide* form a very important part of the duty of the mental nurse. Knives, scissors and all forms of cutting instruments should be kept under lock and key. Strings, shoe-laces, and articles of neck-wear ; pails, basins, and water-taps must be kept from the reach of those patients who are suspected of suicidal tendencies. The greatest caution should be exercised with reference to the custody of medicines, lotions, and disinfectants, which should always be specially safeguarded. The patients in asylums who are known to have suicidal propensities are usually the objects of special instructions by the doctors, and they are identified by means of special case-papers, called "caution cards" or "suicidal tickets," which bear the patients' names, and state how they are to be supervised and what form of suicide they are predisposed to. Such patients are never allowed to go out of the nurse's sight for any time and they are even followed into the lavatories, and when one nurse relinquishes charge to another, the patient is definitely and formally handed over and duly acknowledged—often in writing—which indicates the strictness of the personal supervision required from the nurse. Care is always taken in bedding such patients. They are carefully searched before retiring, and their clothing and pockets examined after they have gone to bed, and in the morning before they rise,

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in case anything which may prove hurtful to them has been secreted.

As to (4) *habits*. In certain cases of depression patients may habitually refuse food, although much may often be done by tact in persuading patients to take it. If food is persistently refused the doctor then feeds artificially. In cases where the habits are defective, from mental weakness rather than from bodily infirmity or paralysis, care must be personally taken to prevent bed-sores; much may be done by the nurse in training such patients to attend to the calls of nature at regular intervals, and this training not only ensures improved and more correct habits but also saves the nurse trouble and promotes the physical comfort of the patient as well as tending to improve the mental state, for improved habits may be the first indication of convalescence in mental cases, showing that the exertions of the nurse are being successfully applied.

CHAPTER XII.

Sleep and Sleeplessness—The Treatment of Insomnia by Exercise or Rest—Sleep accounted for by two Theories—Nurse's Duties relating to Sleep—Methods used to promote Sleep.

SLEEP, to which we have referred, is a physiological necessity of mental health, and the loss of it, in some cases of acute mental disease, is one of the most universally urgent symptoms. In some cases it is so extreme that the patient literally dies for the want of proper sleep. Sleep, normally obtained, is a periodic suspension of all conscious processes, and its depth, under healthy conditions, increases rapidly for the first hour, when it is deepest, then becomes gradually lighter until waking occurs. Dreaming is therefore physiological just before waking, when the brain begins to be active again. Sleep is necessary for exhausted nature, and the repair which is so urgent a necessity for the relief of fatigue and for efficient bodily restoration, is obtained during sleep. Repose is a greater regenerator than the change of scene so often advocated for cases of early or incipient insanity, and the tired faculties are better restored to healthy energy by tranquillity than by exertion. As to the physiological cause of sleep, all that can be safely stated is that it is due to organic conditions, probably to the using up of highly organised

protoplasm in the cells of the brain, which result from or accompany fatigue, prostration, or exhaustion of nervous matter. We know that fatigue predisposes to sleep, but we also know that when there is acute nervous prostration, as occurs in mental disease, marked wakefulness persists, possibly because a vicious circle is established, the worn-out brain-cells giving rise to fatigue products, which, accumulating in the blood, in turn react upon the already exhausted cells, exciting them to further action—like beating a jaded horse. This probably corresponds to the irritability we so often experience when sleeplessness follows over-work and being “run down,” and a stimulus applied to a sensitive nerve is much more felt at that period, when there is also less inhibition or self-control, permitting a lesser stimulant to fire the brain or a nerve cell or to excite it into action. The peculiar haggard look of insomnia and the length of time the patient has been without sleep, will help the medical officer in whose care the case may be to decide whether the treatment prescribed shall be that of *forced recumbence*, or *forced exercise*, and the assistance of the nurse—who will have to keep a “sleeping chart,” to record the actual hours of sleep and the nature of the case—will greatly influence this decision. As a rule cases which are treated by the method of *forced recumbence*, are all those of acute exhaustion from mental diseases, and such cases as those of acquired neurasthenic insanity resulting from overstrain of mind and body, those who are senile and those suffering from the excitement accompanying the puerperal period. In cases of general exhaustion the bed treatment—with sleep, repose, and judicious feeding—is preferred to

active exertion; for exercise that would be irksome, if compulsory, is not the best calmative to an exhausted and irritable nervous system. Even for sane persons who are "run down," present-day physicians urge a modified "rest cure," and nurses are often sought from among those who have received asylum training to carry out this treatment. Rest, feeding, and massage are the prime measures resorted to for procuring sleep. As a rule, melancholy cases and those of acquired hereditary insanity are best treated with forced exercise. This treatment is also a hygienic agency peculiarly suitable for some cases of mania, as the muscular activity affords a natural channel of discharge for pent-up nervous irritability which is so characteristically associated with the excitement of mania.

Loss of sleep may be an effect of insanity, as is seen in the rapid flow of ideas by night and day which occurs in cases of mania, and in cases of melancholia with much distress and agony of mind; but it is a not infrequent and culminating cause of actual insanity in those of nervous temperament. The nurse, who should accurately and faithfully carry out the doctor's orders, has to keep a written record of the pulse, temperature, excretions, food consumed, medicine taken, and hours of exercise and sleep, and she must see that no bad habits are contracted from taking the remedies for sleeplessness, such as arise after morphia, opium, or alcohol used as hypnotics and soporifics. Loss of sleep, when not actually causing insanity, has a serious effect upon the proper performance of the mental functions, the mind becomes sluggish, the senses are less acute, and reflex movements are more easily excited, as may

be seen in the sudden jerks made by persons involuntarily—owing to the pressure of the bedclothes or to an uncomfortable position of the limbs—in the early stages of sleep. Although we are unable to state definitely to what sleep is due anatomically and physiologically, it is surmised that the cause is to be sought in some altered condition of the blood supply to the brain. We know that *active* tissues require *active* nourishing, and that in the brain there must be a vigorous reaction through the cerebral blood-vessels in response to any active call. Some have therefore described the state of the cerebral blood-vessels during sleep as a venous congestion; and that, as in tumours of the brain there is pressure from interference with the normal circulation, and in consequence stupor, so in sleep there is also a venous engorgement, favoured by the slower respiration and the reduced action of all the functions which are known to occur in sleep. Others have stated that, physiologically, sleep is accompanied by anæmia, that observation through trephine holes in the skull has verified this, and that delicate instruments confirm this by recording a lowered blood pressure in the arteries of the neck which supply the brain with blood. There are, moreover, observers who affirm that certain conditions of the nerve cells and their very delicate fibre-processes have to do with sleep, that sleep is a nervous impression through these nerve cells, and two opposite rival theories have been advocated to explain this, the one considering sleep to be due to retraction of the small processes of nerve-cells which end in ramifications round other cells, such retraction leading to a partial separation of the fine terminations from the cells they surround, leaving a

space which, so to speak, cuts off nerve-currents and so induces sleep (Lepine). The other view considers sleep to be concomitant with a greater projection outwards of all the fine nerve terminations round the cells which then touch each other more closely and intimately and so diffuse nerve impulses which waste their effect in a general loss; the state of waking, on the other hand, being due to retraction of the processes and gemmules, so that the nerve-wave is intensified by having to be concentrated through the few paths which remain open (Lugaro). These views are at the best only plausible theories and they cannot be accepted as in any way proved. Indeed, it is not even known that the changes described actually occur, or, if they do occur, that they are concomitants of altered function in the brain-cells, or that they are the causes of any functional conditions at all.

It is well known that during sleep certain mental disturbances are liable to occur, against which the nurse must be on her guard. Of these epileptic fits are the most important. The patient is often unconscious of the fits, and will, in consequence, deny their occurrence, because the memory also sleeps soundly, as the vague recollection of our own dreams often proves. It is only when certain symptoms remain, such as the biting of the tongue, wetting the bed—the urine during the fit being voided involuntarily—or a feeling of muscular soreness from tonic spasms, a headache, or a general feeling of *malaise* that the patient is reminded of the fit. The night terrors of children are, in all probability, forms of epilepsy occurring during sleep. Hallucinations giving rise to delusions or transitory mania may

also occur during sleep. The condition known as somnambulism or ordinary sleep-walking is known to most nurses, and such a state may itself give rise to insomnia. As sleep is so dependent upon the attention and services of the nurse, it has been entered into somewhat fully.

In mental diseases the nurse's duties in regard to sleep are to promote it by seeing that the day is properly spent and that the patient has a daily discipline in regard to food, occupation (if possible), exercise and diversion. As to food, the patient's meals should be regular, ample and nicely served. The meal must not be hurried—a prolific cause of dyspepsia and sleeplessness, for sound sleep implies the perfect harmony of all the organic sensations. The nurse should encourage each patient to sit decorously at table, and to say grace before and after meals. Apart from any religious view, this act punctuates a meal, and this makes of it a ceremony or rite which implies order, method and discipline. A short rest should follow a meal, then some occupation varied by diversion and exercise, for well-regulated muscular exercise is one of the best hypnotics; neither work nor diversion should be too continuous or prolonged, as there may be a mental strain involved in both, and the change from the one to the other should be complete and thorough. In many melancholy patients a mere walk does not cause them to forget their imaginary misery. An effort should be made to engage them in some work with others. The "social" or "colony" feeling of working with others is the best diversion, and the day should be spent in a methodical and regular discipline, avoiding excitement and mental

overstrain, for sleep itself is a regular function. Although in mental diseases loss of sleep may be due to worry, anxiety, and painful emotions, yet it may also be directly due to physical causes, such as dyspepsia, already referred to, visceral disorders, skin abnormalities, heat or cold, noise or too much light, and it is the duty of the nurse to modify these so far as possible. A quiet bedroom in a retired part of the house should be selected, there should be thorough ventilation of the room, as well as of the bedclothes. The bed should be well made, without crumpled sheets, inequalities, or lumps in the bedding, and the mattress should be easy to lie upon, and if possible should be over another wire-woven. No light should be allowed into the room, and no glaring fire. The temperature of greatest comfort is sixty degrees, although when sleep is obtained, it is stated that the lower the temperature—even to freezing-point—the sounder the sleep. The night nurses in institutions receive instructions to wear soft felt boots or slippers at night—for quietude during the night, desirable as it is for mentally healthy persons, is absolutely indispensable in the treatment of mental diseases. It is the bounden duty of the night nurse in institutions to open and close the doors quietly and to avoid flaring her lamp in the faces of the patients who are sleeping. The same precautions should be observed by the private nurse.

Feeling cold is often the cause of sleeplessness, and when the nurse is on her rounds a glass of hot milk or a cup of hot beef-tea with a crust of bread or a biscuit will often help the patient to procure sleep, and hot drinks are often a reliable antidote to the insomnia of general

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mental unrest. In senile cases, with sleeplessness and restlessness, alcohol is often administered as a drug to assist sleep, and the nurse must see that only the amount prescribed is given, and that the patient is not indulged in what might excite a dangerous craving and create a habit too difficult to break. Warm baths are occasionally prescribed for mental cases to induce sleep, and the nurse must observe all the usual precautions in bathing, *viz.*, as to the heat of the bath, time of immersion, and care in drying. The amount of sleep varies with temperament and age, some require much less than others, but however short the duration, the main thing to observe is, that all the precautions for sleep should have their regular, methodical and punctual placing in the discipline of the day, and that sleep itself is a normal function of clockwork precision and regularity.

CHAPTER XIII.

The Nurse's Report and her Responsibilities, relating to the Person and the Surroundings—Diseases occur as they do in the Sane, and are considered as to the Organs affected—Nervous, Respiratory, Digestive and other Systems—Symptoms of Paralysis of Brain or Spinal Cord, or of Affection of the Membranes.

It is very important that the nurse should report to the medical officer in charge any change in the bodily and mental conditions of the patient, as well as in the "environment". To do this it is necessary that she should observe and remember the different functions of the body and how these react upon each other, and upon the patient's surroundings. Any fresh mental symptoms, new delusions, increased excitement, the use of threatening language, or unusual depression; any attempts to evade supervision, plans to escape, or conversation relating thereto; the occurrence of fits, where they begin, whether there was loss of consciousness or paralysis, or if several fits in succession took place. Her observation would lead her to distinguish between epileptic fits—beginning with the "cry" or accompanied by a scream, foaming at the mouth, with loss of consciousness—and apoplectic fits, with more or less complete and permanent paralysis on one side of the face and body, or hysterical fits, without loss of consciousness, with sobbing or emotional tears and no paralysis, or whether

the fit was a faint or a syncope through cardiac failure, or whether it was a rigor, or an attack of malaria, or a shivering fit indicating the onset of pneumonia, or one of the infectious fevers. Any accident, fall, or struggle should be at once reported, however slight, as fractured ribs or serious internal injury may occur without any complaint being made by the patient. Any change in the habits, the appearance of unusual drowsiness or increased sleeplessness, or helplessness in regard to controlling the excretions, unusual thirst, voracious appetite, or refusal of food, loss of flesh, or any change in the bodily weight—which in many institutions is taken weekly—any sickness, or pain, inability to walk, or a dragging of the limbs, and any change in the general appearance of the patient, all these symptoms need special attention called to them.

It is usual to consider everything that goes into and everything that comes out of the body, as well as any noticeable changes in the body itself and in the environment, to be worthy of report.

What has the patient taken? Are food and drink voluntarily, easily, regularly, and properly taken? Has the patient swallowed anything harmful, such as bits of bone, pieces of glass, stones, leaves, or grass? Has there been apparent discomfort, pain, or sickness after food is taken? What is the character of the matter ejected? Has it been preserved for inspection? Is there pus or blood in it, or is it changed or unchanged food? Is the medicine or are the extras that are ordered taken satisfactorily? Are the excretions regularly voided? Is the urine normal in quality and quantity, and do the bowels act daily and naturally?

Is there a cough with expectoration of mucus, pus or blood? As to the body itself, any general changes, emaciation or gain in weight must be recorded. Is the skin normal in colour, and are there any eruptions, bruises, ulcers, abrasions or signs of injury?

Finally comes the environment. Are all doors and windows securely fastened, and are all medicines, lotions, poisons, applications, such as bandages or dressings, securely put away? Are all keys, scissors, knives, step-ladders with cords attached, under proper supervision? Are all matches, pocket-knives, string, boot-laces, window-cords, hooks, or anything with which the most ingenious devices of even a sane person could contrive to use for personal harm, or danger to others, carefully put away?

The insane are liable to the same diseases as the sane, with possibly a preponderance of breakdown from nervous diseases, ordinary forms of which are met with in asylums as well as in general hospitals. There is often great difficulty in diagnosing diseases in the insane, as there are frequently no subjective symptoms, *i.e.*, definite complaints of pain or discomfort may be absent, and the patient may not be able to assist by modifying the respiration when told during an examination of the chest, or assist in other ways by replying to questions, hence the great assistance derived from the nurse's own observation in regard to changes which may be noticed in the patient's conduct or appearance.

We shall refer to diseases as falling under the groups of organs affected, such as the *nervous, respiratory, digestive*, and other systems. In dealing with the nervous system, it is proposed for the information of nurses to

deal generally and broadly with diseases of its various divisions, *viz.*, the

- (1) *Brain*,
- (2) *Spinal cord*, and
- (3) *The membranes*—the *meninges*.

The commoner diseases of the brain, for which special nursing is needed, are paralysis, usually affecting the whole of one side, chorea or “St. Vitus’ dance,” epilepsy, and hysteria.

Paralysis occurring on one side of the body is caused generally by some injury to the opposite side of the (1) *brain*. Such injury may be due to a tumour or to the blocking up of an artery through a clot carried into or forming in it, or the rupture of an artery with hæmorrhage into the brain, the blood collecting in the substance of the brain, which is torn and ploughed up and its functions impaired in consequence. This is generally described as an apoplectic fit or a “stroke”. The symptoms come on suddenly, the patient being previously in perfect health. There is loss of consciousness amounting to complete and total insensibility—a condition called “coma”—with stertorous or snoring breathing, indicating the depth of the paralysis. This state may end fatally after a very great rise in the temperature, probably from 106° to 110°; but if partial improvement occurs, one or other side is found to be limp and paralysed, and the sensation in the affected side greatly impaired or absent. If the right side is paralysed, there is most often great or complete loss of the power of speech.

The treatment for the nurse in such a case is to see that the patient is kept quietly in bed with the

head slightly raised, and that the patient is turned on one side or the other to prevent the mucus from accumulating in the lungs. Great care must be used in administering liquid food—the only form which can be taken—for it is apt to gravitate into the lungs, owing to loss of power to swallow food, and this induces “*aspiration-pneumonia*,” or broncho-pneumonia as it is sometimes called. The patient must be kept very clean so as to avoid bed-sores, and when well enough to get up, the paralysed limbs, which are colder than the others, must be kept warm and free from pressure to prevent sores occurring. When paralysis occurs the arm is the first to go and the last to recover. Some mental weakness—*dementia*—may occur after apoplectic fits, which are also apt to recur. As to tumours of the brain, these may occur in persons of all ages and are occasionally met with in asylums. The most common in young persons and childhood are those due to tubercle, the others are caused by cancer or may result from specific diseases. The symptoms are headache, vomiting, convulsions, and a change in disposition and mental powers—the mind changing more especially if the tumour is in the front part of the brain; possibly also there may be some affection of vision. The nurse’s duties in such cases are to keep the room quiet, cool, and darkened, particularly if there is sensitiveness to light. Headache is relieved by cold applications to the head or the use of an ice-bag. Leiter’s tube is also used, being a coil of small lead tubing rolled into the shape of a cap, through which ice-cold water is kept circulating. Careful feeding with liquid food is to be observed and the bowels may require enemata. In regard to the con-

vulsions, it will be of much assistance if the nurse has observed and can report as to the position of the head and the direction of the eyeballs, also in what part of the body the convulsions commence—whether in the face or arm, and whether they are limited to one side or the other.

Chorea or "St. Vitus' dance" is a disease characterised by irregular jerky movements of the limbs on one, sometimes on both sides of the body. This form of disease occurs not infrequently among asylum patients, more especially in young boys and girls, or women during pregnancy. There is often mental depression and dulness with the jerky movements, or there may be the excitement of mania associated with them. Absence of emotional excitement and disturbance, together with quiet surroundings are necessary, also rest in bed, or on a mattress on the floor if the convulsions be severe, otherwise patients may be jerked out of bed during the attack and suffer harm. Great care must be taken in feeding them, and sleep is to be encouraged as the movements cease during sleep, and rest is essential to these cases. The patient may even have to be held by the nurse in very severe cases in order to check the involuntary jerks. It is very necessary to keep the patient clean. With regard to epilepsy it has already been described, and hysteria merges into mania by such insensible gradations in cases of insanity that no further reference here will be made to either of these conditions.

In disease of the (2) spinal cord, if the whole cord be affected, *i.e.*, the afferent and the efferent tracts, *viz.*, those that conduct impressions to the brain and from the brain, paralysis or loss of power affects both sides, a

condition to which the term paraplegia (*para*, beyond, and *plegia*, stroke or paralysis) is used. There is loss of control over the bladder and the rectum and the habits become defective; there is also a great tendency for bed-sores to occur. The symptoms are: complete loss of power over the legs, and when the disease occurs high up in the spinal cord complete loss of power over both arms and legs. This form of paralysis is soon fatal, but patients may last a long time when the legs are only paralysed. These are very trying cases to nurses, as they require constant supervision to prevent bed-sores and inflammation of the bladder through involuntary distension of the organ or from decomposition of the urine within the bladder. When only one tract of the cord is affected, if it be the afferent, which conveys impulses from without to the brain, a condition termed *locomotor ataxia* may result, and there is marked want of control to direct the movements of the arms and legs. Patients thus affected cannot tell the position of their limbs unless they can see them; there is loss of general co-ordinating power, and the sense of muscular position is also absent, particularly when the eyes are closed—there is what is called a *stereognosis* or loss of the feeling of solidity. In the dark or when the eyes are closed the patients totter and tremble, and may fall. There is also loss of common sensation, the feeling of touch being impaired, and there may also be present what are called “lightning pains” either in the chest, abdomen, or the limbs. These pains are most distressing and cause patients to believe that they are annoyed by electricity or unknown agencies, and they may in consequence develop painful and dangerous delusions.

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Such cases are not uncommon in asylums, and are considered greatly to resemble general paralysis, but the duration is longer and the illness is much more chronic. The treatment is to prevent bed-sores, to be careful in feeding, and to regard with attention the regularity of the excretions, more especially the functions of the bladder. Rubbing, or a mustard plaster, will often soothe the chest or stomach pains, and gentle but progressive muscular exercise is greatly recommended. A reference to this will be made later. When the efferent tract is affected, the tract which is motor in function and carries nervous impressions from the brain to the muscles, there is marked paralysis and often much wasting. Such a condition may occur in children or adults, and the effect of rubbing, massage and electricity is often most satisfactory as tending in the absence of normal nerve currents to keep up the nutrition of the muscles. This form of treatment is found to be very efficacious when the whole of a nerve or a group of nerves is paralysed, and a short reference to these methods will be made in a later chapter, as the mental nurse is supposed to be able to apply such treatment when so directed.

In disease of the (3) membranes of the brain—*meningitis*—the management by the nurse is similar to that given in the treatment of cerebral tumours. There is great sensitiveness to light in these cases and also much pain. Great care should be exercised to encourage sleep, also as to feeding and to keeping the patients clean.

CHAPTER XIV.

Methods of Remedial Treatment—Massage—Electrical Treatment.

THE trained mental nurse is expected to be familiar with the application of every method of remedial treatment. The use of (1) massage, (2) electricity, (3) physical drill, (4) hydro-therapeutics, and (5) the rest treatment being included in those measures which are now considered to be helpful in the cure of insanity.

As to (1) Massage, it is practically a form of exercise, but exercise of a passive description, and applied to the patient by another person in contradistinction to active exercise (such as dumb-bells or tennis) which is taken by the person himself. Massage is the name given to a number of manipulations of parts of the body which are of great value in the treatment of nervous diseases. These movements are not difficult to learn, although intelligence is required in their application, and the *masseur* or *masseuse* must have his or her brains—so to speak—at that part of the hand which is used in the work, and the hand should neither be too small, so as to be inefficient in grasping or kneading the part treated, nor too large, so as to lose the fine sense and muscular touch necessary in the treatment of superficial and delicate structures such as nerves, veins, and lymph vessels. The movements are always made in the direction of the venous blood-flow. The terms used in the

description of massage are French, but their English equivalents are rendered here. There are four kinds of movements in the application of massage which must be carefully distinguished and apprehended, the whole value of massage being in the proper execution of these movements in their detail. These movements are applied lightly or strongly, and superficially or deeply, and they are used either separately or in combination. They are generally commenced in the legs, then the arms, back, chest, and abdomen, and are as follows: (a) *effleurage*, or gentle stroking, which consists in lightly passing the flat of the hand lightly over the skin of the limbs or body, always in the direction towards the middle of the body—*i.e.*, towards the heart. The effect of such stroking is to empty the veins and the contents of the lymphatics, and thus relieve congestion.

(b) The next movement is *pétrissage*, or kneading, and is used for the muscles of the limbs or the body, which are grasped with the whole hands, lifted, and kneaded, tightening and loosening these alternately. In the calf or thigh muscles both hands grasp the limb, and the muscles are rolled between the hands against the bone. There must be no pinching, and the skin must move with the hand, the same part of the skin rolling over the same part of the hand, which should not slide over the skin and cause the fine hairs of the skin to be pulled.

(c) The third method is *massage à friction*, which is applied with the thumb, the finger-tips, or the whole hand in small circles, such as those where neuralgia has pained, or around the joints where effusions collect, or where there are fibrous or other swellings. The move-

ment may consist of vigorous strokes of one hand, and strong circular or to-and-fro friction with the other.

(*d*) The last movement is described as *tapotement*, and is a striking or a percussion with the tips of the fingers, the ulnar edge of the hand, or the whole open hand. This includes the application of gentle blows transversely across the long axis of a muscle, and is not unlike what "chopping" of the muscle would be. It is applied with the finger-tips when stimulating a nerve-trunk, or with the open hand when applied to anæsthetic areas.

It is customary to apply massage direct to the skin and without the application of adventitious material such as oil, lanoline or vaseline. It is also best to apply massage for a short time at first, and once only in the day. When the patient becomes more accustomed to its use the application may, if desired, extend to an hour or more per day, and may be applied twice. Care must be taken to cover over and keep warm the part massaged. In using massage for the abdomen, the head is raised upon a pillow, the knees are bent and the patient breathes deeply. Deep friction is then used with the heel and palm of both hands in small circles round the umbilicus, over the liver and stomach, and particularly over the course and direction of the large intestine, the abdominal walls being well grasped and kneaded in the process.

For insomnia the neck is stroked downwards from the occiput or back of the head on each side, thus aiding the flow of venous blood and lessening the amount of blood in the head, in this way favouring the anæmia which has been referred to as concomitant with sleep.

For locomotor ataxia massage has been recommended as a valuable remedy, and is said to lessen the pains and to cause the various affections and perversions of sensation to disappear. At any rate, it has the merit of doing something in the way of relief in conditions for which everything else appears to be of no avail. Nervous states described as neurasthenia, hysteria, muscular atrophy and what are called occupation neuroses—such as writer's cramp, etc., are definitely improved by massage. Speaking generally, massage increases the blood supply in the part rubbed. It causes the skin and the muscles to flush and the lymph stream to flow, thus removing fatigue-products and restoring functional activity to jaded organs. It certainly increases the activity of the superficial circulation, it increases the secretion of urine, and it has a definite influence upon nutrition. In melancholia, and conditions where the secretions or the excretions are out of order, and states such as sleeplessness, dizziness, confusion, migraine, headaches and flushings, massage has been found to be very useful, for it improves the nutrition of the muscles when patients refuse or are unable to take exercise, or when they are sent out of doors and linger listlessly or sit indifferently about. It is well not to neglect the influence of electricity, full and free feeding, and due warmth in such cases, and means should be taken to record the weight weekly and to note the desire for food and the power to assimilate it.

As to (2) Electricity, the mental nurse to-day is expected to be familiar with its application. It is of great advantage in certain forms of mental diseases; more especially those cases of early mental failure now more

commonly seen than of yore among otherwise promising young men and women; also in cases of local paralysis, some of which may have been caused by lead-poisoning. Electricity improves the nutrition, as may be seen in the great improvement in health which occurs in these cases when undergoing treatment by electric baths. It is used for promoting the general tone, or that of individual muscles and nerves. It is also used to increase the sensibility of the skin, or as a sedative for the relief of pain and spasm. It is further used for cases of locomotor ataxia, or muscular paralysis and for sleeplessness. The laws which govern the flow of the electric current are similar to those which govern the flow of water. Water will flow from a higher to a lower level, and in doing this will exert force which is called its *potential*—*viz.*, a capacity for doing work, and we see this potential made use of in turning water-wheels which work machinery in mills and other factories. Electricity is described either as *positive* or *negative* in kind, and the potential is higher in the positive than in the negative. The two kinds always tend to become united, that of higher potential tending to flow towards the lower. This tendency is the *electric force*. It is also called the *electro-motive force*, is measured in *volts*, and always flows outside the battery from the positive to the negative. The amount of electricity which passes through a wire at any one time is measured in *ampères*, but in medicine we use only one-thousandth part of an ampère as our standard, and this is called a *milliampère*. Not more than from five to fifteen milliampères are used medically. The body offers a certain amount of resistance to the passage of electricity, that is to say, it is not a good conductor

of electricity. The standard of resistance is called an *ohm*—after the name of a famous electrician who described and established it. The resistance of the body is much less when in water; generally speaking, it may be described as from 3,000 to 5,000 ohms. Electricity may be applied to the body in three ways: (a) *static*, or *electro-static*, that from a machine in which plates rub each other, the friction giving rise to electricity. This form is used for nervous, hysterical or other pains such as those in neuralgia, headaches, in skin diseases or chronic ulcers. (b) That obtained by the direct chemical action of one substance on another, as when an acid dissolves a metal in a jar or cell, several cells making up what is called a *battery*, and the current the *battery current*. In using this current the negative pole is often glided over the muscles (labile electricity). The power of response of a paralysed muscle remains longest for the battery current than any other. The last variety is (c) that which is obtained through a coil, and called the *coil current*, or the *alternating current*. Silk-covered conducting cords carry the current and end in flat metal pads called the *electrodes* or *poles*, which are either positive (anode) or negative (kathode). Instead of a flat pad a brush may be used. The negative electrodes act quicker upon a nerve or muscle than the positive, and for this reason the negative pole is applied to paralytic states, whereas the less irritable positive electrode is used for conditions with spasm or neuralgia. The battery current is the form of electricity which is most often used in giving an electric bath. This is a most stimulating method of treatment in cases of malnutrition and general “run down” or neurasthenia; cases

of insomnia, of stuporose melancholia, and that form of insanity which is described as premature dementia in young persons. When using the electric bath—which must be of glazed earthenware to render it non-conducting—the electrodes are large metal plates, placed one at the head and the other at the foot of the bath, and separated from the patient by some non-conductor such as wood or flannel. The bath is prepared with water at one hundred degrees, and the current is then passed through it, the patient receiving about one-eighth part of the total electricity, and he remains in the bath from ten minutes to half an hour, the bath being given about three times a week. It is well to begin with a weak current, gradually increasing the strength until a contraction is produced.

In administering electricity avoid painful shocks. For the skin the electrodes should be dry, but for the muscles and deeper structures they should be moistened with water or a saline solution. It is found that the weight increases, also that the general tone and the state of the bodily nutrition improve under this treatment. The patient brightens, and the nurse obtains much credit from the application. Patients who have left the asylum cured, and who have had the electric bath administered to them, sometimes say that they date their convalescence from the commencement of this treatment. In some asylums, notably the Yorkshire Asylum at Wakefield, there is a most complete equipment of electrical apparatus for the treatment of the insane.

Notes by the Nurse.

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Notes by the Nurse.

CHAPTER XV.

Treatment by Physical Exercises—Methods of Treatment by means of Water Baths, Douches, Massage—The Rest Treatment.

As to (3) Physical Drill, this consists in the application of certain exercises for the improvement of the bodily health, and it is significant that insanity is almost always associated with impaired physique and with malnutrition, for the report of the Lunacy Commissioners to the Lord Chancellor shows by statistical tables that impairment of health is intimately connected with mental breakdown. No method of treatment in my experience has been more successful in improving the bodily state and in restoring mental vigour than physical drill. It is especially adapted for some cases, such as those who are suffering from melancholia, or insanity of the dull and depressed type; for cases of stupor; for some cases of premature dementia in young persons, and for those who are "run down"—neurasthenia—who are irritable or who suffer from so-called nervous debility, or in whom there is a marked tendency to the formation of chilblains, whose circulation is feeble and slow, and who suffer even in warm weather from cold feet and hands. It is also a valuable diversion from overwork, and is a most suitable interruption to mental labour. I am of opinion that the neglect of physical training

and the ignorance of its beneficial effects, is responsible for much distress and poverty, for it favours an ailing existence, and disease is a common source of poverty. By weakening men and women they are rendered unfit to meet their various responsibilities. Outdoor physical drill would do much to counteract intemperance and the bad effects of unhealthy trades and overcrowding. It certainly has done much in asylums to restore that harmony of mind and body which characterises mental health. The movements encouraged by physical drill are educative in their effect. Patients are taught certain bodily movements at the word of command, and to do this with precision and exactitude increases the influence of the will over the muscles of the body, and it tends to independence and presence of mind. It teaches self-reliance, for the combination of muscular movements brings about a prompt, orderly, and precise result in obedience to instructions. The mind perceives the movements, and is thus taught to control and to govern the body, which, to be a good servant, must be strong. The movements are based upon a correct knowledge of anatomy and physiology, for their effects can be plainly foreseen and demonstrated. The exercises give suppleness and freedom of movement to the frames of those who otherwise would sit about in the wards in constrained attitudes. Drill is the best antidote to a sedentary life, and it has a marked mental effect, for it restricts morbid fancies and helps to prevent patients dwelling upon their delusions. Apart from the purely physical effects of muscular exercise which helps to give a pleasing and graceful appearance to the body, it adds steadiness and dexterity to the frame, making the body straight

and firm; it also lends suppleness to movements, helps the circulation, and improves digestion. It opens out the chest—enlarging the narrow one, and thus strengthening the lungs; and by improving the quality and the circulation of the blood, and making the skin and the secretions more active, it keeps up a healthy equilibrium between repair and waste. It soothes and favours sleep and has a definite influence upon morality, which those nurses in attendance upon backward children cannot but observe.

The nurse, in exercising her patients, can use this opportunity if she chooses to encourage a knowledge of ordinary domestic hygiene and combine this with physical development. It is one of the best results of the application of physical drill that in institutions several patients can be systematically taught at the same time. In this way the *egotism* characteristic of insanity gives way to altruism and friendship, and the fact that these movements take place among several in a class, encourages sympathy and obedience—both of them most desirable features to be awakened in the insane. The method, precision, and order involved in physical drill are the best means to recovery in mental diseases, and the patients and the nurse will find much use, as also some amusement, from their application. These free exercises are based upon the Swedish drill introduced by Ling, and they can be carried out in any place, and without any apparatus or appliance other than a cotton or silk sash, which is held stretched out in the hands. The exercises consist in movements of the head, trunk and limbs, both (in position) on the spot, and from the spot with or without support. The arms are raised,

the head and neck flexed and rotated, and the legs slide or glide, or are exercised in leaping. These exercises are carried out with regard to time either slowly or quickly, and they may be associated with sound and rhythm such as singing or music. There are five fundamental positions: (i.) standing upright with the heels close together and the feet at right angles; (ii.) the same with the feet close together and rising on heels and toes; (iii.) striding position with the feet sliding laterally; (iv.) the feet sliding forward or backward as in walking; and (v.) stretching with the arms vertically upwards. These movements are further compounded with flexion and extension of the trunk and limbs, bending forwards and backwards, running, walking, and leaping, and the compounded movements are further elaborated into æsthetic positions, and exercises are being carried out simultaneously with breathing exercises. It is astonishing how dormant paths seem to be re-awakened; ease, certainty, and precision of muscular movements being obtained in the most unpromising and slovenly individuals; all the faculties are re-awakened uniformly and equally, mental and bodily states being harmoniously united into that condition which we call "health". I consider physical drill to be a most valuable addition to the treatment of the insane.

As to (4) Hydro-Therapeutics, the term is used to describe the medicinal value of water when applied externally to the body. The use of water is either as a (a) *tonic* or as a (b) *sedative*. The (a) tonic effects, *i.e.*, the general feeling of comfort and the capacity for work, are well known to "cold-tubbers," and the stimulating effects of the cold plunge, of shower baths, and of various

kinds of douches are familiar, the reaction, that is the power which the organism has of defending itself against the effects of cold, being different in different individuals. Sea baths or artificial salt baths prepared by the addition of rock salt—any quantity up to ten pounds to thirty gallons of ordinary fresh water—are also stimulating, and a reaction should always be encouraged by vigorous rubbing, when cold water either in the form of a spray or a douche is used.

Alkaline baths of thirty gallons containing six ounces of carbonate of sodium, or half this amount of carbonate of potassium, are used medicinally, also acid baths with twelve ounces of diluted nitro-muriatic acid used either hot or cold.

The cold plunge is a momentary stimulation followed by a glowing reaction. The temperature of the water is that of the surrounding air, and the person jumps into the water and out again almost immediately. A modified application of cold water is by means of the cold sitz-bath. The shower or rain bath consists in allowing the water to fall over the head and body from a height, and this is borne for less than one minute, friction of the body being vigorously applied afterwards. When cold and hot water are used alternately the term "Scotch douche" has been applied to the process. When the water is directed forcibly to the back of the patient it is called a "Charcot douche". These are methods of applying cold water as a tonic, but there is one form which is considered to be "restraint," and notice of the use of this, which is the cold pack, must be sent to the Lunacy Commissioners in the case of persons under a certificate. The method of applying the cold pack

is to wring a sheet out of cold water, wrap it about the patient in a recumbent position for a few minutes, when it is removed and the patient placed in bed and rubbed to obtain a reaction. Great care must always be taken in giving cold baths to the insane. It is best to begin with warm water and gradually lower the temperature, and care must be taken to examine the heart, as cold baths are contraindicated when the circulation is weak or the patient is elderly, for the stimulation may be in excess of the powers of the organism to react. Cold baths are excellent remedies for hysterical females or young adults suffering from adolescent mania. The bath should not be given against the will of the patient, and all struggling must be avoided. Aromatic and pine baths, hot or cold, are used for hysterical or nervous patients. They are prepared by adding the essence of pine oil or a decoction of aromatic herbs to an ordinary bath.

As a (*b*) sedative the various forms of hot or warm baths are used, and their preparation should be familiar to the nurse. The sedative effect is brought about through the healthy reaction of the body to heat, and is shown by a diminished desire for exertion, probably caused by anæmia of the brain and internal organs, brought about by dilatation of the superficial vessels of the skin. The hot wet pack has already been described, and the precautions necessary in its use for the certified insane have been fully referred to. The head is left out of the wet sheet in the wet pack, also often the feet, and the sheet is carried between the legs and wrapped smoothly about the patient, who remains in the pack from half an hour to an hour. Hot-water bottles are applied to

the feet and cold compresses to the head, but the greatest care is needed in the use of the wet pack, as dangerous collapse may follow its use for excitement. When taken out the patient is sponged with warm water and placed in bed between warm blankets.

The hot sitz-bath is used at a temperature of 100° to 110° for about half an hour, and is a valuable sedative for uterine irritation, hysteria, or neuralgia, complaints not infrequent among patients in both public and private asylums. The continuous warm bath is less used than formerly in the treatment of acute mania. The bath is prepared at 98.4° or 100° and the patient immersed in it. His head is kept above the bath by a boarded covering, there being a hole through which the neck and head protrude. The patient eats, sleeps, and passes all his excretories in the bath, and is continuously immersed for eighteen to twenty-four or forty-eight hours. In some asylums on the Continent immersion has been continuous for a period of six weeks. The effects of the continuous bath are probably in part a mechanical action caused by the water on the blood-vessels of the skin, as well as probably also a vasomotor one.

The Turkish bath is the application of dry air to the surface of the body at a temperature of 150° and over. The soaping, rubbing, douching, and cold spray afterwards are a powerful and agreeable stimulation to the skin. The Russian bath is moist heat applied by vapour, and the temperature is necessarily much lower than the hot dry air of a Turkish bath. These various methods of hot-water application are excellent remedies for insomnia.

The (5) Rest Treatment was described and initiated by Weir-Mitchell, and is of especial value in cases of hysteria, neurasthenia and incipient insanity. Its essential features are: (a) isolation from the patient's family and from former surroundings; (b) rest in bed—"a man's life has often been saved by breaking his leg"—an overworked, overstrained man or woman is kept absolutely and compulsorily in the recumbent position, not even being allowed to sit up in bed; (c) massage as a form of gentle exercise, or (d) electricity as a stimulant being applied by (e) a tactful, bright, and sympathetic nurse whose personal influence is an important factor; and lastly, (f) the diet is carefully and strictly supervised. Feeding is most important, and that form called "high feeding" is observed, the meals being especially plentiful and frequent in order to withdraw blood into the abdomen by means of the food.

The nurse is required to administer at least six meals a day, which is greatly in excess of what is customary during health, the excess being in the form of fat, eggs, cream, and the like. To assist the nurse a schedule for the day is drawn up, and may be as follows:—

- 7 A.M. Cocoa; cool sponge bath, with rough and vigorous rubbing.
- 8 A.M. Breakfast, mostly milk; rest for one hour.
- 10 A.M. 8 ozs. peptonised food.
- 11 A.M. Massage or gentle shampooing applied to the head and neck.
- NOON. Milk or soup.
- 1.30 P.M. Dinner; rest for one hour.
- 3.30 P.M. 8 ozs. peptonised milk.
- 4 P.M. Electricity (generally faradisation—called the coil current or the alternating current).
- 6 P.M. Supper with milk, preferably oatmeal or some farinaceous preparations.

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Notes by the Nurse.

9 P.M. Massage and warm sponging, or a warm bath and careful rubbing.

Further 8 ozs. of malt extract to be taken with the meals, and a tonic after meals; 8 ozs. of peptonised milk with biscuit at bedtime, and a glass of milk during the night.

This treatment is carried out by the nurse or nurses for a period of about six weeks, and the qualified mental nurse is expected to be familiar with the principles upon which the treatment is based.

CHAPTER XVI.

Application of the ordinary Bath—Scheme for a daily Report in an Institution—General Routine of the Nurse's Duties in Asylums for the Insane—Night Nurses and their Duties and Reports.

IN the last chapter we described somewhat fully the "water treatment" in regard to the insane. It is necessary to lay down very definite regulations in regard to the ordinary bath which every patient receives upon admission into asylums—public asylums at any rate—and which he or she continues to receive every week, oftener if required, during the period of detention, unless there are medical or other special reasons to the contrary. Should there be the slightest doubt as to the advisability of bathing any patient, owing to sickness, feebleness, or excitement, reference is to be made by the nurse, directly or indirectly, to one of the medical officers. In an institution the name of every patient not having the customary bath is to be inserted by the responsible nurse in her daily report of the ward. The charge attendant or sister of the ward is always to be present during bathing, and the Lunacy Commissioners insist that an officer such as the matron, or some one deputed by her, should also be present. We propose to relate, somewhat fully, the rules which are generally insisted upon in all asylums with regard to bathing, for very serious accidents—amounting even to fatal scalding—

have taken place during bathing. It is customary in asylums to have the bath taps locked with a special key, and clever devices have been invented whereby there may be no possibility of turning the hot water for a bath without first turning on the cold, so that the hot water first flows in this way through the cold. The bath key is used by the nurse alone; it should be attached with the other keys to the nurse's chain or belt and should never be given to or employed by a patient, and during the employment of the bath the room is never to be left without a nurse or attendant, as some depressed patient may attempt to end life by drowning. When the bathroom is not used, the door is to remain locked, the taps secure, the floor to be kept dry and everything nice, clean, and orderly.

In preparing a bath—where some “patent” tap is not used—the cold water is always to be turned on first, but no cold bath is ever to be employed except under medical orders, and then only for the duration of time specified and in presence of one of the so-called officers, such as the matron or chief attendant. It is understood that the weekly or ordinary bath is used solely for the purpose of cleanliness, the body of each patient being well cleansed with soap. Before the patient enters the bath the taps both for hot and cold water are to be turned off and locked, the water is to be well mixed, and the temperature is to be taken with the bath thermometer, which should not register less than 90 degrees, nor more than 98 degrees. No additional hot or cold water is to be added to the bath whilst the patient is in it. In case the thermometer has become inaccurate from injury or other cause, all bathing operations are to be suspended

until another instrument is obtained. While the patient is in the water, under no pretence is the head of the patient to be put under water, the hair is to be cleansed with soap, and water from the bath or from a can previously arranged douched over it to clear it from all soap. After the patient has come out of the bath especial care must be taken to dry those who are feeble and helpless and to clothe them as rapidly as possible. Not more than one patient is to be bathed in the same water, and under no circumstances whatever are two patients to occupy the bath at the same time. If there is any deficiency of warm water the bathing must be suspended, and the irregularity is to be at once reported and also entered in the daily report of the ward. Soap, towels, brushes and combs are always taken down by the charge nurse, or a special bath attendant, and the number of patients carefully counted before leaving the ward and bath-room and also after returning into the ward. Any marks, bruises, wounds, sores, local pain, evidences of disease of any kind complained of by the patients or noticed by the nurse during any of the bathing operations are to be immediately reported to one of the medical officers and also to be entered in the daily report of the ward by the sister or nurse in charge. The matron on the female side, and the chief attendant on the male side, enter also in their own reports that they supervised the whole of the ordinary bathing operations and that the rules have been rigidly carried out, or, failing this, they name and describe the infringements thereof.

Reference has been made to the daily report of the ward. The following is a copy of the one in use at the London County Asylum at Claybury:—

Ward..... Date..... 190 .

EVENING REPORT.

Number of beds	Number of patients in bed
Patients in ward at bed-time	Patients in Airing Court, morning Attendants do.
Vacancies	Patients in Airing Court, afternoon Attendants do.
New patients admitted	Patients Chapel, morning Attendants do.
Patients received from other wards	Patients Chapel, afternoon Attendants do.
Patients sent to other wards	Number of patients beyond grounds
" discharged	Number of patients in entertainment
Absent on trial deceased	
Temperature of ward	
Total number of fits	
Total number of cases wet	
" " " dirty	
Total employed during day	

- Names of patients sleeping in padded rooms.
- Names of wet cases.
- Names of dirty cases.
- Names of patients who have had fits or epileptic attacks.
- Names of patients ordered to be in seclusion, and duration.
- Names of patients ordered to be in restraint, and duration.
- Accidents or casualties in the ward.
- Names of attendants on duty.
- Names of attendants absent.
- Names of attendants employed outside the ward, and where.
- Workmen or persons in the ward other than officers, and time.

PATIENTS EMPLOYED.

In laundry	At needle or fancy work in ward
dormitories	Cleaning corridors
workroom	Helpers in other parts
nurses' blocks	
the residences	
Helpers in the ward	Total employed

PATIENTS UNEMPLOYED.

Sick, infirm, and old age
Unemployed

Total unemployed

Names of patients outside grounds and attendants in charge.

Reports on other matters, patients visited, patients taking medicines, etc.

I have ascertained that all the patients in my ward are safe and all the doors securely locked.

(Signed).....Charge nurse or sister of the ward.

The day nurses in institutions for the insane generally enter upon their duties at six o'clock in the morning, and they remain on duty until 8 P.M. During this time they devote themselves exclusively to the care of the patients. They commence duty by unlocking the doors of the bedrooms or dormitories, and begin to hand their clothes to the patients, seeing that they dress themselves properly and with correct sequence. The nurse in charge of the ward visits the whole of the patients in that ward, as also the separate rooms—called “single rooms” because only one patient sleeps in each—with the night nurse, and signs a book that she receives them over correctly. The nurses assist those patients to dress whose mental condition or infirmity of body prevents them from doing so themselves, and they see that they are properly washed, that the state of the skin is free from soreness or discoloration, that their hair is combed, and that they are neat, clean, and tidy before breakfast. As soon as the patients have got up and are dressed, the bedrooms and passages are to be cleaned out, the beds and bedding laid out to air, and every kind of dirt, dirty linen, broken vessels, rags, remnants of food, and every description of litter removed and the windows opened. In summer and warm weather the windows and ventilators are opened shortly after six, when the patients are sufficiently dressed, but in hot and dry weather instructions may be left for them to be open

all night. Before seven o'clock the nurse has taken the foul linen—and this constitutes the daily in contrast to the usual weekly washing—to the laundry, and another nurse is sent to the kitchen or stores for the bread, butter, and other necessaries required for the day, but in some institutions these are drawn in the afternoon. Before eight o'clock in the morning all broken windows, furniture to be repaired or other necessary repair, are to be reported to the matron or her deputy, so that they may be entered in the daily report of repairs to the engineer or the clerk of works. From eight to half-past eight the patients' breakfast is served, care being taken that those who are in their rooms are also at the same time duly served. The strictest attention is to be observed in regard to the administering of morning medicines, baths, or other instructions directed by the medical officer. After breakfast—before breakfast in some institutions—the patients are collected and conducted to chapel. It is often most difficult for the nurse to select patients for chapel attendance, and although it is her duty to encourage their presence, those who are most desirous and wishful to attend may be the least fitted mentally for the consolation of spiritual ministrations. All the epileptics desire to be in chapel, and all cases of religious mania also desire to attend. These are often aggravated in their mental states by attendances, and it is best that the selection in doubtful cases should be decided by the medical officer. All patients attending chapel should be dressed in a neat, decorous, and becoming manner. Those who are liable to be seized with fits are seated near the door, as also those who may, under the influence of delusions, behave vio-

lently, so that they may be removed by the nurses with promptitude and quietness. Those whose conduct is the most doubtful should always be seated near the attendants. Those patients desiring to partake of the rites and sacraments of the Church are always, in institutions, referred by the nurses to the medical officer, and to the chaplain or spiritual advisers in attendance. It is a rule in all institutions that those patients desiring the ministration of their own denomination be accordingly given facilities for the purpose.

In every institution for the insane it is the rule to allow as much of the patients' wishes in all things to be granted as may be safe and possible. No one knows who has not experienced service among the insane the trouble, anxiety, and worry caused by the constant buttonholing and references made by cases of religious insanity to the spiritual safety of others and others' "souls".

When service is over the patients are counted, collected, and taken out for exercise into the various gardens or, as they are often called, exercising or airing courts. Those patients who for any reason—noise, excitement, or restlessness—are yet in their rooms are now dressed, and in fine weather are also taken out into the gardens or airing courts, as the wards are now free and supervision within the grounds is undisturbed. During the time the patients are in the airing courts the nurse sees that they do not lie down on the gravel or paths or walks, nor on the grass in damp weather. In very hot weather they must be placed in the shade, and in very cold weather be encouraged to take brisk walks, or to take part in some outdoor amusement, such as skipping,

looking after birds or animals, such as guinea-pigs, tame mice, or rabbits, which are a special feature of some institutions. By ten o'clock the cleaning of the day-rooms, bedrooms, and passages is to be completed; no mops, pails, brushes, steps, or rubbish must be left about; the utmost cleanliness is to be observed, and the nurses are to be neatly dressed and everything ready for the visit of the medical officer, a full report being made to him when on his round—as fully described in a previous chapter. The sick diet lists are placed out ready for daily inspection by the medical officer; who revises the medicines, the suicidal “parchments,” and who also inspects the wards, bathrooms and lavatories. About half an hour before the patients come in from the airing courts, the more troublesome, excited or noisy ones are collected, as also those with suicidal tendencies, and they are either securely brought in and placed in the wards, or they are undressed and placed in their rooms until they go out again after dinner, which meal they may take in their own rooms. During the morning the tins and trays are taken down to the kitchen for dinner, and are fetched therefrom on trollies shortly after noon with the dinners for the wards. In many institutions the patients dine in large halls, either one or both sexes together. The nurse must be careful in supervising the diets of patients—each of whom receives what is allowed according to a scale fixed by the committee of the asylum, if a public one. Every patient may, if he or she desires it, see the diet weighed out for him or herself, but it is usual to place the portion of meat allowed on the weighing scale or balance, and the nurse with this before her serves out

the rest upon this pattern. In the case of "suicidal patients" the meat and vegetables are cut up beforehand and the patient uses a spoon and fork at a separate table. The knives in an asylum are specially constructed so as to allow of a sharp edge on about an inch of the blade, and also about an inch from the point, in order to avoid any possibility of injury or harm to himself or others, should any tendency in this direction arise. The patients, even the excited ones, are more tranquil after than before dinner, owing to a physiological withdrawal of the blood from other organs to the digestive tract. In this way half the nurses in a ward are permitted to go to their own dinners when the patients have been served, the other half similarly dining after their return. In some institutions the nurses may have their breakfast and tea in the wards, dining only in a separate mess-room at a general mess-table. In others they have all their meals in a separate mess-room, breakfasting before they go on duty in the morning. These are matters of administration which vary in different institutions, and each method has its champions. At half-past two the patients are again collected for airing court, and they go out until four o'clock, the excited and agitated ones going out as in the morning after the others, and coming in before them. In the afternoon the quiet, orderly, and convalescent patients or those who are chronic but tractable and express the wish to go, are taken either into the grounds, or beyond and outside the grounds and into the adjoining village or neighbouring town—if not too distant—in order to "shop" or make little purchases for themselves, the nurses personally supervising their marketings with a not too direct attention, but with a

sufficiently close guard to see that the confidence reposed in them is not betrayed.

Care must always be taken that patients who walk along the streets or roads are safe from the traffic, that they are not in the way of others, for the law is strict as to the conduct of insane patients when exercising beyond their own grounds, and any complaint from those not connected with the asylum is sufficient to prevent the enjoyment of this liberty, which is so greatly prized in asylums and which is so beneficial a remedy in the treatment of the insane incarcerated in institutions and separated from their friends and ordinary life outside. From 5 to 5.30 o'clock comes tea, being preceded by that for the nurses. After each meal the cups, saucers, plates, dishes, etc., are to be carefully washed and put away, and every knife, fork, and spoon used at meals by patients is carefully counted over and examined *before patients rise from table*, so that the numbers are correct. They are then carefully locked up in a special box for the purpose. The loss of a knife or fork after a meal is a most disturbing factor in an asylum and means a great upset, as every patient is personally searched, the whole of the ward overturned, every sink and trap examined, and no refuse leaves the ward nor does any patient go out to exercise, or chapel, or entertainments until the missing knife or fork is found. After tea, in some institutions, evening chapel takes place, and patients are always allowed the use of hymn-books and prayer-books when so desiring. In the summer during fine weather what is called "evening airing court" is also arranged, or the patients walk out into the grounds, or into the cricket-field and associate in games, dances,

listening to music, or watching cricket or croquet matches. They are always encouraged either to take part in some diversion or to be occupied at needlework or in some other congenial pastime.

At seven o'clock all patients are in their wards, except on entertainment nights, and about this hour the evening extras ordered from the kitchen for the different wards are fetched. These are for the use of patients during the night, and are served by the night nurse. They are generally beef-tea, mutton-broth, sago, arrowroot, gruel, and lemonade.

From half-past seven to a quarter to eight the patients prepare for bed. They have medicines or special draughts ordered by the medical officer served out to them about this time. Their day-clothes are wrapped up and placed in bundles on racks, each patient's wardrobe compartment being labelled with her name or the number of her bed, and her clothes placed thereon. In the case of patients suspected of dangerous propensities, the day clothing is carefully searched for any weapon of offence, and she herself is examined every night in case she may have secreted something about her person which may prove to be dangerous to herself or others. These precautions are fully detailed in a previous chapter. The tobacco pipes of the male patients are given up voluntarily before bed-time and placed by the patient or his attendant in a special rack, with a number or some other means of identifying them afterwards, and the bundles of clothing are placed in a like manner upon racks on a concrete or stone floor as a precaution against the spread of fire, such as has occurred when a lighted pipe was placed in a patient's pocket and overlooked.

A list of all the patients sleeping in a ward is made out, with the names, number of room or bed occupied, and notes are entered for the night nurse, in regard to any one requiring special attention. The day charge nurse or sister personally hands her cases over to the night nurse, and states that she has done so in her report for the day, which she makes up before leaving duty, and hands this report, called the Ward or Day Report, to the matron or her deputy.

The charge nurse once a week prepares a list of all stores and articles to be repaired or to be replaced owing to damage, loss or injury — furniture, utensils, etc. — and submits the list to the matron, who further requests the steward to supply the same. Her list includes the number of boots and shoes to be repaired, and on certain specific days the laundry is to be seen to, and clothes which need it are to be listed for condemning, which is done by the matron herself or by the “work mistress,” or some other official delegated for the purpose. “Condemned clothing” has to be replaced, so that the inventory of all articles kept in the ward is always correct, as the sister or the charge nurse is held responsible for all “stock”.

The night nurse comes on duty at a quarter to eight, and remains so until half-past six the next morning. She first takes over all the patients from the day nurse, seeing each individually, and then examines her list of patients, more especially noting those who require attention, food, cordials, or medicine during the night, and ascertains if everything necessary has been left out for them. The night nurses in asylums are either attached to a definite ward or they promenade through

certain sections, these latter being denominated "patrol" night nurses. These visit some of the wards several times during the night, administer medicines and nourishment as directed, and pay proper attention to such patients as are restless or of defective habits (*i.e.*, are "wet" or "dirty"), who wish for water to drink or who need change of dress. Special attention is paid to the cleanliness of wet or dirty patients, who usually have "mackintosh sheets" below the bottom blanket to save the bed or mattress from being soiled. In going through the wards at night care must be taken to avoid disturbing the patients. Soft shoes are provided and must be worn by the night nurse, the doors must be locked and unlocked as quietly as possible and a light is to be carried in lanterns provided, so as to avoid turning the electric or gas light fully on in the dormitory. The proper clothing of patients who refuse to lie in bed must be carefully attended to, and their feet must be protected. Patients who are disposed to suicide, or who are subject to epileptic attacks, or who have a habit of lying on their faces, sleep in special dormitories where there is a constant night nurse on duty. These patients must be especially watched, and are called "observation" cases. Such are those already named and all newly admitted cases, as also those who are seriously ill, who suffer from bodily as well as mental ailments, and who constitute the ordinary medical cases of our hospitals. In case of any accident or unusual circumstance the night nurses shall at once summon the aid of the medical officer.

In the morning they call up the day attendants at the usual hour of rising, and they hand to these their patients as already described. When this has been

done, and their reports are completed and handed to the matron or her deputy, their duties cease. The following is a copy of the night nurse's report used at Claybury Asylum :—

NIGHT NURSE'S REPORT.

Ward.....

FEMALES.

Date.....190 .

I have taken over.....patients sleeping in.....
dormitory of Ward.....

(Signed).....

Ward.	Patients' Names.	Remarks.

Clothes sent to laundry.			Hours.	No. of patients and hour at which			Summary.
Articles.	Articles.	Articles.		Wet.	Dirty.	Ep.	
			8				No. of patients having fits..... No. of fits..... No wet..... „ dirty „ raised
			9				
			10				
			11				
			12				
			1				
			2				
			3				
			4				
			5				
			6				
			7				

Attendants late... ..
 ,, absent.....
 Heating of ward and temperature.....
 Lighting.....
 Water.....

OFFICERS' VISITS :

.....

SPECIAL REPORTS :

.....

..... } Night Nurses.

Notes by the Nurse.

Notes by the Nurse.

CHAPTER XVII.

Duties of the Private Nurse—Value of Training—Selection and arrangement of the Sick Room for a Mental Case in a Private House—Important to prevent Bed-sores—Necessity of Cleanliness.

THE duties of the private nurse in charge of mental cases are more onerous and of wider extent than fall to the lot of those who nurse the insane in institutions. She may have to nurse cases not only in their own homes, but possibly in lodgings, and she will not be able to summon to her aid all those helpful means which have steadily grown up in the best private and public institutions, and which constitute the great advantages of such places as curative establishments. The private nurse may probably have to select the sick-room for her patient, and she may be called upon to do a considerable amount of sick nursing, and it is important, as was made clear in the first chapter, if she is to render real help, that she should be well trained in hospital as well as in asylum nursing. There are large numbers of mentally affected persons among the wealthy classes who are cared for outside asylums, and many also in asylums who have, in the earlier stages, received home treatment before being certified for detention in hospitals and asylums. The trend of general opinion at the present day is to try the nursing of all early mental cases in private homes, under specially trained nurses—*i.e.*, before sending them for treatment into

asylums; and a recent Bill before Parliament had for its sole object the legalising of such treatment in private houses, which is at present contrary to law in England and Wales for more than one person. The class of cases which it is intended should be nursed in private homes is from those whose mind is weakened either from old age, or as the result of long-continued epilepsy, or those suffering from gross lesions of the brain—such as cerebral tumours, cerebral hæmorrhage, or embolism; cases of hemiplegia in whom the power of speech, active locomotion and response to the calls of nature are impaired; cases of congenital deficiency, imbecility or idiocy, and terminal cases of paralytic dementia. Speaking generally, cases with marked excitement, or those who are suicidal or who exhibit dangerous propensities are not treated in their own homes, but they are certified for detention in hospitals, licensed houses (otherwise called private asylums), or public asylums, unless they are cases of mental excitement in young persons or pregnant women or those whose insanity is accompanied with puerperal conditions, or even those who are suffering from the temporary maniacal conditions caused by alcohol. The latter can be suitably treated for a time in private houses under the care of private nurses. Should a Bill, which was before Parliament be re-introduced and become law, it will legalise the treatment of “incipient insanity” in private houses, and a great need will then arise for properly trained private mental nurses, and the following observations in addition to those referring to nurses in institutions may be found useful.

It must, at the outset, be understood that no amount of training and no amount of special experience, whether

in a hospital or an asylum, can replace the judgment and common-sense which a nurse needs who is directly engaged with the insane. She must be her own key of interpretation as to what should best be done in any special emergency, and her own native tact will prove more helpful to her than any number of fanciful theories. The school of experience associated with sound training will make the best nurse, as it will make the best surgeon and the most practical physician. The old-fashioned asylum nurse—who probably could neither read nor write, but who possessed a clear head—has more often relieved anxiety, saved risks, and been of more comfort to patients and their friends than the brilliant probationer; indeed, more helpful probably than the newly fledged medical degree holder who has just emerged from hospital with his yet untried medical qualifications, and whose practical work among men and women has yet to be learnt and acquired. I do not undervalue brilliant attainments, both in the case of nurses as well as doctors, for such are not to be decried, for they are useful handmaidens, and will without doubt assist those who possess them, but they will not serve the place of those qualities which are inborn and which cannot be artificially raised, *viz.*, tact, patience, devotion, good temper, sympathy, sound judgment, and an alert mind—points which are absolutely essential to the good mental nurse, whether engaged in public institutions or in private work. The private nurse is more the companion of her patient than is the ordinary institution nurse—she may have to read, play, or sing, she may have to “maid” her patient, and she will certainly have to nurse her.

As to the sick-room, it should have, if possible, a southern aspect, so as to allow of the possibility of sunshine when the weather does not permit of exercise, or when from other causes the patient is compelled to remain indoors. If possible, it should be spacious, lofty, and well-ventilated, as the habits of the insane are often such that the atmosphere may soon be rendered close, oppressive and offensive, and may thus injure the health of both nurse and patient. The room should be made cheerful and pleasant to the eye, with wallpaper of not too demonstrative a pattern, and there should be bright flowers and pictures about. To avoid risks in consequence of stairs, the rooms for a mental case should, if possible, be on the ground floor. It is advantageous, however, in case of noise or outburst of excitement on the part of the patient that the apartment should be somewhat isolated, and it should be away from avenues of traffic or causes such as may disturb the rest or sleep of an irritable, nervous, or excited sufferer. A natural prospect with a good view of field or garden is preferable to that of a thoroughfare with its various disturbances. There should be a second room opening out of this and a bathroom and lavatory with all the necessary adjuncts, which should have perfect drainage. It so happens that such ideal arrangements are possible for the private nursing of mental cases, as many of these cases can afford to pay for all that is needed. It is already provided for the poor who cannot so pay, in the palatial homes created by the various County authorities and met with all over the country.

In regard to ventilation, the purity of the atmosphere is of the highest importance, and this can best be secured

by natural means, *i.e.*, by open windows and open fires. In the case of many insane persons the emanations from the surface of the body and from breathing soon vitiate the air, and when these emanations are combined with dust and other impurities, the air, unless frequently changed, is soon rendered unfit for respiration. Fresh air should be admitted without draught, and for this purpose it is best to keep the window open at the top. An open fire is one of the best means of diffusing currents of fresh air through a room, and fresh air should be obtained from the outside and not from passages or rooms in the house. The temperature should be kept at 60°, or higher for old persons, and it should not be allowed to fall below 50°. The windows of rooms in which insane persons reside should only open about five inches above and below to avoid danger from escape, homicidal or suicidal attempts. The glass should be guarded in the lower pane or panes if these are large by an iron screen of a light and artistic pattern so as not to obtrude the idea of seclusion. The furniture should be of a simple kind, strong and comfortable. There should be no keys left in the locks for the patient to isolate herself. There should be no cords to the blinds and no picture wires or aught that could suggest self-injury to a depressed or suicidal patient. The carpets should not cover the whole room, and matting can often be substituted for rugs or mats. The bed and bedding should be of a simple kind. The male or female nurse usually sleeps in the same room with a private patient of the same sex unless the case be very acute. The bedstead should be placed where light cannot fall on the patient's face in the early morning, and the light should be at the

back of the patient, not in front of him. A horsehair bed on a spring mattress will be quite satisfactory, and the bed linen should be clean, light and smoothly folded. Comfortable pillows—care must be taken to avoid feather pillows for epileptics—must be arranged, and if the patient is feeble or bed-ridden, a bed-rest to support the shoulders will afford much comfort, and it will be a change for the patient to be occasionally propped up. An eider-down quilt is always preferable to heavy bedclothes, both from a health and comfort standpoint. If a patient be a chronic case, feeble or paralysed, she may have to be kept in bed for long periods; in such cases an air or water-bed or cushion is a necessity, for it equalises the pressure and helps to prevent bed-sores. Bed-sores are, in some cases, a flagrant example of bad nursing; when present they are most difficult to heal, and their prevention is always better than their cure. I admit that in some cases where there are great nutritional disturbances, bed-sores or pressure sores will inevitably occur, but a general test of good nursing is their absence. The patient should be kept scrupulously clean, changed whenever necessary and at once when the occasion arises, and not at fixed intervals. The skin of the back should be frequently examined and washed clean with soap and water, then with methylated spirits, brandy or eau-de-Cologne, dried carefully, and afterwards powdered with violet powder, starch, or boracic acid powder. I have known a female patient who had to be, together with her bedding, carefully changed not less frequently than seventeen times in a day. A “mackintosh” sheet is placed under the lower blanket in cases needing special supervision, *viz.*, such as those whose habits are

Notes by the Nurse.

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defective, and when not in use this should be rolled and not folded, to prevent the rubber from cracking and perishing at the folds.

The nurse herself should wear a quiet and unobtrusive uniform, as she seems to be more in authority when wearing a special dress, and there will be less risk of personal antagonism when she is thus attired. The uniform should be of some light, washable material, and of a colour that will not readily show the dirt. A print dress is always a useful indoor uniform, as it can so easily be washed. A neat cap, apron, and cuffs complete the toilet. The nurse should have a good pair of scissors for emergencies, attached to a chain on the belt and kept in a special shielded case. The patient's face and hands should be washed before each meal, at least three times a day, and the body sponged with tepid water whenever necessary. The teeth should be regularly cleaned, and any artificial teeth taken out at night, cleaned, and placed in a tumbler of cold water till the morning, when they are handed to the patient or placed by the nurse in the mouth. The hair should be carefully tended to; combed, brushed, and then plaited into neat braids. The nurse for private mental patients, as stated, is expected to be maid, companion, nurse, and friend.

CHAPTER XVIII.

The Private Nurse in a Private House—Changing of Bed-ridden Patients—Administration of Medicines—Forced Feeding—Preparations.

THE private nurse in a private house is face to face with risks and difficulties which nurses in institutions never meet. The chief of these are less from the nature of the case than from the greater difficulty of controlling a patient in her own house, where she has been mistress, and where she is more apt to resent interference with her liberty. Difficulties will also arise from the probable interference through nervousness, suspicion, and fear on the part of the relatives and friends, and a nurse will have to exercise considerable tact and forbearance, and maintain a calmness under much provocation whilst nursing private cases. It is well for the medical officer to issue his instructions in writing, and in order to protect the nurse he should take all responsibility for the instructions being carried out. It is still better for the medical officer to use his influence to keep the patient and her relatives apart, as their presence will tend greatly to prolong the illness and to retard recovery. If the patient exhibits violence the nurse should as far as possible try to prevent, in a private house, every kind of impropriety of manner and language, and should, if necessary, summon aid as quickly as possible; in the meantime

she should avoid personal struggles, and endeavour to tranquillise the patient by kind words or by diverting her attention. It is often better to persuade such a patient if possible to enter her room, where the quietude and the unexciting surroundings may restore her calmness.

A private nurse takes much pains as a rule to acquire a knowledge of the character of her patient, whom she encourages to good conduct and to habits of neatness and order, securing her confidence by friendly treatment and a uniform regard for her comfort. A nurse should always heed every complaint made by a patient, however trivial it may appear. It is important in a private house to promote such habits as may prevent patients being negligent of cleanliness when in bed, and this can only be done by proper attention paid during the night.

For changing the under bed-linen of patients who are kept in bed there are two methods usually practised by nurses—*viz.*, either (*a*) replacing the sheet and blanket lengthwise; or, when patients cannot be turned on their side, (*b*) across the bed from the foot upwards. For the first-named method the pillow is removed, the patient rolled on one side beyond the middle of the bed, the soiled sheet and blanket are rolled their whole length until the soiled roll is placed right against the patient's back; the clean sheet and blanket are then half rolled along their whole length, the two rolls of clean and soiled being thus side by side. The free unrolled portion of the clean sheet and blanket are then placed in the proper position over the bed, mattress or mackintosh, and tucked in under. The patient is then rolled back to the clean linen, the body passing over the two rolls (clean and

soiled), which are now free. The soiled bedclothes are further rolled outwards and removed and the unsoiled sheet and blanket follow, the free edge being tucked in on this same side as on the other. If the patient cannot for any reason, such as fracture of the leg or thigh, etc., be moved from one side to the other, a similar process of changing takes place across the bed from the foot towards the head.

To remove the upper sheet without uncovering the patient the bedclothes are stripped except the sheet and blanket. Over these the clean sheet is placed, the soiled one is drawn out underneath, and afterwards the blanket, so that the clean sheet is now next to the patient. The remainder of the bed-covering is placed over this in the usual order, and the changing is thus completed.

The draw-sheet, used for helpless patients to protect the lower bedclothes, is a small sheet folded so as to reach from the middle of the patient's back to the knees, the sides being well tucked in under the mattress. When soiled, the draw-sheet is removed in the manner indicated for the lower sheet, or if the patient is not too heavy, she can be lifted either by the nurse alone, who passes her arms well underneath, one under the back the other under the knees, whilst another nurse places the draw-sheet in position, or two nurses can do this by joining hands on each side of the bed. It is necessary to see that all bed-linen is well aired before being used.

In using the bed-pan—the slipper for women and the round pan for men—a flannel covering for the sides is always adopted to prevent the cold earthenware from coming into contact with the patient's body. Carbolic solution, Jeyes' fluid, or some other disinfectant is kept

in a locked cupboard always placed in the pan after use. This should also be done after washing the pan, and the nurse must see that none is left on the sides of the pan to irritate the skin. It is usual to keep the excreta in the lavatory for inspection by the medical officer.

No harsh treatment nor any punishment may at any time be applied to a mental patient, nor should any violent or intemperate language be used towards a patient. When certified, such persons are carefully guarded by the provisions of an Act of Parliament, and the nurse or person who “ill-uses” the insane is liable to severe penalties. The whole time of a private nurse should be devoted to the patient, as she pays attention to the patient’s food, dress, occupation, exercise, amusement, and general conduct. A great difficulty which the private nurse has to contend against results from the structure and the arrangements of the private house in which the patient resides, and especial care must be taken to guard against risks from stairs, open windows, razors and knives, medicines, poisons, etc. These latter have to be carefully locked away, and the nurse must also be cautious to see that ladders, steps, or other objects with which patients may hurt themselves or others, or by means of which they may escape, are placed out of the reach of the patient. The private nurse is always expected—more so even than the public nurse—to set an example of order, quietness, kindness, and good conduct to the patient, and to be careful of what she says concerning the house, relatives, or others in attendance. She should herself set an example of usefully employing her time, as her conduct will probably become the standard by which the patient orders

her own acts and conduct. Like the public nurse, the private nurse is expected to pay strict obedience to all orders from the medical officer in charge, and it is undesirable that she should talk of the behaviour of the patient under her care; neither should she convey any letters or newspapers from her patient or any other person without permission from the medical officer in charge, or from the relatives or other persons appointed—in some cases by the Court of Chancery—to supervise the patient's care. It is very necessary for the private nurse to report all daily changes in her patient. To do this means much practice and close observation, but when carried out with precision and without exaggeration it is a good proof of valuable training. For this purpose she will keep a private daily memorandum book recording (*a*) the food and drink taken, and the state of the bowels; (*b*) the amount of exercise and length of time in the open air; (*c*) the patient's temperature, pulse, and respiration; (*d*) the weight (and variations thereof) observed from time to time; (*e*) the amount of sleep; (*f*) the chief mental symptoms, and whether any impulses hurtful to herself or others have developed; (*g*) any struggles, accidents or casualties that may have occurred; and (*h*) the administration of medicines.

In the administration of medicines a measure-glass, marked in teaspoonfuls, or tablespoonfuls, is used. This measure-glass holds two ounces as a rule, *viz.*, the quantity contained in an ordinary wine-glass. A teaspoonful is the same measure as a drachm, two drachms are a dessertspoonful, and a tablespoonful is half an ounce. A minim is one measured drop, and there are 60 drops to the teaspoonful or drachm. It is not often that a nurse

is called upon to measure minims or drops, and when requested she is provided with a minim measure, but she must always be very careful in measuring out medicines of all kinds, as grave and fatal errors have occurred from the want of due care in this respect. Before pouring out medicines she should always carefully read the instructions on the bottle and be certain she understands them, and note the time they are to be given, and shake the bottle before pouring. In pouring out medicines she should hold the bottle with the label uppermost, so as not to soil or obscure the instructions on the label by the medicine running over it after or whilst it is tilted.

Medicines and lotions or external applications must be kept separate, and the medicine-glass carefully washed after using. If the medicine is nauseous a biscuit or crust of bread or a peppermint lozenge will remove the taste.

It is well to know the actual quantity of nourishment taken, and for this the capacity of different holders should be known; for instance, a small teacup holds about four ounces, and a tumbler about half a pint. When insane patients are unable to sit up in bed they are fed either with a spoon or by means of a feeding-cup. The feeding-cup is half covered, it has a handle and a spout; the latter is long and curved, more especially when used for those who cannot lift their heads from the pillow. Too much fluid must not be put into the feeding-cup at one time, as it may run over the side and soil the personal clothing or the bed-linen. Feeding insane patients is one of the most common forms of duties the mental nurse is called upon to do. For mental cases in private houses the meals should be

cleanly, nicely, and punctually served, more especially as many patients entertain delusions of suspicion and poisoning in regard to their food, or they refuse food from depressing delusions of personal unworthiness and wishing to die. In such states all the persuasive powers of tactful persons may be of no avail. Much, however, may be done by encouraging and coaxing the patient, who, when once he or she has tasted the food, may overcome any prejudice in regard to it and take it freely. The nurse has to be especially careful in feeding helpless or paralysed patients, who should be gently raised by passing the left arm behind the pillow or under the shoulders, raising the pillow and head together, giving the fluid food with the other hand by means of the feeding-cup or spoon, being watchful that no liquid trickles into the lungs to set up broncho-pneumonia. In all feeding cases a napkin or towel should be used to protect the personal and bed linen, as already stated, and the mouth should be wiped after each feeding.

In cases of profound exhaustion it may be necessary to administer nourishment at frequent intervals, as the life of the patient may depend upon this; such nourishment as beef-tea, mutton-broth, albumen-water, egg-flip, milk, or stimulants may have to be given every two or three hours, and by a judicious varying of these the nurse may succeed in not nauseating the patient. It is surprising what quantity of concentrated liquid nourishment can be taken in the extreme exhaustion of mental cases, and it is equally surprising how apparently hopeless cases rally, obtain sleep, and mend under this treatment. When the mouth and lips are parched, and the teeth black with *sordes*, glycerine and borax or

lemon juice and water can be used to cleanse them. In cases of melancholia, liquid nourishment administered in the early hours of the morning is one of the best antidotes to depression, and if the habit of early morning depression can be broken the patient will probably begin to mend. As a rule, except when there is acute gastric disorder, water may always be given to patients whenever they ask for it. Forced feeding with the nasal or œsophageal tube must never be resorted to by the nurse, whether public or private, but she is expected to get everything ready for the medical attendant to do this, *viz.*, a glass or other funnel, a long rubber tube, carbolised vaseline, basin, soap and water, and the nourishment and medicines prepared as ordered. Artificial feeding by the rectum may have to be performed by the nurse when "enules" are prescribed, or a small injection (about 4 oz.) of peptonised beef-tea or milk may be ordered every four hours.

The private nurse may be confronted with many emergencies, certainly more than fall to the lot of public nurses, and find that she is expected to cope with them single-handed. Some of these are through attempts at suicide by hanging, drowning, burning, scalding, poisoning or suffocating, and there may be accidents of various kinds needing a resolute nerve. It is only after a full and complete training that the knowledge and experience necessary for coping with emergencies can be obtained, and the best training for a private nurse is to be obtained in institutions, where all varieties of insanity and all kinds of cases are received and treated, and where these emergencies are experienced. In regard to one point, the question of stimu-

lants, it is much the best plan for private nurses to abstain from these during the period of their engagement, as their conduct may be liable to misinterpretation. If the nurse be true to herself, it follows, "as the night the day," that she must be true to her charge.

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CHAPTER XIX.

Mental and Physical Care of the Defective Classes—Special Training needed for the Defective and Epileptic—Methods of Dealing with these Cases.

THERE is a further class of mentally afflicted persons which needs special supervision and treatment. This is the large class of backward children of both sexes, the mental failure in them varying from slight inability to fix the attention and to learn lessons, down to the most helpless and speechless idiocy.

Idiocy and imbecility include cases quite distinct in their causation and pathology, and the popular terms idiocy, imbecility, and feeble-minded, indicate fairly well three degrees of mental obtuseness. The fact that such obtuseness may occur through lack of development, or through disease or injury befalling the brain, either before or after birth, justifies this as a sufficiently precise classification for our present purpose. Such feeble-minded children occur as well in the most virtuous as in the most vicious families, in the noblest as well as in the poorest and most insignificant, and when opportunities permit of education and training, suitable nurses are selected for their reasonable, methodical and affectionate discipline under which they greatly improve, and to such an extent that the slighter forms of dulness and retarded mental development evolve into reasonable,

good-tempered, quiet, and obedient persons. I think, however, that it would be too much to say that feeble-mindedness is ever capable of complete cure by any amount of training; nevertheless, the results attained are eminently gratifying. To show how wide a field exists for the trained nurse for weak-minded children it will be sufficient to state that there is more than one weak-minded and backward child to every 120 children in the schools of London, and that every effort is made to improve such children by the application of the laws of health and elementary hygiene, as well as by special instruction in schools for the defective classes. This public feeling as to the improvement of the improvable cases opens up an extensive career for many nurses and teachers who are qualified to undertake such mental cases.

It is important to obtain good influences over these children at an early age, and, if speech is backward, the repetition of letters, syllables, phrases, or sentences after the nurse or teacher, sometimes accompanied with music, serves as a valuable help to articulation. The discipline obtained by the repetition of nursery rhymes associated with tunes and in conjunction with rhythmical muscular movements, such as dancing, marching, drill, clapping of hands to keep time, helps to draw out their latent powers. Speech, intelligence, the use of their limbs for walking, and their hands to feed and dress themselves greatly improve under this training. The chief aim in teaching all such children is to interest them and to kindle a feeling of attachment to those around them, as also to their toys, and thus serve to gain their confidence. Their hands should be guided and helped to

hold things, to pick them up, to part and put things together, like a dissected map; to arrange blocks into shapes, to name, compare, and count common things, to draw conclusions, and later to evolve something useful by manual application, such as is done in the various kindergarten classes of infant schools.

Children who are thus being specially taught should have objects of interest, such as stuffed birds, eggs, butterflies, models of figures, pictures, simple models of machines, artificial and real flowers, presented before them for observation. Due praise must be accorded to successful efforts at learning, the approval of the teacher must be used to encourage effort, the training must be pleasing and care must be taken not to fatigue or bore the child; it should also be amusing—so far as possible.

The nurse will probably have much occasion to exercise her forbearance and patience in correcting uncleanly habits and in encouraging efforts at self-feeding and dressing. She must see that no one teases or scolds the child, or under any circumstances applies corporal punishment, for as such children grow older they tend to become more difficult to manage, and only when the discipline is regular, kind and reasonable, will they become tractable, good-tempered and quiet. With diligent application many of these cases improve so far as to interest, amuse and occupy themselves. They learn a trade or a handicraft of a mechanical kind, such as tailoring or carpentering, and may become in many instances self-supporting. Sometimes, when they have acquired sufficient knowledge and power to earn their maintenance, they do not know how to expend their earnings, still they learn to be of much use to their

parents or relatives, especially boys who can work on the land, and girls who become useful in domestic occupations. It is of great importance to feed backward children properly and well, also to teach them to be self-helpful generally. Under suitable and judicious training even the lower grades, who tend to be noisy, mischievous, spiteful and excitable, become calm, quiet and well-behaved; uncleanly habits, tricks and improper propensities are overcome and give way to decent and even good behaviour. Furthermore, previously weak and undeveloped physical powers are so strengthened that among the well-to-do these persons pass muster at the social meals and in the family circle without prominently obtruding their deficiencies and eccentricities. Also, they may be able to take part in simple pastimes such as cricket and croquet, and by tutoring to become industrious and tidy, instead of being dependent, and growing up to be ungovernable, mischievous, and self-indulgent. It is interesting to note that backward children are pre-eminently susceptible to religious training and moral influences; the ceremonies and rites please them; the music during Divine service entertaining them, and the whole scene of quiet reverence usually producing placidity. After a certain age they should be encouraged to attend places of Divine worship. They learn to sit still, and, if not too long, the varied parts of the service help to fix their attention without causing weariness or fatigue. By thus fostering religious feelings a moral sense is aroused which assists to form their character, and deeds of simple kindness are quite noteworthy among these afflicted children. It is not that temptation to depravity and selfishness is not strong in this class, but it is a fact that the emotional

life, such as is encouraged by religious devotions, does exercise a very considerable control over their impulsive and restless conduct. It is now no longer questionable whether these cases can be improved; on the contrary, it is generally accepted that marked benefit is derived from a distinctive system of training among the weak-minded, and that much is to be obtained from persevering endeavours to develop their physical and intellectual powers; it thus becomes necessary that the mental nurse should have sound and recognised views as to how to act. As stated, the bodily condition of weak-minded children necessitates above all things good food: oatmeal porridge and bread and milk should enter largely into the diet scale, and as there is so great a tendency to swallow food insufficiently masticated, it should consist also of soft puddings such as rice, custards and sago, cornflour and broths or beef-tea. Solid food, such as meat, should be carefully cut up or minced, and the mince should have a due quantity of well-cooked potatoes and green vegetables, for such patients are very prone to scurvy, bad mouths, bad teeth, and sore gums; the latter often caused, in my opinion, by insufficient green vegetable food, and the daily use of a toothbrush is essential for all these cases. Fruit, such as ripe oranges, apples, etc., are greatly enjoyed, and as a rule the fruit should be cooked. Attention to the bowels is most important in all classes of mental cases. As to the clothing, it should be warm and well fitting, as the figure is often awkward and unattractive, necessitating greater attention so as to render it presentable. Outdoor exercise is very necessary to overcome the natural tendency to sloth on the one hand and to restlessness on the other. Exercise after a meal is often convenient, and

it is well to rest before one. Weak-minded children require more rest than is customarily taken by healthy ones; they are often unable to walk much, and they soon tire.

Of weak-minded and backward children a high proportion—it is stated over 25 per cent., and this is verified from the statistics of Earlswood Asylum—are epileptics, and unless the fits cease there is no likelihood of improvement, rather the reverse, for progressive deterioration ensues, until the child, growing to man's estate, ultimately becomes only fit for care in an asylum for the insane. Fortunately, however, the shield has another aspect, for with combined medical supervision and judicious care on the part of the nurse, with the training and education provided for this class by the Act of 1889, also with attention to the body by means of gymnastic apparatus and by easy physical drill, either in the nursery or in the playground, marked improvement often results. The epilepsy may cease, indeed juvenile epilepsy not infrequently does, and the child grows in intellect and adds to its acquirements.

It is often asked at what age is it best for the "special nurse" to supersede the mother? To this, with some qualifications, the answer is five years. A child at this age begins to assert and press its own will in opposition to the mother, who is often too sympathetic to deny the child anything it wants or craves for. Selfish or bad habits are evaded, if proper training be commenced at this age, and if the directions of a nurse are unheeded in such cases, then about the age of seven, treatment by association with others in a special school or institution becomes necessary; the child then sees others play-

ing with balls, hoops, kites, or skittles, wheeling a cart or barrow, or taking an interest in live animals, and thus itself develops an interest in these by imitation and uses them to advantage without direct command. The nurse must have special training through experience, and this gives her the faith and the conviction that her influence will be a good one and that her supervision will be duly rewarded. Attention to the proper manner in which meals are taken and to the regular calls of nature are very important; care should be exercised that the food may not be ravenously taken nor in too large mouthfuls, that habits which are self-helpful are cultivated and that the children should not depend too much upon others; also that regularity and punctuality are preserved in all domestic and training arrangements. Much can be done for these weak-minded persons by gaining their confidence and then guiding them by kind and cheerful looks and words, together with tact and firmness.

In the application of bodily exercises care must be taken to avoid fatigue, and the nurse should carefully notice any indications of inattention or of failing health or loss of appetite.

It will take much of the nurse's time to keep children who are mentally deficient clean and warm, especially in winter, as they possess languid circulations and are limited in their capability for bodily exertion. To keep the feet warm, worsted socks should be worn in bed at night. Their rooms should always be light, airy and sweet, the ventilation should be free but not draughty, the air warm but not oppressive, for which purpose open fires are preferable to the various new methods of heating by hot-water apparatus or by steam radiators. The

rooms should be bright and cheerful, and should have pictures and ornaments, birds or pet animals that can be looked after indoors, and the nursery should not only be an indoor playground but also be as stated, a school-room full of object lessons. Care is needed in case of an outbreak of fire, and the nurse should have received instructions in anticipation of such an event, so as to know how best to get her charge or charges into a place of safety. In regard to cleanliness, bathing is very necessary for weak-minded children, and a tepid bath given every morning or a rapid sponging, with all the necessary precautions against taking cold, will tend to brace up and keep these little people as vigorous and healthy as is possible.

It is often found by nurses that the terminology of mental disease is puzzling and confusing, and idiocy is confounded with dementia. It is as well to understand that idiocy begins with a low grade of intelligence which gradually improves and increases, whereas in dementia the person has commenced with average intelligence which gradually diminishes. The intelligence in dementia is gradually getting less, whereas in idiocy, on the contrary, it gradually improves, and may greatly improve under skilled and patient training. In extreme cases of idiocy the stupidity is so profound that the afflicted victim lives a merely vegetative life, is totally devoid of intellect, and quite incapable of any improvement. In such a case the nurse's duty is to pay attention only to the creature or animal functions—a dull task, and one which would be positively repellent were it not for the Christian feeling that attention to the lowest and the least is a service to Him that made all

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things. There are many and various causes of idiocy, such as consanguineous marriages, tuberculous affections or drunkenness in the parents, hereditary and other influences, but in these the nurse is not expected to take more than an intelligent interest, and in regard to them it is not her duty to offer advice.

CHAPTER XX.

Symptoms of Disease in the Insane—Pain may be entirely absent—
Diseases of the Respiratory Organs—Their Symptoms and Treatment by the Nurse—Diseases of the Circulatory Organs—Their Symptoms and Treatment.

IN a previous chapter it was stated that the insane are subject to the same bodily diseases as the sane. Owing to mental affliction, however, these diseases are by no means easy to diagnose, as little or no assistance can usually be given by the patient whereby the medical man and the nurse are enabled to appreciate the nature of the disease. Pain, which as a subjective symptom is a valuable index, may be altogether absent, or it may be misleading, and the only symptoms are those objective ones which are discovered by direct physical examination of the organ affected. It is important to differentiate between *symptoms* and *signs*; the former relate to changes of function in an organ, such as palpitation, shortness of breath, or difficulty of moving, and they may or may not indicate disease of the particular organ affected. Thus, pain in the knee may point to disease in that joint or in the hip, and pain in the chest may indicate commencing pneumonia, pleurisy, heart disease, or even a fractured rib; but when *crepitus* is obtained, by placing the hand, *i.e.*, by palpation, over the seat of pain we have a definite physical *sign* of fractured bone.

Signs are unmistakable evidence, symptoms only possible evidence. Signs of chest trouble may be obtained by auscultation, percussion, and other methods of physical examination. Fulness of the abdomen in a woman of a certain age may indicate or may be a *symptom* of pregnancy, but the sound of the foetal heart is a *sign*. Pain, therefore, as a symptom of disease—so much relied upon in the sane, and which may be sharp or acute, a twinge or a pang, heavy or weighty, full or tensive, shooting or lacerating, tearing or burning—is often entirely absent in the insane owing to mental impairment, and may, when present, and in consequence of delusions, be misinterpreted. Insane persons often obstinately resent questioning and refuse to submit to any kind of physical examination, hence it is important for the nurse to note and report any change in the conduct or manner of her patient, so that early and proper treatment may be applied.

In this chapter we propose to deal with symptoms of disease as occurring within the chest, *viz.*, of the respiratory and the circulatory systems, and only so far as concerns the insane, for the nurse is already considered competent to deal with ordinary sick nursing.

Pain, as we have seen, may be absent, and cough also, which being a reflex act, may never be present, even throughout the whole course of ordinary *phthisis pulmonalis* (consumption of the lungs), the expectoration not being coughed up but quietly swallowed, so that the first sign of phthisis may be diarrhoea, caused by tubercular affection of the intestine. The appetite may be undiminished, and the loss of weight be almost inappreciable. There are two *symptoms*, however, indeed they

might be called *signs*, for they are definitely indicative of this form of lung affection, *viz.*, (*a*) feverishness at night or evening temperature, and (*b*) dyspnœa or difficulty in breathing.

Whenever an insane person appears to be out of health, although pain and other symptoms are absent, the temperature should be taken night and morning. The value of the clinical thermometer cannot be overestimated in the appreciation of disease accompanied with mental affection. It is the first, most reliable, and the best means of obtaining information.

If a cough be present, and it is coarse and croaking, or attended with a whistling or crowing sound, then laryngeal disease or obstruction may be indicated, and I have more than once seen this as the only sign of early malignant disease of the larynx. If the cough be attended with wheezing sounds or rattling and difficult breathing, there may be bronchitis. If the cough be short and sharp, pleurisy or pneumonia may be indicated, whereas that of whooping cough is unmistakable. If dyspnœa or difficulty of breathing be present and the respirations are shallow and more frequent than twenty-five to thirty in a minute, pneumonia may be present; if prolonged, difficult, and wheezing, then bronchitis, asthma, or heart disease may be indicated. A cessation of respiration for a few seconds, then a sudden recommencing—at first rapid and shallow, then slower and deeper and again stopping, a condition called Cheyne-strokes respiration—is an indication of serious brain affection; a state of breathing which may occur before death from heart or kidney diseases.

The commoner varieties of inflammatory affections

attacking the air passages and lungs include ordinary catarrh or colds; laryngitis, *i.e.*, inflammation in the larynx; bronchitis, when the bronchi are affected; pneumonia, when the lungs are affected; pleurisy, when the pleura or covering of the lungs is affected, and pleurisy with effusion, when there is a collection of fluid, and empyema, when pus collects in the chest; asthma, when there is a distressing difficulty of breathing; and consumption or pulmonary phthisis, when one or both lungs are affected by the *tubercle bacillus*—a condition which requires special attention, more particularly when a number of persons are collected together as is necessarily the case in public institutions.

Catarrh or cold is probably the most common affection of the respiratory tract, and may be the precursor of laryngitis and bronchitis. It is a congestion of the whole of the mucous membrane of the nose and throat, with plentiful secretion of clear glairy mucus, which later becomes green and thick. It commences with headache, passes through a stage of active secretion necessitating the use of many handkerchiefs and may end, if neglected, in bronchitis.

Laryngitis is a cold, primarily in the voice organ or voice-box, as it is usually called. The voice becomes harsh and husky; there may be a dry cough, with much discomfort and difficulty of breathing, which during the night may suddenly, in adults as well as in children, become dangerous.

Bronchitis may follow upon either of the above. It is an inflammation of the membrane lining the whole of the bronchial tubes, and is the prevalent complaint of elderly persons in cold weather. It is often the cause

of the chronic winter cough and the difficulty of breathing from which many aged persons suffer. It may appear in an acute form as the result of a cold, with a high temperature reaching to 103° or 105°, with cough, expectoration, marked difficulty of breathing with wheezing, and a feeling of great tightness across the chest. The expectoration passes through the usual stages, being at first glairy, or watery or frothy; then, as the mucus changes into pus, the expectoration becomes greenish or greenish yellow and sticky.

The shortness of breath and the difficulty of breathing may become very marked as the disease spreads to the smallest divisions of the bronchial tubes, finally involving the little air cells of the lungs and ending in fatal broncho-pneumonia.

Asthma may be associated with chronic bronchitis. There is considerable difficulty of breathing, the inspiration is long and deep with much wheezing, and expiration is also long and difficult. The nurse should observe whether inspiration or expiration is the more difficult. The feeling of suffocation attending asthma is more distressing than dangerous. Asthma sometimes takes the place of an attack of insanity; at any rate, the mental symptoms have been observed to abate with its onset. Asthma may come on quite suddenly in the night, and may follow indigestion or the taking of some inadaptable food.

Pneumonia is an inflammation of the substance of the lung itself. It means a filling up of the air cells with inflammatory products, and is usually the result of a cold or chill. At times it seems contagious, and to occur as an epidemic. It is an acute disease, coming on after

accidents when persons have been long bed-ridden ; with heart or kidney disease, or after rheumatic and other fevers, and it very often supervenes upon paralytic states.

In the case of the insane, and in the form of broncho-pneumonia, it is the most common cause of death among old people ; it occurs also among those who require to be fed artificially, particularly if they lie much on their backs, and for this reason it has been called "feeding pneumonia". In the case of young people suffering from depression with refusal of food it may occur within a few days of feeding with the cup, the milk trickling into the larynx and lungs causing the temperature to rise, for milk forms a favourable culture medium for germs, and such a state not infrequently ends in fatal broncho-pneumonia. Ordinary pneumonia, primarily attacking the lungs, commences (after a day or two of undefined illness) with a severe rigor, and a temperature of 104°. The breathing is rapid, there may be a short cough and pain in the side, the face is somewhat flushed, there may be some vesicles of herpes round the lips, and there may be expectoration, after a day or two, of sticky, reddish-brown sputum, which is described as "rusty," as it is the colour of old iron, from an admixture of blood with the mucus. The skin is dry, there may be some jaundice, especially if the pneumonia is on the right side, as the up and down movement of the diaphragm is impaired and the bile is no longer circulated through the liver into the gall-duct, but is absorbed into the general circulation ; there is also a destruction of blood-corpuscles in these attacks which helps to give the jaundiced hue. The tongue is brown,

the teeth are covered with *sordes*, and incrustations appear on the lips. There is usually marked delirium, with tremulousness and picking at the bedclothes at night, and the temperature remains high for from seven to nine days. It may come down suddenly—which is called a *crisis*—and there is profuse perspiration; or it may fall gradually—which is *lysis*—and the skin becomes moist, the symptoms gradually subside, and the patient recovers. In a large number of cases the course is less favourable: exhaustion increases, the sputum from “rusty” becomes “prune-juice” coloured, caused by a greater admixture of blood, then it becomes greenish and foetid, indicating gangrene; the patient’s colour becomes more livid and dusky, the respirations more difficult and rapid, the restlessness increases, the pulse falls, and death ensues.

Pleurisy is an inflammation of the covering membrane of the lung and that lining the chest wall, the surfaces of which in health touch and rub over each other without pain. Pleurisy may occur from a cold or a chill; from injury, such as a fractured rib, or in the course of rheumatic and kidney diseases; but most frequently from tubercle in the course of, or as the commencement of, consumption of the lungs. Pleurisy is either “dry pleurisy,” which is a slight roughening and inflammation of the pleura giving rise to a sharp “stabbing” pain in the side during respiration, which is easier when the patient lies on the affected side, thus preventing the movements which occur in respiration; or it is pleurisy with effusion, when fluid accumulates in the thorax, pressing upon the heart and lung, pushing both from their ordinary positions and compressing the lung so

that it becomes airless. This fluid may amount to quarts in quantity, it may be clear watery fluid, or mixed with a slight amount of blood, or it may be pus—in which case the pleurisy is described as an *empyema*. The symptoms are a raised temperature (102° to 103°), difficulty of breathing, pain, an occasional short cough without expectoration but with some lividity. There is great danger from sudden death, which is the most common ending among the insane in fatal cases. To avoid movement or restlessness the patient is made comfortable by being propped up in bed, or being helped to lie on one side, which is often the easiest position.

Phthisis or Pulmonary Consumption.—Of all the deaths that take place in asylums for the insane phthisis is responsible, either alone or in association with other causes, for nearly one-fifth. It is caused by the invasion of a germ, the *tubercle bacillus*, which attacks the substance of the lung, causing a local inflammation and the formation of a small nodule or tubercle the size of a boiled sago grain. These nodules are either separate or collect together into large masses, eventually breaking down in the middle, causing cavities in the lungs and giving rise to the sputum in which the tubercle bacilli swarm. As pulmonary consumption is infectious and the actual cause is known, it becomes imperative and obligatory that no extension of this disease becomes possible in institutions where many people are collected together. The symptoms of phthisis, so well known in the sane, may be masked in the insane. There may be no cough, and it is often impossible for a medical man to make the thorough and complete ex-

amination which is possible in the case of sane persons. The patient will often neither breathe nor speak when told, but he will shout and resist all efforts at examination. The best tests in such a case are the body weight, the shortness of breath, and the morning and evening temperature, the so-called night sweats and diarrhoea. Spitting of blood, which is a common incident in the course of consumption, may be altogether absent in the insane or may occur as a complication. The deposit of tubercle in other organs is also a complication occurring in cases of phthisis, and may take place in the intestines as already stated, from swallowing the sputum; in the larynx, or in the membranes of the brain; the latter, however, is very rare, except in young persons who have suffered from ear disease with discharges. Air in the pleural cavity may occur as a complication in cases of phthisis after sudden or severe exertion, and such a condition is accompanied by acute sudden pain, difficulty of breathing, and collapse. Such a complication occurs owing to air passing through the diseased lung into the cavity of the pleura, thus causing the lung to collapse.

As to the treatment of the respiratory affections enumerated, the nurse should never allow a catarrh or a cold to be neglected. The patient should be kept indoors and in an equable temperature, with plenty of good and nourishing food. A few days in bed may save complications, and the extension of the catarrh down the bronchi.

For *laryngitis*, the bronchitis kettle may afford much relief, the air being kept moist and the temperature of the room at sixty-five degrees. Inhalation, if the

patient's mental condition permits, will also give relief. If the case be serious, surgical relief by means of tracheotomy may be necessary, and the nurse will have to prepare the dressings and the instruments and be capable of cleaning the tube.

For *bronchitis* the same surroundings are necessary, draughts and chills are to be avoided, and the temperature of the room must be equable. The patient's shoulders are to be raised up in bed, if preferred, and paper expectoration pots should be used when needed, so that they can be destroyed. The various remedies are inhalations, which are prepared according to instructions, poultices, and cough medicines. The effect of medicines must be observed and recorded by the nurse, as stupor and lividity may appear and mental symptoms such as delirium aggravated. Fluid nourishment and stimulants are to be given as ordered.

For *asthma* a cup of coffee may relieve an attack, or the burning of nitre paper, but a good aperient may prove more effective than any other remedy.

Pneumonia is one of the diseases that especially needs good nursing. The patient is kept in bed, the room must be quiet and the bedclothes light but warm. Pain is relieved by ice or mustard poultices in the early stages, or by large hot linseed meal poultices, or a cotton-wool jacket after the first stage. A receptacle for the sputum should be kept and a bed-pan used so that the patient does not get out of bed, and great care must be exercised to prevent bed-sores. Ice, or iced drinks, lemonade or gruel should be given to quench the thirst, and fluid food must be regularly and freely administered. It is for this disease, especially for

the nervous symptoms, that stimulants are so useful. The nurse must report any change in the appearance of the sputum, the pulse, temperature and respirations.

Pleurisy may require the use of an aspirator to tap the chest wall with, and the nurse must be careful about frequent changes in the dressings if pus is withdrawn, as in such a case the chest is probably opened under an anæsthetic, and a tube kept in the opening for the pus to drain through. These cases of empyema (collection of pus in the pleural cavity) usually require much attention to prevent blood-poisoning.

For *pulmonary consumption* the nurse must exercise constant care that all spoons, cups, forks, etc., used by the patient are properly disinfected, and of all disinfectants the most efficient and least harmful is boiling water. The utensils must be boiled after use, and all sputum, if cough occurs and expectoration takes place, must be burnt. This is often difficult with the insane, as many of them spit about the room, bedding, and bedclothes. The room is kept clean by wet scrubbing, and all dusting done with a wet cloth to avoid raising the dust, and with it millions of infective bacilli.

The patients should be in the open air as much as possible, and when in a room it should be well ventilated, there being plenty of fresh air without causing a draught. The dietary should include milk, cream, and butter, or, failing these fats, cod-liver oil may be found very suitable, and in these cases it can often be well digested. If diarrhœa be present the stools must be disinfected, also all soiled linen and bedding. It is often possible to relieve pain in the chest by hot poultices or fomentations, and a simple "linctus" will

relieve the cough when present. The flannels must be changed if there is profuse night sweating, and barley-water, egg-albumen water, or lemonade must be given to allay thirst.

Tepid sponging relieves the high temperature, and a little fountain or spray of eau-de-Cologne or other scent will often give patients much gratification.

For the spitting of blood, also called *hæmoptysis*, ice to suck, cold drinks, and absolute quietness in the recumbent position are the best remedies within the power of the nurse. Even the insane are greatly frightened at the sight of their blood and there is often considerable shock, and whilst the doctor may meet this by an injection of morphia, the tact of the nurse will do much to preserve the quiet and restful demeanour so necessary for such cases.

As to diseases of the circulatory system, there are three cardinal symptoms which may indicate heart affections—*viz.*, *dropsy*, *difficulty of breathing*, and *lividity*; the latter is present mostly in cases of mitral disease and in affections of the right side of the heart; it is only a sign of general congestion and engorgement caused by heart weakness. It is absent in the most dangerous form of heart disease, *viz.*, aortic valve disease, a form which causes sudden death; the patient in this form being often white and blanched and liable to sudden faintness which may be fatal. Palpitation is a *symptom* of functional as well as of organic heart disease; but it is not a *sign*, as it may arise from indigestion, anxiety, or worry, also from over-smoking and other causes. The dropsy of heart disease commences usually in the most distant parts, and it is

termed *œdema*. If dropsy begins in the face and the eyelids become puffy, kidney disease is suspected; if the abdomen becomes full (*ascites*) disease of the liver is suspected, whereas dropsy of the feet and ankles results usually from heart disease. In all cases of dropsy there may be albumen in the urine. There is not often much pain in heart disease unless the pericardium, *i.e.*, the sac round the heart, is involved; in such conditions, named *pericarditis*, there may be a collection of clear fluid pressing upon and interfering with the action of the heart, as occurs in rheumatic fever, or a collection of pus (*pyo-pericarditis*) and *pyæmia* may result. The *dyspnœa* or difficulty of breathing may be very marked, especially in *pericarditis* or valvular disease accompanied by congestion or inflammation of the lungs, the slightest effort bringing it on. The difficulty of breathing is greatly increased by exertion and may come on in paroxysms. The patient is often more comfortable when propped up in bed or sitting up in a chair. Disease of the aortic valves is more common in men than in women and is the most fatal form; disease of the mitral valves is not generally fatal and death rarely occurs from it, being due, on the other hand, to congestion of the lungs or to dropsy. The mental symptoms are also more marked in aortic disease, the patient being more irritable, restless, and sleepless.

Disease may attack the veins, causing blood to clot in them, and when the valves in the large veins of the legs give way, varicose veins and varicose ulcers result.

Disease attacking the large arteries is serious and may cause *angina pectoris* with sudden pain and spasm, as also aneurism, the whole or part of the artery dilat-

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ing and giving rise to symptoms of pressure, eventually bursting and causing sudden death. The nurse's duties in mental cases with heart disease are to avoid unnecessary strain, to keep the patient calm, to see that the meals are not too heavy and the stomach not over-taxed nor over-loaded. Avoid exciting conversation, or conveying bad news, or any emotional disturbance. It is often found best not to mention their heart disease to mental patients. Such patients must not be opposed or thwarted, and no discussion of their delusions or views is to take place, as it may bring on excitement with faintness or collapse. Their irritability and restlessness must be tactfully met and tolerated, and they should avoid all haste, overstrain, hurry and impatience. Rest in the most comfortable posture is to be observed as much as possible, and the horizontal position on a bed or couch is the least effort for the heart, and the one in which the circulation is easiest and least taxed. If the patient faints, the head should be low. Pain can be relieved by warmth or a counter-irritation. Dropsy needs special instructions and treatment. Heart affections are commoner among insane patients than among the ordinary population, and the nurse is expected to be familiar with the various applications of massage and bathing as already referred to in a previous chapter, and as used in the Schott or Nauheim treatment of cardiac cases.

CHAPTER XXI.

Diseases of the Abdominal Organs—Their Symptoms and Treatment Summarised.

WE have dealt with the nursing of insane persons for diseases of the chest and referred to those affecting the heart and arteries, the lungs and their covering, the pleura. We shall in the present chapter deal with disorders of the abdominal organs, and firstly, those of the digestive system, which are by no means easy to discover in persons suffering from mental disease, as pain—which is the most definite and general symptom—may be and often is entirely absent, or, if present, rarely rises into consciousness. *Dyspepsia* or indigestion is not common among inmates of asylums owing to the plainness of the food, the regularity of its service, and its limited quantity, determined by a well-thought-out scheme; so that the various aches, pains, and discomforts about the chest, pit of the stomach, shoulder-blades and sides, indicating indigestion, are uncommon among these persons. Flatulence and eructations, fulness, acidity, headache, nausea, sickness and vomiting, which are the usual symptoms of dyspepsia, rarely indicate this condition among insane people. When present they may be symptoms of much more serious conditions, such as cancer or some other grave disease of the stomach or the intestines. So often is this true, that whenever an

insane person suffers from vomiting, internal strangulation may well be suspected and should be looked for; more especially must the nurse be satisfied that there is no hernia—inguinal, femoral, or umbilical—which has possibly become strangulated at one or other of the natural openings in the abdominal wall and which would account for the symptoms. I have known a strangulated hernia overlooked by a medical man, and the urgent symptoms treated as from severe gastritis. Always therefore ascertain the presence or absence of a rupture or hernia at one of the usual seats, either at the navel or in the groin, and any doubt upon the matter should be immediately reported to the medical officer.

The first consideration in regard to the digestive system, in the order of sequence, is (*a*) to notice whether the food is properly masticated, and (*b*) whether it is swallowed without difficulty. Many insane persons, such as those who are suffering from dementia or general paralysis—although they have previously to their insanity been persons of essential refinement and cultured manners—become reduced and degraded through their infirmity into creatures of purely reflex action, only their animal instincts remaining. These eat with avidity, and even collect the refuse food left on the others' plates, becoming mere scavengers. They "bolt" their meals, and may, yea sometimes do, run great risks of choking—to which we shall refer later. It is the duty of the mental nurse to be especially watchful during the serving and partaking of meals, so that bones, gristle, or masses of unmasticated food are not swallowed and do not thus obstruct the upper air-passages or the gullet, and to call immediate attention to any complaint or ap-

parent difficulty in masticating or swallowing. For such patients, specially prepared food, carefully minced and with appropriate vegetables, is always ordered. When vomiting occurs, the matter ejected should be kept for the inspection of the medical officer, as the appearance of (i.) undigested food with the peculiar sour odour due to the action of the gastric juice, (ii.) foreign matter, such as something swallowed which is not food, *e.g.*, leaves, grass, bits of wood, dirt, or pebbles, which cause mechanical irritation, or (iii.) blood, and (iv.) "fæcal vomit," may be a sufficient indication of the cause of the sickness. Vomiting in the early morning is not an uncommon symptom, in both sexes, of alcoholic mental affections, and it is a normal symptom of early pregnancy. It may also indicate serious brain disease, such as pressure from tumour or abscess, and it may accompany kidney or uterine affections. The vomiting of undigested food in large quantities may probably point to dyspepsia as the result of cancer of the stomach, which organ becomes dilated or distended, the food undergoing decomposition and fermentation. Persistent vomiting of foul smelling matter, or "fæcal vomit," indicates intestinal obstruction, and the vomiting of blood is a common symptom of gastric ulcer, or congestion from disease of the liver; as may occur in heart affections and in cases of alcoholic insanity with cirrhosis. The appearance of the blood may be dark brown, or it may resemble coffee-grounds, owing to the action upon it of the gastric juice, and there may be an admixture of food with the blood. Vomiting of blood may occur as an isolated attack, or such an attack may be repeated, and the hæmorrhage may so endanger life.

Ulcer of the stomach occurs mostly in young women who are anæmic and suffer from chronic indigestion. There is often tenderness on pressure, even if there is no actual pain, and it is increased on pressure in these cases. There is discomfort after food, followed by vomiting, which may relieve the pain. In some cases perforation of the stomach takes place at the seat of the ulcer, which thus eats its way through the peritoneum and permits of the contents of the stomach escaping into the peritoneal cavity, causing sudden death from shock, or a less rapid death—in one or two days—from peritonitis. *Constipation* is a common condition among insane persons, especially females. It is a frequent cause of diarrhœa, and it may be the cause of intestinal “*colic*”. The patient may bend double with the pain, which is thus relieved by pressure and warmth. Colic may also be a symptom of inflammation or obstruction of the bowels.

Diarrhœa is a frequent ailment among the insane, mainly because they are unable, owing to their mental infirmity, to exercise care in the selection of food, often eating what is unsuitable or indigestible, and thus giving rise to irritation of the intestinal tract, partly also because it may be communicated to them from others. It may be caused by cold, or by sudden variations in the temperature of the air. It may occur in the form of *English cholera*, or *summer diarrhœa*, as an epidemic, with pain, cramp, profuse discharge, cold extremities, and feeble pulse, and giving rise to fatal exhaustion and collapse. In like manner it may be endemic among a people, as is exemplified in the *colitis* or *dysentery* seen among those who live in large institutions, asylums, or

workhouses, more especially when, as is often the case, there is overcrowding.

In some of these institutions this form of dysenteric diarrhœa has become a perfect scourge, and the symptoms which characterise it, *viz.*, (*a*) loose motions, with (*b*) blood and *mucus*, or slime, (*c*) straining or *tenesmus*, together with (*d*) general weakness, are an indication for at once isolating the patient from others. When the stools are black, the blackness, called *melæna*, may be caused by blood which has been acted upon by the gastric juice; in such cases the hæmorrhage is probably high up and may be caused by a gastric ulcer. When the blood is red, it is probably from the large intestine low down, or it may be from piles or *hæmorrhoids* within the rectum. The nurse is always instructed and requested to wash her hands after changing or handling the clothes of such patients, to convey foul linen to proper receptacles, to keep special feeding utensils for these patients, to cleanse and disinfect the nozzle of enema syringes after use, and to observe all other special regulations that may be issued for the prevention of the spreading of this disease, such as identifying them by special case-cards, examining the *dejecta* once a week or oftener, and noticing whether any tendency occurs to loose motions, and that all patients (and those associated with them) should carefully wash before each meal. It is important that the stools or motions of all patients suffering from diarrhœa be kept for examination by the medical officer, and the nurse should herself notice the amount, consistence, colour, odour, and general constituents in regard to foreign bodies or substances such as undigested food, seeds, gall-stones, or fruit-stones

or their skins, intestinal worms or membranes which may be passed by the patient.

Tuberculous ulceration of the intestine, referred to under phthisis, is characterised by simple diarrhœa, and may be the only symptom of consumption of the lungs in insane persons, the expectoration being quietly swallowed, and thus infecting the intestines and the mesenteric glands.

Intestinal obstruction is often fatal. It is caused most frequently by a hernia becoming strangulated; but it may be caused by a tumour pressing upon the intestine, or by the constriction of a band of fibres across the gut, by the growth of cancer involving the intestine in any part of its course; or in children, to one part of the intestine slipping into the tube or cavity of another part, like the inverted finger of a glove when pulled off the hand. This latter form is called *intussusception*. Obstruction may also be due to one part of the intestine twisting upon itself through flatulence. From whatever cause the symptoms may arise, when constant vomiting, distension of the abdomen, pain or constipation occur, there is probably internal strangulation, and if relief is not forthcoming, death occurs in a few days.

Appendicitis, formerly called *typhlitis*, is inflammation of the *vermiform appendix*, which is attached to the commencing portion of the large intestine—the *cæcum*, situated in the lower part of the right side of the abdomen. There is pain and tenderness, feverishness and constipation with vomiting, and relief is to be obtained only by an operation which, to succeed, must be performed early. Therefore, it is of the utmost importance

that the nurse should be able to observe symptoms so as to report them in time to save the life of the patient.

Peritonitis is inflammation of the delicate membrane lining the outer surface of the bowels. It occurs as the result of cold, disease, or injury, of a perforated gastric, typhoid or other ulcer, or as a complication of childbirth or puerperal fever. There is general abdominal pain, possibly not much temperature, but a weak and rapid pulse, the knees are drawn up, and the general pinched appearance is indicative of serious mischief.

General Summary of Nurses' Duties.—For all diseases of the intestinal tract, rest is necessary, which can best be obtained by a partial or complete abstinence from food. This is especially necessary in cases of gastric ulcer or the hæmorrhage from it; and, for a time, all nourishment may have to be administered by the rectum. When food is taken by the stomach it may require *peptonising*. In most cases of gastric and intestinal trouble a simple dietary of milk with light farinaceous thickening, such as arrowroot, is alone allowed. Such is prepared by mixing the peptonising powder or liquid with milk or beef-tea at the body temperature, and keeping thus for half an hour to an hour, then raising it to boiling point, which stops further action and prevents that bitter taste in the peptonised milk which is so disagreeable. Ice or iced water, soda or effervescing water, barley water and gruels are exceedingly useful to relieve thirst in acute cases. Purgatives must not be used in the acute stage, and if there be constipation, a rectal enema is the safest first remedy. Every nurse must know how to give an enema, to note

if it be retained, and for how long. Hot applications, when ordered, should be light, and the weight of the bedclothes kept from the abdomen—as great care and tenderness are required in nursing cases of peritonitis.

Diseases of the Liver are generally indicated by the presence of jaundice, but a slight degree of this may accompany pneumonia on the right side, when the movements of the diaphragm are impeded and the pumping action of this muscle upon the circulation of the bile is impaired. Jaundice may also occur with certain fevers, or in cases of obstruction of the bile-duct from gall-stones, or from the extension of gastric catarrh to the orifice of the common bile-duct, which thus swells the mucous membrane and obstructs the flow of bile into the duodenum. There is usually much itching of the skin with jaundice, which can be relieved by alkaline baths, or by sponging with glycerine and water. The urine is highly coloured and the stools are pale. The sweat is yellow, and the linen may be stained thereby. There is often much loss of appetite and flesh, with sickness and vomiting. The nurse's duty in these cases is to pay special attention to the bowels, to see that the "chair" is near the patient should he desire to get out of bed, and also to see that the sheets and bedding of the patient are comfortable, that he is kept clean and warm, and that the patient is as contented as his generally irritable disposition may permit.

Disease of the Kidneys, or Renal Disease—often called Bright's disease, as it was first described by old Dr. Bright, of Guy's Hospital—may be acute or chronic. The acute form may follow fevers, especially scarlet fever, diphtheria, and occasionally may accompany preg-

nancy. Neither is of common occurrence among asylum patients, although it might have been expected that the chronic form, which is called gouty or granular kidney, and is prone to follow drink and overwork, would be frequently met with. The cardinal or chief sign of kidney disease is the presence of *albumen* in the urine. The diseased kidneys permit the soluble nourishing constituents to pass from the blood into the urine, and there is anæmia, headache, palpitation, and probably dropsy. There is also a great tendency to hæmorrhage and apoplexy. The urine is scanty in the acute form; it is also highly coloured, of high specific gravity, and probably contains blood. In the chronic form it is copious, of a low specific gravity and light in colour. It is of great importance that the nurse should understand urine testing, as upon its condition depends the subsequent treatment. The urine should be collected for twenty-four hours and placed in a glass vessel; or, failing this, in a chamber, and allowed to stand. The (1) quantity is noted, (2) the colour and the amount of deposit observed; then (3) a strip of blue litmus paper is moistened with the urine, and if it turns red, the urine is of acid reaction, if it remains blue it is alkaline. (4) The little glass measure—the urinometer—is now allowed to float in it and the reading taken—probably between 1,010 and 1,030; (5) a small quantity is poured into a test tube and boiled. If the deposit disappears and the urine remains clear, then the deposit was urates; if, on the other hand, the deposit remains, or when there is no deposit, the boiled urine becomes cloudy, then the precipitate or cloud may be either albumen or phosphates. If, at this stage, two or three drops of

strong nitric acid be added, the cloud of phosphates will disappear, but the albumen further clots and remains insoluble. Two other bodies, mucus and pus, may both be present in the urine, the former as a stringy or fleecy deposit, the latter yellowish or greenish-white. Blood in the urine gives it a smoky tint, and bile a yellow or mahogany colour. The nurse is only expected to test for albumen, to take the reaction (acid or alkaline), and to note the specific gravity of the urine. If she can accomplish these simple tests she saves the medical officer much time and may render very valuable assistance, whether in private nursing or in a public institution. The nursing treatment of all such cases is to take care to avoid cold by seeing that flannels are worn next to the skin, to apply vapour baths or medicines when directed, and to see that there is always a free action of the bowels. Milk food with farinaceous thickening is generally prescribed as nourishment, and everything must be done to encourage a free flow of urine.

Renal Colic, lasting some hours, is accompanied by acute pain in the loins, and is caused by the slow passing of a stone from the kidney to the bladder along the ureter. Hot baths and applications relieve the pain and spasm. The urine should be saved in such cases for the doctor to ascertain the nature of the deposit, which is an indication also of the nature of the stone present.

Diabetes, a sad, trying, and almost invariably fatal disease among the insane, so far as my experience goes, is characterised by the excretion of a large quantity—usually several quarts—of urine in the course of twenty-four hours; by the presence of sugar in it, by constant thirst,

a marked increase of appetite, but with loss of flesh and power, and a gradually progressive emaciation. This disease is not infrequent among the insane. It aggravates the mental condition when it occurs after the onset of insanity, and the treatment is, in the main, dietetic. All varieties of animal flesh, fish and fowl may be eaten, and milk in large quantities forms the staple article of diet. All farinaceous food, *i.e.*, that containing starch and sugar, must be avoided. The patient is to be kept free from bed-sores, and should, when the habits are defective, be changed as soon as the occasion arises. These patients are very irritable, and must be guarded against suicidal impulses. Much tact is needed to prevent irritation and imaginary offence. In my experience, the sufferers have, previously to their insanity, been mostly very able-minded persons.

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CHAPTER XXII.

Fevers in the Insane—Symptoms and Stages of Fevers—Precautions to be taken against the spread of Fevers—Cleanliness and precaution against Parasitic Insects and Skin Affections.

THE insane are subject to the same fevers as are the sane; possibly their risk, at any rate among the poorer classes of the insane, in regard to one form, *viz.*, enteric or typhoid, is greater than among the general community, as their lives are spent in institutions where large numbers of persons congregate, none of whom can ever be bacteriologically or chemically clean. Although great care is taken in regard to the ventilation, heating, and drainage of these institutions, yet in some of them these conditions are not brought up to modern requirements, and owing to this the lives of some of the patients and staff may be endangered and even sacrificed. In support of this statement one has only to read the annual reports of the different asylums, and the annual report of the Lunacy Commissioners to the Lord Chancellor.

Of all the means to aid a diagnosis among the insane the thermometer is the most valuable, and the nurse must know not only how to use it under varying conditions, but also how to record the result. Before taking the temperature the index should be shaken down to a point two or three degrees below the normal, and care

should be taken when holding it and shaking it with the bulb down that the index is not forced into the bulb of mercury. When placed in the armpit or the rectum—the usual places for the insane—it should remain from three to five minutes, and if the temperature is raised there may be fever. By the term “fever” we mean an elevation of the temperature above 101° . Anything between 103° and 105° is considered to be moderately high fever, and over 106° —hyperpyrexia—is exceedingly dangerous.

Most morbid states in the insane, as in the sane, are, with few exceptions, accompanied by fever, and with the rise of temperature there is also a quickening of the pulse and respirations. When the fever keeps high for some time without dropping it is called *continuous* fever. If it fluctuates daily, being high at night and normal in the morning, it is *intermittent*, as is the case with hectic fever, which is well known by the pink flush on the cheeks, a pale face and free perspiration indicating phthisis, suppuration, or the formation of an abscess. If a high feverish temperature does not fall to normal, but remains high for some time, falling for a while—but not to normal—and rising again, it is called a *remittent* fever. Fever indicates many disorders, but some alterations of temperature are *typical* and of diagnostic value. A sudden rise with a chill and rigor indicates pneumonia. A gradually increasing and continued daily temperature may indicate typhoid. A rise at night and a fall in the morning indicates phthisis, or a rise of temperature may indicate one of the so-called infectious fevers which are often called *specific* or *zymotic*, in the belief that they are caused by certain specific

germs or organisms. The spread of these fevers in an institution is a matter of grave concern to the health and possibly to the life of the inmates, and it is also a serious expense to the responsible authorities. In cases of specific fevers the particles of infection float in the air, or they are conveyed by the clothing, get into the food, or are communicated by the breath from one person to another. It is important, therefore, that the cases should be recognised early so that proper means may be taken for their isolation, disinfection and treatment. The *infectious* fevers mostly prevalent—*contagious* is a term now rarely used, as the word infectious covers contact and other modes of communication—are usually described as chicken-pox, scarlatina, small-pox, measles, typhus, typhoid, diphtheria, mumps and cholera, as opposed to non-infectious fevers, such as rheumatic fever, ague and malaria. Consumption, due to a communicable micro-organism, is not regarded as a fever, but classified like other diseases, such as syphilis, etc., of similar microbic origin.

In ordinary text-books on nursing, the infectious fevers have no place and are treated apart; but as the mental nurse may be called upon to look after any mental case with fever, we shall allude briefly to the danger of communication and the means of identifying fevers, with short directions referring to precautions against their spreading.

All fevers have in common a *period of incubation*, a time after the entrance of infection into the blood during which the fever develops, but without any definite outward symptoms. When this stage is over and signs of the fever begin to appear this is called the

period of invasion, and it is during this stage that a feeling of fatigue, headache, dulness, and possibly a rigor may make their appearance, the temperature rises, the pulse quickens, and other symptoms of feverishness follow, together with the *rash*, which is the obvious and more diagnostic symptom, a stage which is now called the *period of eruption*, during which, for each specific fever, various skin affections appear which characterise the disease. In chicken-pox a crop of vesicles appears within twenty-four hours of the symptoms; in small-pox hard small spots appear on the third day of the symptoms, the spots soon become vesicles, which finally contain pus. The pus dries up into a crust, which when it falls off leaves a scar.

Headache, vomiting, and pain in the loins are the special symptoms characterising the "invasion" period of small-pox. In scarlet fever there is a general rosy rash appearing on the second day of invasion, and there is often much sore throat. In measles small red papules in groups are seen on the fourth day of the illness near the hair-line on the forehead, and there is often much watery mucus at the eyes and nose. In typhus—which is now rarely met with—a dull red rash appears on the sixth day after symptoms of serious and intense illness. In typhoid fever (which is apt to occur in the autumn), after the first week of ill-defined illness, small red spots appear daily on the abdomen, which gradually fade, being replaced by fresh ones, which again disappear, re-appearing in separate crops. There is also marked mental dulness and usually diarrhœa.

The danger of infection in these fevers is from the breath in measles, chicken-pox and small-pox, scarlet

and typhus fever; from the skin in chicken-pox and small-pox and scarlet fever; from the stools and the urine in typhoid, and from the emanations or exhalations of the body and clothing generally in all these except typhoid. In typhoid fever if the stools have soiled the clothing or bedding there is a risk of infection from them. Death takes place from bronchitis in measles; from blood-poisoning and dropsy in scarlet fever; blood-poisoning in small-pox; and from perforation of the bowels, hæmorrhage, or collapse in typhoid.

The precautions to be taken in nursing the insane when suffering from fevers are, immediate isolation—in fact, this is the common treatment for all infections. Every patient and every other person who has been in contact with a small-pox case should be re-vaccinated at once, and the nurse should see that every rag used for a scarlet fever or a measles case is burnt, and also that the stools and the urine of a typhoid fever case are burnt or disinfected before putting the *excreta* down the drains. In addition, for scarlet fever the throat is washed with some medicated application such as chlorine water, or inhalations are used. During convalescence care must be taken to prevent the scales of skin which are shed from dispersing into the air, by the use of warm baths and the application afterwards of carbolic oil or camphorated oil, also to avoid chills, which may cause great danger to life from kidney affections. In small-pox the patient must be kept clean, and especial care should be taken to keep discharges from entering the eye. In measles all complaints about the ears should be noticed and all discharges from the nose

or ears treated with care. In typhoid fever, recovery depends most upon good nursing, as the patient will be in bed for some weeks, and during this time the body should be kept clean, the hair kept short and the feeding most carefully attended to. Rest in bed must be rigidly observed as the best precaution against ulceration and perforation of the bowels, the diet should be one of pure milk and, possibly, nothing else. Nutrient enemata with stimulants are given in cases of extreme exhaustion.

As to diphtheria, the patient is isolated and the throat painted or swabbed with antiseptics as may be ordered. Constant nourishment helps to maintain the strength and a careful watch must be kept for laryngeal symptoms. During convalescence much care is necessary, as there is a liability to fainting and paralysis. The recovery from diphtheria is often a matter of months.

In nursing cases of erysipelas similar precautions against the spreading should be taken by isolation, and the room must be carefully disinfected by burning sulphur or vaporising formalin after removing the patient and sealing up all exits and chinks.

The sick-room for insane persons should ordinarily be on the ground floor, but for infectious cases the top floor is best suited. In the case of an insane person suffering from infectious disease, *i.e.*, when both conditions are combined, it is best to isolate on a well-ventilated ground-floor flat. This should be stripped of all unnecessary accessories—curtains, pictures, and furniture. No other person should be permitted to share this room, and the patient must be under constant observation night and day. The usual sheet steeped

in carbolic (1—40) should be hung over the door of the room, and all body and bed linen should be taken outside and soaked for an hour or more in disinfectants before being taken for further disinfection into the special chamber for the purpose, such as the Washington Lyons apparatus. Nurses in attendance must observe strict rules as to disinfection and change, and everything used as an accessory must after use be freely disinfected.

Whether or not it be due to the fact that the skin is developed from precisely the same area and structure which gives rise to the organ of mind, *viz.*, the brain, it is considered that this tissue of the body, *i.e.*, the skin in the insane, undergoes marked changes, and is more liable to certain abnormal conditions and unhealthy activities than are ordinarily met with in sane people. All medical men and nurses who have much to do with insane persons know that there is a peculiar odour attaching to these persons when in the acute stage, and, in consequence, to all institutions for mental cases unless very efficiently ventilated. The whole of the activities of the skin are under the reflex influence of the nervous system, and when the latter is affected, altered function results in whatever organ comes under its control. In regard to the proper supervision of the skin, and also of the hair of insane patients, it can truly be stated that no other duty is more trying to the nurse. To keep the restless patients tidy, the demented ones clean, and the melancholy from obstinate self-neglect, are very constant duties, and as trying as they are constant. In consequence the nurse has most repellent work to undertake, and for the quiet, unostentatious perform-

ance of her duties without grumbling, she deserves and needs every kindly encouragement that can be bestowed upon her by those in authority over her. I have elsewhere stated, that were the devotions of the nurse not charitable and self-denying in the extreme, and were they not rewarded by a high ideal sense and the honour of serving others, there could be no adequate compensation for her repugnant duties in an asylum for the poor. That these duties are often thankless, owing to the mental infirmity of the sufferer, is why this kind of service is unpopular among ladies of education and private means who in other places find gratitude a sufficient reward for self-abnegation. No monetary consideration can be an equivalent recompense for the nurse's devotion and attention to such cases. The hair, especially among females of the poorer classes, is often loathsomely dirty when these are received into asylums, and the rules of the establishment do not usually permit of the hair being cut.

In the *toilette*, and as an application for effectively removing the ova or "nits" attached to the hair, the medical officers generally order a special lotion of eucalyptus and ether in equal parts, which the nurse pours into a dish, soaks up with a pledget of cotton wool or lint and applies to a strand of the hair, thoroughly rubbing it up and down until all the hair has been carefully gone through and cleansed. After the application of the eucalyptus is completed, some white precipitate ointment is used with a few drops of lavender essence or bergamot to disguise its significance. This is for the purpose of destroying the living parasites, and the whole of this treatment is repeated day by day

until the hair at the end of a week or perhaps several weeks is clean. It is painful to know that not only is the hair of the head thus neglected but also the hair on the body and not infrequently the eyelids and eyelashes as well. The neglect which permits women to get into such a repugnant state not infrequently originates in drink, followed as it invariably is by squalid poverty and disease, conditions which are important factors in physical deterioration. Words fail adequately to describe the pitiful condition of these persons, words equally fail to express the admiration which self-denying women command for their noble and high altruism when serving as nurses to them.

Another form of parasite, but of a vegetable kind, which affects the hairy surface and which has to be dealt with is ringworm—*tinea tonsurans*. It attacks the scalp and body of men, women and children. Another variety—*tinea barbae*—attacks the beards of men (*sycosis*). It is extremely difficult to be cured and slow to be affected by any remedy. Cleanliness is the first and strictest necessity. Affecting the skin only, is another vegetable parasite (*microsporon furfur*), which appears either as brown patches, oftenest on the chest and shoulders, or the front of the abdomen, or it may indeed cover the whole trunk. It is termed *chloasma*, and can easily be cured by rubbing with strong mercurial ointment. A common animal parasite also indicative of neglect, is the itch (*acarus scabiei*), which is equally responsive to treatment; a good hot bath daily with soap and water, and then sulphur ointment well rubbed in afterwards, for a week, completely cures this horrible and contagious malady. It is due to a minute creature burrowing under the skin,

causing great irritation and not infrequently also painful abrasions and pustules. It usually commences in the web between the fingers. *Nettle-rash* occurs among the insane, and is either caused by dietary indiscretions or through idiosyncrasy in relation to special articles of food, such as fish, shellfish, or strawberries.

The other so-called rashes, which I think are more common among the insane, are the different kinds of *herpes*, which consist of an eruption of small vesicles arranged in groups on an inflamed base. These vesicles run their course and are not succeeded by fresh groups, but there is often a feeling of irritation, tension, burning, or neuralgic pains preceding and following their appearance. When herpes girdles the trunk unilaterally it is called *herpes zoster*, or shingles. It follows the course of a definite nerve, and it occasionally occurs in cases of general paralysis of the insane, or in excitable and nervous persons. Sometimes it affects locally the arm, thigh, or face, and it may appear on the lips with an ordinary cold, or in cases of pneumonia.

Eczema in its various forms is not infrequently met with in asylums. It is an inflammatory infiltration of the skin with a tendency to excoriated redness and tending also to the formation of crusts. *Psoriasis* is a scaly skin disease appearing in patches, met with most often on the elbows or knees. *Acne* is a common disfigurement on the face, shoulders, and back. *Lupus* is not uncommonly seen among an asylum population. The various *warts* and *corns*, rashes due to *syphilis*, as also those due to *drugs*, especially the "bromide" rash, are met with; the latter seldom fails to be seen among the epileptic insane. *Maculæ*, *petechiæ*, or *stains*, not

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removable by pressure on the skin, are sometimes seen as hæmorrhagic spots in cases where the arteries are diseased and tortuous as in senile insanity; also brownish discoloration at the root of the hair and bend of the knees, elbows, etc., in cases of Addison's disease. The *erythema* which indicates rheumatism, chilblains, or *erysipelas* may also be seen among the insane. The disfigurement of the ears, through hæmorrhage between the cartilage and the skin, is seen among the more demented and chronic class of the insane. Formerly it was an opprobrium to the nurse, but I am quite certain that these "*insane ears*" are most frequently due to the constant restlessness which marks so many of the chronic insane, who not only strike themselves but also bite, rub, kick, and scratch themselves frequently without obvious intent and for no apparent purpose.

CHAPTER XXIII.

Emergencies—Poisons—Division of Poisons—Systems of Poisoning—Antidotes—Artificial Respiration—Methods of Application—Control of Hæmorrhage.

THIS chapter will be taken up with the consideration of accidents and emergencies, which occur most unexpectedly among the insane, in spite of the closest supervision and precautions. With a certain proportion of the inmates of every institution for the insane bent upon self-destruction, possibly about 20 per cent. of all cases admitted; with a certain number of them subject to epileptic seizures without warning, possibly also 8 per cent. of all cases admitted; and, furthermore, with some who are violent in the extreme upon the slightest suspicion of actions contrary to their interests or opposed to the nature of their delusions—the occurrence of accidents within an asylum or upon its grounds is not to be wondered at. It is necessary, therefore, that the mental nurse should be in a position to deal promptly with some of these, pending the arrival of the medical officer, who must be summoned at once, and who in these institutions is, fortunately, always somewhere near at hand.

The question of dealing with cases of self-poisoning will be first considered, and there are three leading principles which must be considered for guidance in

such emergencies. Primarily, the necessity for getting rid of the poison is obvious, and is best attained by means of emetics, in regard to which there are certain definite rules to be observed as to their use. They are to be administered always, and at once, when there are no signs of corrosion or burning about the mouth or lips after poison has been swallowed; the safest of these being mustard and warm water, or warm water and salt. When signs of corrosion are present an emetic is not to be given, but oil may be administered. Secondly, if unable entirely to get rid of the poison, then an endeavour must be made to neutralise what remains, and it is here that the question of antidotes comes in; antidotes being anything acting in the opposite direction to the effects of the poison. Thirdly, at all risks the patient must be kept alive. It must always be remembered that time is of the utmost importance in all cases of poisoning, as every moment lost renders treatment more difficult and recovery more remote.

In regard to poisons, all text-books begin with describing acids and alkalies, but what these terms convey to the young nurse or probationer is not very distinct. Our classification of poisons shall be into those which are found within the institution or house—favoured possibly by an oversight on the part of the nurse, and of those which may be found and taken out of doors. Of the former the so-called acids may be considered first. These are mainly corrosive poisons, and in their actions they burn and destroy the tissues, the commonest of them being (*a*) oil of vitriol or sulphuric acid, used in charging the accumulators of electrical plant, in the manufacture of soda-water, and for domestic purposes.

(b) *Aquafortis*, red nitre or nitric acid, a fuming brown liquid kept for treating warts, or other caustic effects, an ingredient also of the "urine-testing" stand. (c) Spirits of salts, muriatic or hydrochloric acid, used for tinsmiths' purposes and brass polishing. (d) Salts of lemon, bonnet acid, acid of sugar or oxalic acid, a crystallised substance like Epsom salts used as an ingredient of polishing pastes, for removing ink stains, cleaning hats, and by grooms and bookbinders for cleaning leather articles. (e) Carbolic acid, used for disinfecting purposes, for stings and bites or for curing toothache. All the above are corrosives; some, such as *aquafortis*, leave brown stains on the lips, mouth, and skin; some also (like vitriol) a black stain; whereas others, such as carbolic acid, spirits of salts, and oxalic acid, leave a white stain.

For corrosives it is best not to administer an emetic, because the strain and efforts at vomiting may cause a rupture of the œsophagus or the stomach; but antidotes, such as baking soda or ordinary washing soda, lime, chalk, whiting, or whitewash scraped from the ceiling and mixed with water, are to be administered, followed by olive oil, or castor oil and milk, or milk gruel. Epsom salts and the white of an egg beaten up with water are the best remedies for poisoning by white precipitate or corrosive sublimate (of mercury), as also for poisoning by saltpetre.

In all cases where collapse is a marked feature, warmth to the feet and warm water with brandy must be administered so as to keep the patient alive. Death from prussic acid is so rapid that no antidote is of any avail as a remedy, but artificial respiration must be

employed so long as there is any hope of life. As to alkalies—such as ammonia, hartshorn, caustic potash or “pearl ash,” caustic soda (used as rat poison)—their general treatment is to give vinegar freely diluted and alternately with olive oil.

Alcoholic poisoning is too well known to need special attention. In poisoning from alcohol and other spirits, such as turpentine, and laudanum or opium, an emetic is necessary, followed by strong coffee and compulsory exercise, such as walking about between two nurses, flipping with wet towels, and the use of the electric battery. For poisoning by antimony, used for furniture polish or for horses' medicine; or for poisoning by arsenic, as in fly-papers or vermin killers; for zinc powders, used as hair dyes, an emetic is administered to promote vomiting. Strong green tea, white of egg with milk and water, oil and lime water, are also given to neutralise the effects of these poisons.

Sleeping draughts of chloral or chlorodyne in excess may also cause poisoning. The treatment is to give an emetic, such as mustard and water, keep the body warm, give strong coffee, and arouse the patient so as to prevent sleep getting the mastery. After chloral, but not after opium, allow the patient to be in bed and at rest. No exercise is necessary, nor is it desirable, after an over-dose of chloral, its action being to lower the pulse and weaken the heart's power.

For poisoning by the salts of copper an emetic is administered, and fomentations applied for abdominal pain. For lead, an emetic with Epsom salts. For caustic (lunar caustic) or nitrate of silver, give table-salt freely dissolved in water.

For mussels or shellfish, paraffin oil or petroleum poisoning, give an emetic and take means to prevent collapse.

For phosphorus—the paste often used for rat poisoning—which is sometimes taken with the intention of destroying life, give an emetic of sulphate of zinc; in this case do not give oil, as it dissolves the phosphorus and may thus assist its absorption.

For irritant poisons, the administration of an emetic, followed by the free use of milk, are as much as the nurse can do. The question of antidotes is generally a matter for the medical officer.

It may be that poisoning may occur accidentally when the patient is out of doors, taking exercise or sitting about in the grounds, some herbaceous or garden plants, the leaves of trees or seeds, being swallowed thoughtlessly or with intent, and they yield the second group of poisons for our consideration. Among these may be mentioned the fungi or poisonous mushrooms; aconite, known as “monk’s-hood” or “blue rocket,” the root of which has been on more than one occasion mistaken for horse-radish. Belladonna, known as “deadly nightshade”—the fruit being a blackish, purple berry—has also been taken accidentally. Bryony, digitalis or foxglove, hemlock or “fool’s parsley,” privet, holly, laburnum pods and seeds, the flowers of laburnum trees called “golden chain” or “golden rain,” lords and ladies, cuckoo pint, and yew leaves—may all be taken in poisonous quantities and must be treated by an immediate emetic, followed by castor oil and milk, or coffee if there be drowsiness, and stimulants if there be any loss of strength or a tendency to collapse.

In poisoning by coal-gas, which may occur from an escape into the sleeping apartment, artificial respiration must be at once resorted to and in the open air, smelling salts may be applied to the nostrils to excite breathing, and stimulants may be administered—the whole time keeping the body warm. In the case of stings and poisonous bites, if possible first take out the sting; then wash the wound, rub with Scrubb's ammonia, or some essential oil such as lavender or eucalyptus. Tie a ligature on the "heart side" of the sting of poisonous flies, snakes, or vipers, and "keep the patient alive" by careful wrapping up of the body in warm blankets, or by applying hot-water bottles to the extremities; also, for any tendency to collapse, administer stimulants with caution and deliberation.

An emergency which may readily occur in a certain class of insane persons, and with fatal results unless promptly relieved, is asphyxia by choking. It is most frequently due to an obstruction of the windpipe caused by some foreign body, usually pulpy food voraciously eaten, or some such substance as gristle or hard meat, which becomes impacted in the larynx, trachea or the bifurcation of the bronchi. Choking is more likely to occur in cases of general paralysis, epilepsy, in feeble and demented senile cases, and in those whose insanity—organic dementia—is the consequence of paralysis due to hæmorrhage or the blocking up of an artery in the brain, a condition described as thrombosis or embolism, and in such cases the paralysis is, as a rule, on one side of the body. The place or the exact site where choking most frequently occurs after "bolting" the food is in the *pharynx*, the opening at the back of the mouth,

which communicates with or opens into the nose above, the windpipe (larynx), and the gullet (œsophagus) below. Any foreign body which blocks the entrance to, or remains in any part of the windpipe, will cause choking. In normal swallowing the epiglottis behind and below the tongue covers the entrance into the windpipe, but when the epiglottis does not close over this opening, as may happen in demented persons in whom the ordinary sensitiveness of the parts is absent, a large lump or a collection of food may cause complete occlusion and remain as an obstruction unless removed. Choking may also happen when a person speaks excitedly during a meal, as in chatty children, or when a person coughs or sneezes, or is seized with a fit during the act of swallowing food, the food or part of it slipping into the breathing channels, being drawn in by a sudden and powerful inspiration. A fish-bone or false teeth stuck in the gullet does not cause choking, which occurs only when the windpipe is obstructed. In the case of an obstruction in the gullet the effort at vomiting may remove the foreign substance, and relief can thus be obtained by an emetic, or even by drinking water and rapidly gulping it down. Such obstructions may either be pushed down or brought up by means of "probangs"—special instruments passed down the gullet towards the stomach. The best remedy in cases of choking at meals is to deal the person a somewhat violent blow on the back between the shoulder blades, making him lean forward at the same time. If the obstruction is not at once ejected the finger is put into the throat, and an attempt made to clear it by hooking it up. If insensibility occurs and continues after the obstruc-

tion is removed, then artificial respiration is to be tried. If the obstruction is in the bronchi, and relief is not at once obtained, the patient may be "inverted" or held up by the legs or feet, and in all probability the medical man (who should be sent for at once) will perform an operation to admit air into the windpipe (laryngotomy or tracheotomy), *i.e.*, an artificial opening into the windpipe from the front of the neck, and pass a long forceps through the wound into the bronchi to take out the obstruction. Assistance in cases of choking must be immediate, or life is lost.

Artificial respiration is an imitation of normal ordinary breathing, and can be carried out in three ways. (1) Sylvester's method, when the nurse kneels on the floor behind the patient's head, grasping both arms below the elbows, bringing them up together above the head, by which movement air enters the chest, and then moving the arms down alongside the chest, or crossing them over the lower part of the chest, which is pressed in, thus causing air to be expired. This up-and-down movement is alternated about eighteen times a minute. (2) Marshall Hall's method, when two persons roll the patient backwards and forwards, first on the face, then on the side, at the same time pressing in the chest in imitation of normal breathing. (3) Another method (Howard's) is to sit astride the patient, facing him; grasp the sides of the chest with both hands and press the chest in with some weight, squeezing the air out, and then rising, so that the natural elasticity of the chest-wall causes it to rebound, and draw in the air. These methods are applied to restore the apparently drowned as well as those suffering from asphyxia

due to choking or narcotic poisoning, and must be kept up energetically for persons taken out of the water unconscious, for at least an hour—at the same time using every effort to keep up the natural warmth of the body. It is most important in all these methods to see that the tongue is pulled well forward and the jaw is depressed.

Not infrequently attempts at suicide with glass or cutting instruments occur among the insane; in such cases bleeding may take place, and may be so serious as to demand immediate attention. The best treatment is to take a clean handkerchief or a piece of shirt linen, cotton-wool, or anything handy, and make direct firm pressure on the wound until assistance is obtained. If bleeding still occurs, pressure must be made on the “heart side” of the main artery, and if the bleeding takes place from a limb, this is to be raised. Bleeding of a serious character may take place from a varicose vein; in such an event pressure at the bleeding spot, as well as above and below this point, and raising the limb up well above the body lying flat, are the correct methods of treatment. Digital pressure on the wound is generally safe in all cases of bleeding, and should always be practised. In the case of wounds, until medical assistance arrives, wash and clean them with warm water previously boiled, and apply a clean handkerchief over them, or any soft article of wear washed in hot water.

In cases of burns and scalds there are three maxims to be observed. (1) Remove the clothes with care; (2) exclude the air; and (3) prevent collapse. Great care must be exercised in removing any clothing attached to the skin; indeed it is often best to cut the clothes

off; apply oil—usually Carron oil—composed of equal parts of linseed oil and lime water, with strips of clean rag, which should be well saturated with the oil; over these apply a good quantity of cotton-wool, and then a flannel bandage. Care must be taken to prevent shock by wrapping the patient in a warm blanket, and cautiously administering stimulants, and, if the pain is acute, a soothing opiate draught will be ordered. If oil is not at hand then use flour, whiting, or chalk made into a paste, and apply over the scald. If the skin is only reddened, the dressings may be soaked in a weak solution of bicarbonate of soda which will afford much relief to the pain.

Foreign bodies, such as stones, pebbles, beads, etc., are apt to be mischievously inserted into the ear. The best treatment is to syringe the ear, directing the stream along the roof of the ear channel and to pour in olive oil until skilled assistance arrives. If such a foreign body be inserted into the nostril, then a good sneeze may cause its ejection and removal.

If a foreign body enter the eye, turning the upper lid over backwards, what is called “eversion,” or “turning the lid inside out,” and lightly wiping it over with a silk handkerchief may remove fine dust or minute foreign bodies; or a fine camel’s-hair brush may be used; also alternately opening and closing the eye under water—not an easy method with the insane—and, failing this, a drop of castor-oil may be placed in the outer angle of the eye between the lids until medical aid is at hand. All “drops” for the eye are put in at the outer angle, and with the end of the glass dropper resting on the lower lid.

If lime gets into the eye, wash immediately with weak vinegar and water.

As a rule injuries to the insane are of a serious character, and they themselves are also more difficult to treat for their injuries than those in full possession of reason; but mild accidents beyond those above stated do frequently occur, and it is well for the nurse to be familiar with plain and practical remedies which are efficient as well as safe.

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CHAPTER XXIV.

Fractures and Dislocations—Duties of the Nurse—States of Unconsciousness—Causes—Their Treatment by the Nurse—Injections and Enemata—Their Kinds and Uses—Baths—Varieties and Uses—Lying-in Cases—Emphasis upon Cleanliness—Poultices and Stupes—Death—Last Attentions of the Nurse.

THIS chapter will deal with emergencies accompanied by unconsciousness, with fractures, and the care of the lying-in, and appliances in general use for sick nursing.

In regard to fractures, they may occur in the insane without showing (1) subjective symptoms, such as pain. The (2) objective symptoms are (*a*) loss of power or inability to move the part or to raise the limb, (*b*) deformity, shown by an alteration in shape, *i.e.*, by bending or shortening of the limb, (*c*) an irregularity in the course of the broken bone, (*d*) abnormal movement at the seat of fracture, as if there was a joint there, and lastly, the most certain sign, (*e*) *crepitus*, a peculiar grating sensation caused by the rubbing of the two broken ends of the bone against each other. The general treatment of fractures is to bring the portions of the broken bone as nearly as possible into their natural position and to maintain them there, but this is the doctor's work. The nurse has three rules to observe in regard to fractures. (1) Do not handle the patient unnecessarily, so that there should be no risk of a simple fracture becoming a compound

one. This can best be prevented by moving the patient or the limb as little as possible. (2) Keep the parts at rest. This can be done by applying splints or supports so as to keep the joint above and below the fracture immovable and at rest. The splints should always be outside the clothing and should project beyond the joints above and below the broken bone. (3) Bandages must not be too tight, nor any knots made, nor pressure permitted over the seat of fracture. If there be a compound fracture the first attention must be to the wound; if it is clean, then apply a thick layer of dry lint; but if the wound be dirty, cleanse thoroughly with tepid water that has been boiled, and then apply splints until a special medical examination can be made.

Dislocation.—The only duty for the nurse in this case is to keep the patient quiet and to apply a bandage so as to fix the injured part. In bandaging, which is a means of applying even pressure, a few rules are to be observed—*viz.*, (1) Keep the outer surface of the roller against the skin. (2) Bandage from below upwards and from within outwards. (3) Let each turn overlap one-half the previous one. (4) The crossings and reverses to be in one line and towards the outside of the limb. (5) The bandage should be securely fixed so as not to slip.

Unconsciousness.—The insane are more liable than the sane to suffer from temporary loss of consciousness. The chief causes of unconsciousness are—(1) Fainting, syncope, or collapse. (2) Hysteria. (3) Epilepsy. (4) Apoplexy. (5) Shock, or concussion of the brain. (6) Sunstroke. (7) Alcohol, or narcotic poisoning, such as opium. (8) Asphyxia, from choking or drowning.

Fainting or syncopal attacks are always dangerous,

The treatment, if the patient is not already lying down, is to lay the patient flat on the floor so as to allow more blood to flow to the brain. The clothing about the neck should be loosened. There should be access for plenty of fresh air. The face may be bathed with water, which should also be given for a drink, and in it a little *sal-volatile*, or some other stimulant such as brandy. If the unconsciousness is due to loss of blood, then both legs should be raised to help the return of blood to the heart and brain. Let the head be kept low till consciousness returns.

For hysteria cold water may be applied to the face, but there is rarely danger from these attacks, nor is there complete loss of consciousness. Epilepsy is frequent among the insane in asylums, and is not infrequently a natural termination of some cases of dementia. In the event of an attack care must be taken that the patient does no harm to himself. After the clothing round the neck is loosened place a pillow for the head to rest on. The liability of the patient to bite the tongue can be obviated by introducing an improvised gag. When the fit is over, have the patient carried to a position of safety where he can remain in quiet seclusion, for there is considerable irritability after fits of epilepsy. It is well to give active aperients if the fits continue, and rectal injections of bromide of potassium or bromide and chloral may be prescribed and have to be given. The convulsions of young children may often be stopped by removing possible causes, such as constipation, indigestible food in the stomach, worms, etc. It is well to try and break the habit of repeating the fits in young persons if possible, by the administration of special

medicines, such as the bromides already referred to, which have this effect.

Apoplexy is always a serious condition. There is usually loss of power on one side and a heavy stertorous breathing. The patient must be kept quiet. Cold applications to the head and hot-water bottles to the feet are the nurse's duties, and care is necessary to avoid alcoholic stimulants, also a brisk purgative is necessary. Care must also be taken to distinguish the effects of apoplexy from those of alcohol.

Concussion is caused by a fall or some injury to the head, and care is again necessary to distinguish the effects of *concussion* from *compression*. The patient must be kept quiet, warm, and in a darkened room.

For collapse or shock, warmth should be applied, a light hot bran-bag over the region of the heart, hot-water bottles to the feet, and easily diffusible stimulants may be given.

Sunstroke needs cold applications to the head, with quiet and rest in cool surroundings.

Reference has been made in the lectures to the administration of enemata. These are of several kinds, signified by their use, and are—(a) *Astringent* or styptic enemata, such as sulphate of zinc, perchloride of iron and alum; these are used for controlling hæmorrhage. (b) *Antipyretic*, such as ice-cold water or solutions of antipyrin, for reducing high fever. (c) *Anthelmintic*, such as turpentine emulsion, solution of common salt, infusion of quassia-chips, for destroying worms. (d) *Antiseptic*—boracic acid, chinosol, quinine, "izal" (weak solution), solution of iodine, and Condy's fluid for ulcerative dysentery, or cancerous or other discharges. (e) *Seda-*

tive, as starch and water (two ounces), with twenty drops of laudanum (for diarrhœa), bromide and chloral (for epileptic fits). Suppositories are often used as sedatives. (*f*) *Aperient*, such as soap and water (one to four pints), or this quantity with half an ounce of turpentine; olive oil with water; water (one to two pints) and sulphate of magnesia (Epsom salts, one ounce); castor oil (two ounces) and water (one pint); or glycerine (one teaspoonful). (*g*) *Nutrient*, not more than two to four ounces in quantity, of peptonised milk, milk and egg, or beef-tea with a teaspoonful of brandy. Artificial feeding in the case of the insane may either be by the mouth, nose (nasal tube), or the rectum. When nourishment by the mouth is forbidden as in gastric ulcers, or rejected as in persistent vomiting, or cannot be administered as in states of collapse, then suppositories of some soluble meat are occasionally used in preference to injections. Enemas should be carefully and slowly administered, the nurse stopping at once if pain is given; and the tube when introduced should be oiled and delicately and gently passed into the rectum, as the patient often resists treatment in this particular. It must be remembered that enemata are either to be retained, when they are termed nutrient, and in this case they must be small; or to stimulate the action of the bowels, in which case the quantity used may amount to several, even to six pints. When the patient uses a commode a blanket or dressing-gown should always be placed over the shoulders.

The instruments employed for enemata are of various kinds. (*a*) *The glycerine syringe* is made of glass or vulcanite, and it holds any quantity from one teaspoon-

ful (which is the usual dose) to an ounce. (b) *The "Higginson syringe,"* which is used for relieving the bowels, or, by attaching a special tube, for vaginal injections. It is simple in use, the bulb being squeezed and released alternately. The fluid flows only in one direction, and as the instrument is usually made of indiarubber the elasticity of the material permits a continuous and even flow. (c) *A bulb or indiarubber bottle,* capable of containing from four to six ounces, called the "ball syringe," with a short ivory tube screwed on the end of the bottle for administering nutrient enemata, which, as stated, do not exceed four ounces in quantity. Other syringes are (a) *The hypodermic syringe,* a small glass tube, with register for measuring drops marked upon it. A fine hollow needle is at one end, and the handle of the piston is at the other. When charged, the contents are injected under the skin; and (b) *the ordinary brass syringe,* with an ivory or brass nozzle, used for washing the ear passage and for cleaning wounds, or in removing dressings.

Baths (See also pages 112-115).—(a) *Hip-baths,* for diseases within the pelvis. These baths should not be too full, and during the sitting a blanket should be thrown over the body. (b) *Ordinary hot baths,* ranging from 100° upwards to 110° F. Hot baths may be used with ice to the head. (c) *Tepid baths,* from 80° to 90°. (d) *A warm bath* should be about the temperature of the body; and (e) *a cold bath,* the temperature of the air—colder, of course, in winter. (f) *Continuous baths* for hours, or days, or even weeks, at a degree or so above the body temperature, used for acute mania and for surgical cases, such as burns, etc. (g) *Graduated baths,* for high fever, *i.e.,* gradually reduced

whilst the patient is in the bath from 100° to 70° or 60°, or until the temperature of the patient is lowered to about normal. These have been used with success in the *status epilepticus*; or ice may be applied in an ice-cap and may be used with or without the bath. (h) *Hot-air baths*, given in kidney disease to stimulate the action of the skin; also in cases of melancholia in young persons, to improve the mental condition. (i) *Turkish baths* have this effect. (j) *Russian or vapour baths*, when steam is used instead of air. (k) *Mercurial baths*, when a patient well covered with a blanket sits on a cane-bottomed chair, under which a dish of calomel is evaporated over a spirit-lamp, the vapour of the steam being used at the same time, and the bath lasting for about twenty minutes.

The cold and hot wet-pack have already been described (see Chapter XV.). These and the half-pack and tepid sponging are used in cases of restless excitement with or without fever. Sponging is especially used for cases of high fever, when the skin is dry. Douches, nasal or vaginal, are used as directed.

Poultices, which are means of applying moist heat locally, should always be made as hot as can be borne. If too hot, or if used in the case of a "lost" patient, flannel must be placed next to the skin. Poultices are of various kinds, charcoal being often used for ulcers and bed-sores, or offensive discharges, and sometimes yeast for foul wounds. A mustard plaster made with mustard and cold water is not always a safe remedy for weak-minded persons with a feeble circulation, as the redness of the skin caused by the mustard may result in a sloughing sore. Linseed or bread may be used for

making poultices. When used to cover the whole chest, back and front, as in the cases of pneumonia, poultices are called "jacket poultices". Fomentations and stupes are used as hot as can be tolerated. Fomentations are made by placing an open towel over a basin. A piece of flannel a yard square, and closely folded, is then placed upon the towel in the basin and boiling water poured upon them from a kettle. The towel is folded over the flannel and each end turned and squeezed so that the flannel and towel are wrung free from water; both are then carried to the patient. The towel is now unrolled and the flannel is ready for use as a fomentation. There is no danger from scalding if the flannel is squeezed "dry". In using belladonna paint the glycerine extract over the part first and then apply the fomentation, but in a poppy fomentation the poppy-heads are crushed and boiled, the fomentation being made of the water thus used. Turpentine is at times sprinkled over a hot fomentation, but will soon blister if the fomentation is kept on too long. Turpentine fomentations are used for abdominal pain. Spongopiline may be employed in the place of flannel if desired. Counter-irritants, such as mustard, blistering fluid, and liniments, are also used for relieving pain. When blisters are thus formed they should be pricked, but the fluid let out must not be allowed to run over the skin as it may cause further blistering. Sweet oil or simple boracic ointment can be used as a subsequent dressing. Leeches and cupping are now rarely used. Ointments are often prescribed as applications to raw surfaces; they are really only medicated lard or oily preparations. Inhalations are not easy of application

for mental cases, but where their use is possible they are efficacious for bronchial affections, and they afford much relief for colds such as nasal and other catarrhs. The bronchitis kettle is a familiar means of applying moisture in the shape of vapour or steam to inflamed breathing tubes.

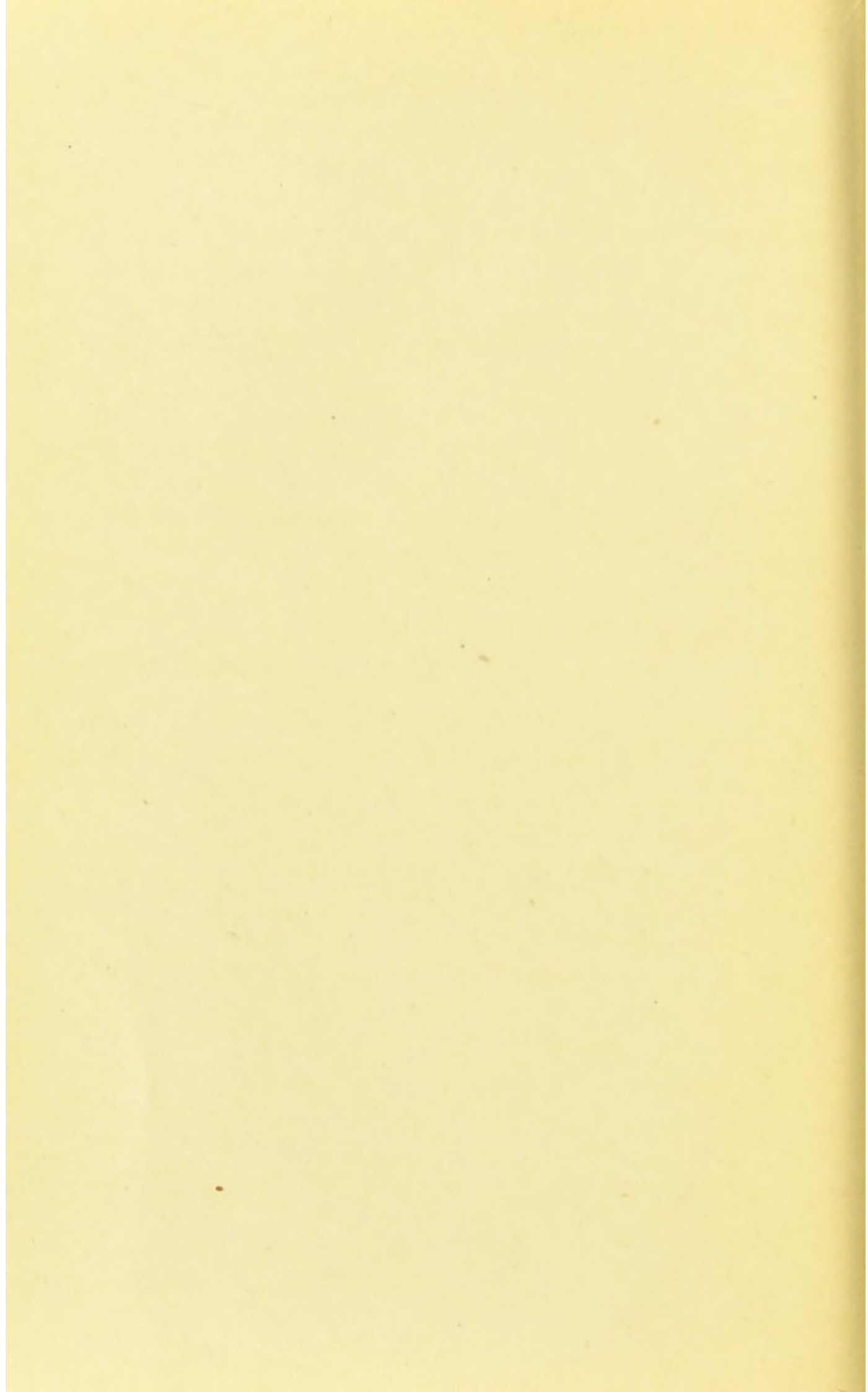
Cases of confinement occur not infrequently among patients in asylums for the insane. In a little over two years at Claybury Asylum about thirty women, whose insanity took place during pregnancy, gave birth to infants at varying intervals after admission. There is generally but little warning by pains of an approaching confinement; the pains are short, and labour may occur precipitately, the child being born within a short time of the initial pain. The fullest preparations for confinement should therefore be made for any case of insanity complicated with pregnancy as soon as the patient is received, and absolute cleanliness is imperative in every respect. There must on no account be any patient near a childbed case that has suffered from any discharges, and the nurse should not have been near any case of fever or of any infectious cases. When the pains begin, the bed should be prepared, a new mackintosh sheet (covered with a fresh draw-sheet) being arranged upon it, and all clean bedclothes furnished for the case. Three stages of labour are described: the first of dilatation of the os for the passage of the child; the second stage being the birth of the infant; and thirdly, the expulsion of the after-birth or placenta, after which the *binder* is fixed. There are certain fixed rules for the nurse to observe which emphasise the necessity for cleanliness in every detail. All metal or glass instru-

ments are to be boiled; all india-rubber instruments kept disinfected by being placed in antiseptic solutions, and the greatest care is to be taken with the hands, fingers and nails. All soiled articles must be immediately removed, and soiled pads burnt after use. During the first few days the vagina is to be douched night and morning with *antiseptic* solutions as may be directed, and the patient kept perfectly quiet. Antiseptics are generally chemicals which arrest or prevent putrefaction, without destroying the germs, whereas disinfectants destroy the germs themselves as well as arrest putrefaction. The antiseptics used for douches are usually carbolic lotions 1 to 60, permanganate of potash or Condy's fluid, corrosive sublimate 1 to 5,000, a saturated solution of boracic acid, tincture of iodine one teaspoonful to a pint of water, a weak solution of chloride of zinc, and such preparations as "izal" and other coal-tar products. The temperature of the patient is taken and recorded twice daily, and reports made as to any discharges, and also as to the state of the breasts, the bladder and the bowels. Attention to the state of the perineum in first cases, and also to the condition of the breasts, is very necessary. With careful and absolute cleanliness, and close attention to details, every case should do well; but many of the insane are very difficult to keep chemically or bacteriologically clean. Attention to the infant includes care in regard to the navel, the eyes, the groins, micturition, the state of the bowels, and the appearance of any rash. With the insane the baby is not permitted to be nursed by the mother, and special directions are given for its care and feeding.

Death.—Before concluding these chapters, perhaps a

word or two may be fittingly offered upon the final duties of the nurse when death occurs—a sad and regrettable consummation to the ministrations of the nurse and to the feelings of the friends. When the patient dies the eyes should be closed by gentle pressure with the fingers for a few minutes, or a small weight, such as a penny, may be placed upon the closed eyelids. The limbs should be straightened out carefully, and a bandage applied under the lower jaw to support it. The arms are placed at the side and the hands across the chest; the lower limbs are kept in position by a bandage connecting the great toes. The clothing should be removed, if possible, soon after death and before *rigor mortis* sets in, and the body thoroughly washed, after which a clean bedgown is placed over the remains.

As these chapters upon mental nursing are now concluded, I can state after long experience of the work, that mental nursing is an employment pre-eminently suitable to able and conscientious women. Moreover, the demand for trained mental nurses is great and is steadily increasing. Into whatever sphere of life a sympathising and well-trained nurse enters, there the standard of life is raised, for she brings enlightenment upon such subjects as cleanliness, self-control, thrift, and the care of the young. If her own standard is high, she becomes the most convincing health missionary that can influence any community, and she can—more than any other agent—help to “render growth more perfect, decay less rapid, life more vigorous, and death more remote”.



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