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Address.

MENTAL PITFALLS OF ADOLESCENCE.*

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So many conditions make for soundness of mind that the field of mental hygiene is a large one; but of all its aspects, none is of more vital importance than its application to the young adult. I shall endeavor, therefore, to give you some idea of the extent, nature and outcome of mental breakdown in youth, its principal causes and the possibilities in the way of its prevention which lie open to the parent, the teacher, the clergyman and the general physician. Widespread information on the subject is plainly called for in view of the large number of youths and girls who are annually admitted to our state and private hospitals for mental disease, and the ignorance of the general public as regards the special form of the disorder which is peculiar to adolescence.

The knowledge and application of the rules of bodily hygiene have, as everyone knows, long protected the adolescent from physical weakness, disease and injury. He is equally well guarded by private and public advice, training and example in the home, the school and the church against moral degeneration. Against ignorance he is educated in this country as in no other. But, against mental deterioration and

breakdown, little or no warning or advice is given him or his parents, as a rule, until he is placed under care in an institution.

Facts about physical disease come home to us. We are familiar with it from everyday observation and experience. We are impressed with accounts of its dangers, its terrors, perhaps, and the numbers of its victims. Mental disease, on the contrary, the most grievous of all diseases, though it may horrify in the abstract, seems very remote as a possibility in our own cases. It is usually the very last calamity we expect to have happen in the family and therefore no precautions are taken against it. If it were not necessary, because of the nature of their illness, to "put away" the mentally afflicted; if the secrecy about their condition, as though it were a disgrace instead of a disease contracted through no fault of their own, did not exist, people would be equally alive to the ravages of mental disease and the importance of the study and application of mental hygiene, or the science of mental health.

THE FREQUENCY OF DEMENTIA PRECOX AND ALLIED CONDITIONS.

How common is morbid mental change in youth, varying from minor states of instability to actual insanity, cannot be stated in percentages. Its lighter shades, although materially affecting the future life of the patient, rarely come under the eye of the institution physician, except in the psychopathic hospital, where incipient and borderline cases are numerous, although full opportunity for their observation and treatment is limited even there. Often the

* A Popular Lecture delivered under the auspices of the Massachusetts Society for Mental Hygiene in various cities and towns of the State during 1915-1916.

family physician is not consulted for these mild conditions, and when he is he either fails to recognize the disorder or belittles its importance. Consequently there is probably a large number of such persons in danger of mental breakdown who are without advice or other assistance.

But simply taking the known cases of the fully developed disease, the showing is impressive. It is safe to say that the majority of the 14,746 inmates of the Massachusetts state and private hospitals for the insane are cases—mostly chronic—whose disease began when they were young. They had then reached the end of the intellectual lives of which they were capable, became stranded on the rocks of adolescence, and were left mentally incapacitated for life. Of the 3264 new cases of mental disease admitted to the Massachusetts hospitals in 1915, 804, or over 21%, were suffering from dementia precox (as the disease we are considering is called) and allied conditions of adolescence. This yearly addition of cases of dementia precox, most of whom become chronic but remain physically well, causes them to accumulate until they soon form the majority of the inmates of our state hospitals. They represent one-third more admissions than the combined totals of all patients whose mental condition is due either to alcohol or syphilis—causes which are very rarely operative in producing this form of mental disease. Of all the classified forms of insanity, moreover, dementia precox claims by far the greatest number of victims.

Here let me say that this mental condition should not be confounded with mental defect or feeble-mindedness proper. It is important to bear this in mind. The mental defective, about whom wide public interest fortunately has at last been awakened, is one who had little or no mind to start with—who has been idiotic or imbecile from birth or infancy. On the contrary, most cases of dementia precox enjoy, up to the time of their breakdown, apparently sound and normal minds. A striking fact is the frequency with which the disease attacks adolescents of marked intelligence and promise. A German authority reports that large numbers of such patients are schoolmasters, the sons of schoolmasters and theologians. Statistics on this point give these figures: 27% men and 21% women had average intelligence before their mental breakdown; 55% men and 66% women had good and even remarkable intelligence; 18% men and 13% women were below the average intelligence, but were not mentally defective.

NATURE OF THE DISEASE.

Adolescence, by far the most critical period of mental life, extends approximately from the age of 15 to that of 25. It is in this developmental period, usually towards the end, that dementia precox, the form of mental disorder which is peculiar to youth, begins. It only rarely hap-

pens that it originates later than the completion of adolescence, although in some individuals full mental maturity is not reached before 30. Its name is derived from dementia, which denotes deterioration of the mind through loss of mental power, and precox, premature. In its essence it is an enfeebling of the previously healthy mind, a slow decline of mental strength through gradual weakening of the will and deadening of the emotions or mental feelings. It ends, generally after a few years, in permanent degeneration of the mind, sometimes light but more often pronounced and involving it in more or less complete disorganization. At the outset and throughout the course of the disorder may occur various kinds of mental disturbance appearing as "attacks," such as maniacal excitement, melancholic frenzy, simple depression, states of bodily rigidity (called catatonía), stupor, confusion of ideas and delusional states. Hallucinations, such as seeing or hearing non-existent sights or sounds, and sudden impulsive acts of homicidal or suicidal violence, are not uncommon. These manifestations do not all occur in the same attack although several of them may be combined in a single case.

FORMS.

The disease has been divided into several different sub-varieties, but I will only call attention to the simple form which, because of its mild nature, is more frequently met with outside the hospital. The other more pronounced and severe types, common in hospitals, need no further mention. These cases of simple dementia are far less striking and very insidious in their development. The principal feature is change in the youth's character, in the shape of a gradually developing mild apathy and indifference. If in good circumstances, he usually spends his life in indolence, varied by spasmodic and aimless activity, and tends to develop obsessions, antagonisms and anti-social proclivities. The poorer patient so afflicted is often a tramp, a crank, a criminal or a prostitute in the making. The "hobo" class is largely recruited from these mental derelicts. Wilmans, in 127 vagabonds, found 66 cases of dementia precox. This form is a common one, but most of the cases do not reach the hospital for the insane.

ITS APPROACH.

Familiarity with the premonitory symptoms of dementia precox is most important, as it is more than likely to be very helpful toward checking or minimizing further trouble if medical advice is sought in time. Therefore, I shall not apologize for giving them in detail. The early indications of the disease, which appear gradually, as a rule, are practically the same whatever form it may afterward assume. In all of my cases, in which intimate knowledge of the earliest manifestations was attainable, lapse in the power of attention—of mental concentration

—has come first. An ambitious student complains: "I cannot any longer wield my mind, which has become my master instead of I being master of it"; "I feel no exuberance as before"; "Everything is a dead weight"; "The feeling clings to me and I cannot fight it off." A bright lad, taking high rank in a preparatory school, grows despondent at finding himself becoming "dull," "stupid," and "weak," and begs to be helped, as his utmost endeavors to go on have failed. The girl in this situation feels for the first time that "she must *struggle* to be like other girls." The patient also becomes more easily fatigued physically than before and loses directive energy and initiative. With increasing mental failure the fruitless efforts are soon abandoned, the mind becomes more inactive, forgetfulness, depression and indolence replacing alertness, ambition and energy. He "wants to be let alone," becomes listless, apathetic, and careless, gradually slipping into a dulled condition of mind. Many become over-conscientious, depressed and self-reproachful. Avoidance of others follows and paves the way for suspicion of those about them, the starting-point it may be of future hallucinations, delusions, and overt acts. Suicidal thoughts may now appear. Adolescent patients of another type, when no longer able to meet even the minor demands of life, and physically fatigued, become easily upset and very irritable, as well as unexpectedly fault-finding and very angry over trifling matters. Marked indecision and constant demand for reassurance regarding the plainest matters of duty are common.

The train of thought naturally becomes interrupted early and may even show signs of the approaching mental confusion of the next and active stage of the disease. Lapse in judgment is shown in the development of unnatural prejudices, sudden and needless alarm at ordinary occurrences. Some patients begin by worrying over their physical condition, believing that their bodies or some bodily functions have undergone a change. Self-control may be early undermined, and strange conduct follows, such, for example, as unnatural and even grotesque infatuations, indiscriminate proposals of marriage, etc.

Sudden and unexpected acts, forerunners of the more pronounced impulsive states of the acute stage, are common, such as exhausting walks with no object after a long period of idleness; unexplained destruction of belongings, etc. Unlooked for transitions of mood and the lack of depth in the patient's depression or anger, characteristic features of the disease through its entire course, are early manifestations, as are also inconsequential speech and aimless effort.

The general appearance of the patient is that of apathy or mild depression, except at times of unexpected and transient animation. Lack of

energy also is constant, except during spasmodic outbursts of misdirected activity or prolonged over-work or exercise. Although such patients, owing to irregular ways of living, sleep more in the daytime, insomnia is developed early. The appetite is capricious. Headache is frequent, and, as Mairer believes, a highly important symptom at this juncture. It is sometimes a severe, persistent and protracted pain, but more often a disagreeable, vague sensation as if, for example, the head were "empty" or "filled with cotton wool." Nightmare is common. A generally weakened, relaxed, poorly nourished bodily condition is usual and is shown in loss of weight, pallor, dilated pupils, low temperature and weak pulse. Menstrual irregularities are rather frequent. In not a few cases the group of premonitory symptoms bears a deceptive resemblance to neurasthenia proper or "nervous prostration," owing to the predominance, for quite a long period, of nervous and bodily debility.

THE SOURCES OF DEMENTIA PRECOX.

Authorities differ as to the prime cause of the disease, one group favoring a physical, the other a psychic origin; but wherever its germ, so to speak, may lie, the character of the mental soil in which it takes root and flourishes and the conditions which excite it to full development are well known to the psychiatrist.

One of the profoundest, although more remote, influences in originating dementia precox is the time of life in which the disease prevails,—the period of puberty and adolescence, of growth, development, immaturity. Almost all modern writers on psychiatry, even those who lay special stress on the influence of faulty heredity, are fully alive to the great importance of this critical time of life in fostering mental disease, and in all probability we shall have to seek for the real causes of its origin in the normal physical and mental variations of this period of development.

To appreciate the possibilities of this time of life in the way of mental deterioration we have only to call to mind the unusually rapid growth of the organism in every tissue, the new and powerful activity of all the functions, especially those of nutrition, in the progress toward complete development, and the stamina and often the care that are essential for properly meeting the demands of this revolutionary period. The disturbance of the heretofore tranquil nervous system by the advent of the reproductive functions is a vital change, and the proper adjustment of this part of the organism to the working whole is of far-reaching importance, as the genital activities have a profound effect on the entire system and the developing personality. During adolescence the normal mental condition is not a solidly settled one, and at this time, if ever, should we expect to find pathological disturbance when impressionability, instability of

purpose, variation of mood, excitability, impulsiveness, ambition, independence, and intolerance are most likely to be in full play; when the affections, emotions, and newly awakened sexual feelings and passions are most keen; when reflection and judgment are immature, and, above all, when self-control, which should regulate all, is itself in an imperfect stage and in danger of being unequal to its function. Nothing is more significant of the causative influence of this period than the resemblance of the clinical picture of dementia precox to these ordinary mental elements of normal development which in morbidly exaggerated form constitute the different manifestations and phases of the malady.

When to this developmental factor is added the special mental make-up, sometimes improperly called temperament, of many of these patients, the soil is thoroughly prepared for the growth of the disease. From childhood these individuals are, as a rule, well behaved and easily trained because they shun opposition and struggles from lack of normal vigor and strength of purpose rather than from any inherent virtue. Their tendency to shrink from coping with the world, due to a faulty habit of adjustment, resolves itself into the "shut-in" personality which typifies these cases. This factor, so important in determining the causation and prevention of the disorder, was first recognized by Meyer and August Hoch who found that a large number of cases occurred in persons who, as Hoch puts it, had "no natural tendency to be open and to get into contact with people and things about them, who were reticent and exclusive and could not adapt themselves to situations, who were hard to influence and often sensitive and stubborn, but the latter more in a passive than an active way. They showed little interest in what went on and frequently did not participate in the pleasures, cares and pursuits of those about them; although often sensitive they did not let others know what their mental conflicts were; did not unburden their minds, were shy and had a tendency to live in a world of fancies."

Many of these sensitive natures suffer in silence at their imagined inferiority, always expect to fail in their efforts to please others or to succeed in their studies or whatever they may undertake. Their pride is easily wounded and they are ever ready to believe themselves slighted. They are excessively over-conscientious, magnify their faults and mistakes, and live in constant fear of what people will think of them. Consequently remorse and shame cause them much suffering except when their troubles are crowded out for the time by everyday duties. Their diffidence and exclusiveness too often pass among their young friends for haughtiness and self-conceit and thereby cause criticism from others—the very thing which they are so anxious to avoid. Submerged and repressed factors which occasionally torment the

adolescent of this type and which the psychoanalyst tries to bring to light and correct are early sexual experiences which are usually exaggerated. The constant and often growing mental conflict caused by the repression of these thoughts is an added strain which is sometimes the precipitating cause of nervous breakdown. Then, too, these youths tend to dwell upon ordinary longings which the normal mind ponders on but puts aside. Hoch found the "shut-in" personality markedly pronounced in 35% and indicated in 16% out of 72 cases of dementia precox.

Another type is the precocious youth, the student who is more or less of a prodigy, a phenomenon. Such subjects are particularly prone to mental breakdown in adolescence owing to the readiness with which their abnormally active minds may be over-stimulated in every direction.

One cannot fail to be impressed also, with the large number of cases of dementia precox which present a family history of mental or nervous disease. Nevertheless many distinguished psychiatrists deny that disease-heredity is a powerful predisposing influence. Kraepelin, the foremost authority on the subject, comes to no definite conclusion on this point, but seems to be opposed to regarding this disorder as a form of degeneracy. He points out that heredity does not appear to be more frequent in dementia precox than in certain other mental diseases and that the best known constitutional disorders, such as hysteria, manic-depressive insanity and psychopathic states do not lead to a mental deterioration but to a periodic recurrence of symptoms with intervals of perfect health which are often long. Statistics on this point are quite diverse.

Badly directed education, moral and mental, may give a wrong turn to the tendencies of the nervous child and thus leave him with little defence against the exciting causes of mental disease when adolescence is reached.

PRECIPITATING CAUSES.

The precipitating causes are various, but for the most part are of the nature of exhausting influences—mental and physical strain. These are the most conspicuous and powerful of the exciting causes of the disease. Rapidly-growing youth or girls in the humbler walks of life, apprentices, clerks, train hands, stable boys, mill operatives, domestics—often succumb to the exhausting effects of hard and continuous physical labor combined with long hours, anxiety, little sleep, insufficient food and in consequence disorder of nutrition. Insomnia and lassitude arise and mental breakdown follows, sometimes apparently without the aid of any predisposition to mental disease. Youthful volunteers not injured to military discipline and the hardship and dangers of active service also recruit the ranks of the youthful insane. Social strain in girls

with its attendant factors of malnutrition and fatigue as well as haunting may precipitate mental breakdown in predisposed cases. Over-study, of itself rarely productive of mental disorder, causes many a delicate girl or lad of the "shut-in" type to succumb to mental disease when poor circumstances increase the struggle for education. Rapid and excessive growth in height, without corresponding weight and proportionate development, is recognized as abnormal. It is not uncommon in this type of adolescent and may sometimes precede by a little the development of the disease. In these instances there is not sufficient alimentation provided to meet the demand of the growth of the organism *plus* excessive mental and bodily energy.

Self-abuse, if the degrading habit be carried to great excess, and if the child or youth be of the nervous type, is apt to be exhausting and to cause general depression and languor, lessened power of attention, poor memory and dullness; but as ordinarily practised,—and the habit is well-nigh universal in youth,—its results, according to accepted medical teaching, are, as a rule, not so directly disastrous as was formerly believed to be the case, and are more often moral than physical or mental. Contrary to popular belief, masturbation is almost never the cause of mental disease or defect. Melancholy subjects of dementia precox, with delusions of wrongdoing and general worthlessness, often accuse themselves of previous excess in the vicious habit who on recovery admit that they had seldom practised it. Many of its symptoms are purely nervous in character, and are due to shame, anxiety and loss of self-respect, due to a consciousness of a debasing weakness which is universally condemned.

Typhoid and other debilitating diseases occasionally leave the patient in a permanently weakened mental condition culminating in dementia precox. Child-birth and its attendant conditions, with its many disturbing influences, is sometimes the starting point of mental breakdown. Aschaffenburg found 56 cases of dementia precox in 118 cases of so-called "puerperal insanity." Finally, it may be impossible to find any adequate cause for the attack, a small proportion of the cases occurring in the physically strong and apparently stable and socially inclined.

SEX.

No reliable data have thus far been recorded which indicate in which sex the disease is more common. Not a few authors find the disease more prevalent in young men.

THE PROGRESS OF THE DISEASE.

There is the greatest variation in the manner in which the disease may progress. In the great majority of cases the first attack may be and usually is more or less pronounced and severe and lasts all the way from three to eight months or a

year, to be succeeded by a remission of symptoms to such an extent that the patient appears to be entirely well and is able, it may be, to live at home. After a time, however, sometimes a year or more, he begins to become easily exhausted in mind and body, sleeplessness sets in and a relapse occurs with deeper dementia though somewhat less acute symptoms. From this attack also he may emerge but, with the mind on a still lower level of strength and rationality, he again relapses and finally the mind permanently succumbs. Others do not have separate attacks but gradually sink into permanent dementia. A large proportion of cases never recover their reason although their physical health becomes and remains good and even excellent.

These temporary recoveries are frequent in dementia precox but substantial recoveries are much more common in other forms of mental disorder. Nevertheless, a certain proportion of dementia precox cases, once estimated by Kraepelin at 13%, appear to get well permanently after one attack and continue ever after to fill their accustomed stations in life to a large extent as well as before, although, as a rule, they never appear entirely the same in the opinions of near relatives in some detail of endurance, judgment or conduct. Other victims of the disease may live on comfortably outside of the hospital but are plainly on a lower mental level than those about them and are regarded as "non-compos." The remainder become irretrievably demented, inactive in mind and body, automatic in their movements and of varying degrees of helplessness, requiring more or less constant personal care. This class of patients, particularly serve to swell the constantly accumulating aggregations of chronic patients in our institutions.

EFFECTS OF TREATMENT.

Improved methods have, of late years, unquestionably tended to benefit the condition of these patients and increased the number of recoveries in our custodial state hospitals. Nevertheless, aside from protecting the patients from neglect, injury to themselves and others and the disturbing influences of outside life, securing their physical well-being and providing occupations and occasional diversions (and a vast amount of excellent work is done in these directions), comparatively few curative results are possible for the majority of them where large numbers are cared for together. It is in the treatment of the *individual* patient that the chances of recovery or improvement are greatest, and the nearer we can approach to this wherever the mental case is under care the better will be the results. By employing resident social workers who interest themselves in the individual patient and his affairs, and increasing the number of nurses, the superintendents of our institutions are now making more progress in this direction.

THE OUTLOOK.

This is indeed a gloomy picture. It has its counterpart in the condition of sufferers from tuberculosis before the public interest in the subject was awakened and a crusade begun to prevent its ravages. Compare the situation of the consumptive of that day and this. What remarkable progress has resulted in public enlightenment in hygienic measures for the prevention of the disease, in general recognition of its earliest symptoms and in advanced methods of treating the developed disease. At that time it was generally looked upon as an incurable disorder. Once the diagnosis had been made of phthisis, as consumption was then called, the patient was supposed to be doomed. Now recoveries are not only frequent but expected when the case is taken in season, and when relapses occur the intervals of health are prolonged under comfortable conditions by our modern means. Statistics tell the story of the diminution of deaths from this cause of late years. In the early days of the movement no one would have ventured to predict such a general public awakening and such encouraging results.

The situation is to a considerable extent the same as regards mental disease, and the outcome, though less pronounced, will be no less surprising if the mental hygiene movement, both national and state, which is now in its infancy, shall take an equal hold upon the sympathies and interest of the public.

IMPORTANCE AND MEANS OF PREVENTION.

The chief aim of such organized effort should be the adoption of preventive measures, as they are the main reliance, the anchor to windward against the disease. As a means of combating it, they are infinitely more effective than treatment instituted after it has once gained a foothold; and it is here that the help of parents, teachers and general physicians is indispensable. Familiarity with the remote influences, the precipitating causes and the earliest symptoms of mental deterioration in adolescence is of great value, and not only, be it understood, in warding off the malady but also, by the way, in throwing much light on the traits and trends of the minds of youths and girls who are normal and sound in mind and body. No one has made this plainer than Stanley Hall, our foremost authority on the psychology of adolescence. "One of the missing links," he says, "which are indispensable to full acquaintance with the many forms of precocious mental decay, is the absence of record or available knowledge of the early stages in the development of the disease before cases come to asylums; for of this disease, even more than of many others, it is certain that if all were known, its manifestations would be found to be numerous in proportion as they are mild, and that the vast majority who are slightly impaired by the ferment of this storm and stress

period of life never come under any kind of medical observation. For one I incline to the opinion that just in proportion as these gaps are filled we shall have less need of recourse, with Kraepelin, to toxic and other chemical cause. The paradigms of premature decay," by which he means its parallelisms with the manifestations of the inner and outer life of normal youth, "reveal a body of phenomena of the highest importance for normal genetic psychology, and it should be asserted that no parent, judge, family or army physician, and especially no teacher, should be ignorant of these morbid forms which, in their mild degrees, are so common and the key to so much that is normal, but which are generally concealed to others and often unconscious to self."

Now, mental, like physical, illness, comprises many different "diseases"—between 35 and 40 all told. Some are more curable than others, and some are inevitably hopeless. Dementia precox has been placed, and rightly so, if we have regard only to *past* results, between the two, that is, in the less curable class, but that should not be taken to mean, by any means, that it is not preventable. On the contrary, it is now accepted by those expert in the subject that much of the disease may and should be prevented.

As Campbell of the Johns Hopkins Hospital puts it: "the researches of Kraepelin, Freud and Jung of Germany, and Meyer and Hoch in this country, show that under proper guidance and control many cases of functional nervous disease and insanity are of such a nature as to be manageable and preventable. It is clearly obvious that, of the enormous number of persons who, as a result of hereditary tendencies, are susceptible to nervous and mental breakdown, many could be saved by proper assistance during the developmental stage." Among the preventable conditions which he considers the most hopeful he places dementia precox first. He classes 39% as manageable and preventable.

Unfortunately, the theory of degeneracy has become so deeply ingrained in people's minds that a surprisingly large number still believe that all mental disease is on a par with idiocy and imbecility and that it not only cannot be really cured but is impossible of prevention except in some future generation through the admixture of healthy stock. We have far too long lain back content in the belief that it is one of nature's methods of weeding out the unfit, and the mental weakling of this type has been excused for giving rein to his morbid tendencies and his guidance neglected because his father or mother was a criminal and inebriate or insane. It is largely for these reasons that no systematic scheme of prevention has ever been tried for the insane until the recent public instruction in mental hygiene was undertaken.

The practising psychiatrist and the neurologist not infrequently are consulted by patients

with unmistakable symptoms of approaching dementia precox in its very earliest stage, and not a few, under close supervision, change to healthful open-air and congenial but quiet surroundings, suitable companionship and careful following up of their cases, have been restored to rationality, calm of mind and enjoyment of life. Some seem to have recovered; others, if they have not been fully brought up to their original mental level, are at least able to be of some use in the community. In this way occasional cases that seemed doomed to lifelong commitment to a hospital for the insane have been saved. So far as they go, therefore, these results constitute object lessons of the effects of prevention. So, too, the intervals of comparative health occurring between attacks are frequently prolonged when the patient is kept track of by the physician and led to make frequent reports of his progress. In this way relapses may be warded off for a much greater length of time than would have been the case without such supervision. But prevention from this source cannot go far as it is comparatively seldom that such cases reach the physician in time owing to the prevailing ignorance of the danger signals or the refusal of the patient to coöperate. Fortunately, psychopathic hospitals and wards are now receiving more of these early cases, which formerly would have shrunk from going to a state hospital.

Nor should we wait until medical advice seems necessary. It is just here that the help of the parent and teacher may be of the utmost service. They should not only make themselves familiar with the signs of its approach in order to summon medical help in time, but should strive to familiarize themselves with the morbid tendencies that I have endeavored to describe, so that, when possible, they may so direct the lives of their charges that strain and other dangers to young minds predisposed by heredity or temperament to breakdown may be avoided. The "shut-in" type of lad or girl, in which the disease takes root most quickly and frequently, should be generally recognized. It should become a matter of common knowledge that just as a special physical make-up or conformation may betoken tuberculosis so there is in many cases of dementia precox a particular kind of personality which favors its development and calls for precaution in the way of training, environment and mental and physical hygiene. In families of the ignorant and unthinking these danger signals pass unnoticed, but intelligent people may learn the lesson and profit by it, if it be brought to popular knowledge as an accepted scientific fact.

Every endeavor should be made to pierce the shell of secretiveness which envelops these minds, to gain their confidence, and without too much preaching explain to them how needless are their self-depreciation and their fears; how exaggerated are their ideas of

past experiences, especially the sexual, and how mistaken they are as regards their consequences. Girls should have the nature of menstruation and the precautions it necessitates early made plain to them. Boys should be led to look upon occasional seminal losses during sleep as a natural occurrence. Many a frightened youth, for want of a father's foresight and prudence in this direction, has fallen into the hands of quacks, who have worked upon the fears of their victims until they have become morbidly depressed and hypochondriacal. Parents should also see to it that their children are kept from the first in the companionship of other children and take part in the healthy pursuits and pleasures of their mates. They should endeavor to implant normal mental processes in incipient cases and regulate their methods of thought, study, reading, exercise and conduct.

But these means of prevention are often difficult to put into effect in dealing with such inaccessible natures, although they should never be neglected. Fortunately there are other and more tangible means of strengthening the resistive power against morbid tendencies in the direction of bodily nutrition and development and regulation of physical and mental effort in the school, in sports, in the family, in society and in other activities.

To begin with, it is important that special attention should be paid to the accumulation of a reserve fund of bodily nutrition with which to sustain the growing system, especially of the delicate youth, and protect it against physical or mental fatigue. Every possible means should be availed of to prevent such subjects from acquiring the habit of taking irregular, insufficient and unwholesome food. They are liable to develop lasting hypochondriacal fancies which might never arise if they had been trained early in this direction. Louis Starr, writing on the adolescent period, recognizes this danger and believes that bad eating habits lead to many breakdowns of students and cause irritability, anemia, malnutrition and a condition of weakness in which marked fatigue follows such trifling exertion that exercise is precluded and a craving for stimulants engendered. It is essential, therefore, to establish an appropriate diet during puberty. If correction be neglected until after sex development be completed little improvement can be expected. A great many young people are inadequately fed, especially the only child, who is supposed to be delicate. Tracy and Croasdale, in a series of observation-tests made during the past year upon 127 typical students at the Philadelphia Normal School for Girls, found that only about one-third of them took three substantial meals a day while the rest depended too largely on hastily-snatched breakfasts and lunches of sweets and pastry and often missed meals altogether. The effect of these habits was easily seen in the general health of the students. There

was a distinct difference in the powers of endurance and vitality of certain girls whose diet was more solid and substantial than the others. Much more does the rapid growth of the young and their enormous and incessant activity of body and mind demand a full and regular supply of nutritious fuel, and they can hardly eat too much. This is especially true of the nervous child who should never be stinted and always encouraged, but never nagged, to eat plenty of all kinds of nutritious food, avoiding perhaps too marked a preference for meats.

The general principles of prevention laid down by Sir Thomas Clouston, the famous Scotch psychiatrist, are practical and to the point. "Build up the bone and fat and muscle by means known to us during the period of growth and development. Make fresh air the breath of life of the young. Develop lower centers rather than higher where there is a bad heredity. Do not cultivate, rather restrain, the imaginative and artistic faculties and sensitiveness and the idealisms generally in cases where such tend to appear too early and too keenly. They will be rooted in a better brain and body bases if they come later. Cultivate and insist upon an orderliness and method in all things. The weakly neurotic are always disorderly, unbusiness-like and unsystematic. Fatness, self-control, and orderliness are the three most important qualities for them to aim at."

I have alluded to the occurrence of attacks of so-called "nervous prostration" during adolescence. They are in reality mild, transient episodes of mental instability and are frequently the starting points of impaired mental stamina whose effects may not come to the surface until later in life under stress of some sort, in the shape of a sharp mental breakdown. It is of importance, therefore, to bear such a possibility in mind in order that the future lives of such individuals may be judiciously ordered and any return of nervous symptoms be promptly met.

Insufficient sleep in the young calls for precautionary measures in the way of less study and more food, fresh air and exercise. Decided loss of flesh with or without any especial mental change should put us on our guard against mental or nervous breakdown in the predisposed and the delicate. Such loss of flesh is not confined to physical disease alone, as is usually supposed. Parents are apt to regard too lightly such indications, and the boy or girl concerned rarely admits mental or bodily tire, in fact does not feel it in most cases, as anaesthesia (absence of physical sensation) of fatigue is not uncommon under these conditions. The adolescent in school or college should be sent home and looked out for without temporizing whenever signs of insomnia, loss of appetite or decided lack of his usual energy and interest in work or sport become evident.

Overstrain in physical effort calls for especial precaution and, while mental and bodily cod-

dling should be discouraged, it should be borne in mind that nervous children become readily exhausted in both directions, and should be guarded so far as possible against pushing exertion to the point of daily fatigue. At the same time plenty of systematic open-air exercise, graduated to the individual's strength, should be encouraged. I have alluded to the necessity for restraint of the mentally precocious boy or girl. The physically precocious also come in for a word of caution. I refer to the very tall, thin, overgrown youths with this mental makeup. If such subjects always could be kept from physical over-exertion and athletic competitions, there would be fewer mental breakdowns.

Over-study is too often singled out as the cause of mental breakdowns; whereas the combination with it of other factors, such as rivalry, the expectations of the student's family, overstimulation of his efforts by the parents, straitened circumstances and other sources of anxiety, as well as unhygienic living, is really responsible for the result. Nevertheless, there are not a few nervous children and adolescents, particularly the dull and backward, for whom much mental application is harmful. These subjects should not be forced, and the time spent in study by any boy or girl should never exceed five hours a day, with intervals for rest and exercise. It has been shown that children who study longer than this suffer more illness than those who understudy, and this is more noticeable the younger the scholar, as there is less resisting power.

For shy, sensitive, self-conscious, perhaps over-mothered boys or girls in good circumstances, the routine and associations of a well-selected preparatory school at a distance from home, where the right moral tone, discipline, physical training and an out-of-door life are important features of the school methods, and where they will realize that each of them is but one of many pupils, is an excellent corrective and upbuilder of mental and bodily strength and character. For the more highly nervous this occasionally proves too severe an experience, but it never need be disastrous, and it often happens that the doting and indiscreet parent gives it an insufficient trial. It is generally admitted, according to Stanley Hall, that girls in good boarding schools where evenings, food and regimen are controlled, are in better health than day pupils with social, church and domestic duties and perhaps worries, to which boys are less subject.

Social service work, both professional and amateur, should only be undertaken by the strong and vigorous girl. It calls for constant effort of the most taxing kind, and the anxious-minded, over-conscientious, delicate and determined worker is more than likely to suffer physically and nervously under the strain, besides exposing herself to the danger of mental breakdown. On the other hand, the high pressure of social gaiety when a girl is "coming out" is

only well withstood by the normal, healthy and vigorous girl, and even she is usually pulled down in flesh and spirit when the festivities are over. Late hours, loss of sleep, insufficient nourishment and a feverish unrest are accompaniments of this season, and occasionally have been the precipitating cause of nervous breakdown in the delicate. At all times the cultivation of healthy commonplace activities is the most beneficial course.

Effort at the prevention of mental disease among the poor must perforce be largely confined to the dissemination of simple instruction in mental hygiene through popular lectures, and especially the oversight given to convalescent and presumably recovered sufferers from dementia precox on their discharge from the hospital, through after-care and social service channels. By following up these cases, regulating their home lives and family surroundings, helping them to secure suitable employment and, in general, improving the condition under which the original breakdown occurred, it is sometimes possible to ward off, or at least, delay relapses. For this class this is among the most promising means of prevention. I must in this connection again urge the advantages of psychopathic hospitals with out-patient and social service departments for meeting the disease in the early stages. Nowhere else can the incipient cases among the poor be reached and treated with better prospects of success.

After-care applies with much greater force to cases of dementia precox occurring in the well-to-do for, when once an attack has been experienced, the dread of a relapse causes the more sensible and intelligent to listen to medical advice. They recognize more readily their limitations, and their relatives and their means enable them to escape the sources of fatigue and anxiety to which the poor are subjected.

Massachusetts Medical Society.

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THE COMMUNICABLE DISEASES OF CHILDHOOD.

I.

THE RELATION OF THE STATE DEPARTMENT OF HEALTH TO THE COMMUNICABLE DISEASES OF CHILDHOOD.

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MODERN health departments have expanded far beyond the field of communicable diseases

and now contemplate in the scope of their work all defects and deviations from the normal, whether due to germs or to other causes.

Teaching personal hygiene and attempting to keep people healthy does not mean that we intend to relax our efforts in the control of epidemic disease. We must hold what we have gained and try to go farther toward the elimination of communicable disease. The fact that typhoid fever has been reduced in Massachusetts to less than 8 deaths per 100,000, and that there are less than 275 deaths annually in Massachusetts from that disease, does not signify that we shall relax our control over water supplies and sewage disposal. Similarly, a continued effort with redoubled energy is necessary further to reduce the death rate for diphtheria, scarlet fever, measles and whooping cough.

In Massachusetts in 1914 the chief factors in our mortality were the following:

Infant mortality.....	9894
Pneumonia	5987
Organic heart disease	5428
Tuberculosis	5061
Cancer	3586
Bright's disease	3057
Apoplexy	2606
Syphilis	?
Diphtheria	652
Typhoid	268
Scarlet fever	246
Whooping cough	225
Measles	149
Influenza	120

Measles and whooping cough are much more serious than the figures indicate. A considerable proportion of deaths charged to pneumonia are really chargeable to measles and whooping cough. Important results have been secured in measles by research workers in regard to the period of infectivity and modes of transmission. Education of school teachers and parents in the early signs of this disease promises much in reducing measles still further. We are peculiarly fortunate in having recognized experts like Dr. Place and Dr. Morse discuss these two interesting factors in our death rate.

Our knowledge of scarlet fever has been augmented in the past year by the brilliant researches of Mallory, and the committee is to be congratulated in securing from Dr. Mallory himself a paper upon this subject. Scarlet fever will also be discussed by one of the foremost sanitarians in the United States, Dr. Charles V. Chapin, who, from long experience and ripe judgment, will give us valuable suggestions for the suppression of this disease.

In spite of the enormous reduction in diphtheria during the past two decades, I am not satisfied with the results at present. Considering the high standard of Massachusetts physicians, the free facilities for laboratory diagnosis, the free distribution of antitoxin and material for the Schick test, it is hard to understand that we have over 600 deaths a year from this easily preventable disease. The State Department of Health made an investigation of all