I hereby declare that the following Recess had been composed entirely by myself, and that the illustrations cited came under my own observation while I acted as assistant medical officer in the Briston Royal Institution, Dumfries, and as Deputy Superintendent of the Wellington Asylum, New Zealand.

A. Rowand
Insanity in Adolescence.

Its Forms, Causes, Prevention, and Treatment.

A. Rowand M.D., B.S. In18, C.M.
List of Works to which reference is made:

- Clouston.
  - Lectures on Mental Diseases.
  - The Neuroses of Development.

- Combe.
  - Mental Derangement.

- Crickton-Browne.

- Layeck.
  - The Nervous Diseases of Women.

- Lewis (Bwan).
  - A Text-Book of Mental Diseases.

- Maudsley.
  - The Physiology and Pathology of the Mind.
  - Responsibility in Mental Disease.

- Merieux.
  - Sanity and Insanity.

- Stearns.
  - Insanity: its Causes and Prevention.
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Insanity, as it occurs during Adolescence, is usually of a well-marked type, and a knowledge of its causes and early symptoms leads to treatment of a rational and frequently successful kind. Moreover, it is a form of insanity with which the family physician has frequently the opportunity of dealing at its earliest stages, and in which his appreciation of the symptoms is likely to prevent disaster. Further, it is of all insanities the one in which hereditary predisposition plays the most important part, and in which preventive treatment can best be employed. Hence the value of a thorough knowledge of its forms, causes, and symptoms.

Adolescence may be defined as the period which elapses between the establishment of sexual activity and the complete development of sexual power. It is at the same time the period of development of brain as distinguished from growth in bulk. At the age of seventeen or eighteen the brain ceases to grow, and between this time and the age of twenty-five simple development of function proceeds, the individual reaching full manhood or womanhood at or about the latter age. Along with development of brain there is corresponding development of bodily function and completion of bodily growth, the closing period of adolescence being especially characterised by the completion of development of the Osseous System.

The period of puberty, or of the maturation and initial functional activity of the organs of generation, is characterised

by very active growth of the body, but the process of differentiation leading to full sexual divergence appears to be incompatible with extreme nutritive activity, which consequently ends in the early period of adolescence.

At puberty, new activities are added to the body, and there is a corresponding differentiation of the cerebral areas in which these activities are represented, accompanied by a slight increase in the bulk of the brain.

During the period of adolescence the development of these activities with their corresponding cerebral centres is gradually completed, and there is an accompanying evolution of the complicated mental states associated with the reproductive system. And just as the sexual characteristics of the male become more and more differentiated from those of the female, so do the mental characteristics of the male become distinct from those of the female during the period of adolescence. The mental characteristics of the normal adolescent are well marked, and their relationship to the reproductive function is not difficult to trace. The most marked of them is self-consciousness. In a healthy child there is very little of this; the child's consciousness is mainly employed with things around it and their relation to himself, and the full realization of his own personality has not yet been evolved. In a healthy state the child's bodily organs work smoothly, and the nervous currents which

1. A Text-Book of Mental Diseases (Bryan Lewis), p. 336.
pass from them to the train do not set up any marked disturbance there. Consciousness of self is of gradual development, but even in childhood and girlhood it is normally of little strength, and when it is excessive it is due to some hereditary nervous taint or to some bodily disease, or has been fostered by unhealthy moral surroundings or by an injudicious education. But with the access of puberty new functions are developed, and the disturbance carried to the higher regions of the brain by the nerves leading from the newly active organs as its mental equivalent a much increased consciousness of self. For the foundation or physical side of conscious personality is the representation of the bodily activities in the reaction of the higher nerve regions to which nerve currents are carried from the various organs.

This consciousness of self is common to the two sexes in adolescence, is most marked during the earlier years of the period, and betrays its origin in the new sensations accompanying sexual activity. The feeling of constraint in presence of the opposite sex, the new consciousness that the one sex has a special interest to the other, the vague longings, emotions, and aspirations, the true nature of which cannot yet be understood—these are the mental equivalents of the nervous disturbances which are being set up in the

2. Mental Diseases (Clouston) pps. 544, 545.
Cerebral cortex by the new activities of the bodily organ. At first there is little distinction between them in the two sexes, but as sexual divergence proceeds the mental characteristics of the male become more and more distinct from those of the female. His is the active organism, and its activities begin now to predominate. But much of the activity is ill-regulated, and with it there is still blended much of the self-centered and the emotion. In the female, on the other hand, the emotional element continues to predominate. Here is the receptive organism, and during adolescence are seen the arousal of new instincts and the development of the higher emotional states. Strong instincts of protection and of self-sacrifice, widespread sympathies, and the craving for sympathy in return, are among the chief mental characteristics of the female. And just as the activities of the male adolescent are often extravagant and ill-regulated, so the emotions of the female adolescent tend to be fancied without discrimination. An outlet for the emotion is needed, just as in the case of the male an outlet is needed for the activities. The object of sympathy may be unworthy, the motive for self-sacrifice may be wholly inadequate, but there is a kind of emotion waiting to be expended, and whether it be squandered or well employed, depends largely on the nature of the outlet which first presents itself.

If such are the normal characteristics of adolescent development, it is easy to deduce in a general way the symptoms which will arise when the develop.
ment is abnormal. If motor activity, combined with self-conceitiveness and a large element of the emotional, be normally characteristic of the male adolescent, it follows that exaggerated or perverted forms of these qualities will be found in the adolescent in whom the normal development has been disturbed. If the emotional element, combined with self-conceitiveness, prevail in the normal female adolescent, it follows that exaggerated or perverted emotions will constitute the leading mental symptom when development is abnormal. That such is the case in typical forms of insanity, occurring during adolescence will be seen when these are considered.

That insanity should readily occur during the period of adolescence admits of simple explanation. Insanity is the mental symptom of diseased or disordered central activity, and adolescence is the time of life when brain development is most active, and when, consequently, the nervous tissue of the brain is most unstable. Certain bodily functions are being established, and the increase of self-conceitiveness and the birth of new emotions show that it is in the very highest regions of the brain that corresponding differentiation and development are proceeding. Again, the vague and unknown emotions which characterize adolescence show that the changes in the brain affect wide areas, that they tend to spread freely, and that they are not yet thoroughly organized. The nerve currents which run from the reproductive and other developing organs are not yet passing to definitely organized centres, but are passing
reaching over large areas. The centres have not yet been completely differentiated, and their discharges tend to spread very widely. And if, as appears to be the case, the physical substratum of thought is the passage of the nervous discharge from centre to centre through the matrix or along the connecting fibres, it follows that thoughts connected with the new feelings cannot yet be orderly, or organised in harmony with external things. And this is markedly the case with adolescents. Not only are their feelings and emotions vague and voluminous, but their thoughts also are out of proportion and disorderly. They are prone to build castles in the air, and to plan schemes of conquest and philanthropy of the wildest nature. Their thought-connections do not correspond with the relations of things with the accuracy to be found only when maturity is reached. Instability of brain tissue is necessary for its development, the new centres and new connections between centres may be capable of formation, and during adolescence, when development is so extensive and so rapid, this instability must be at its maximum. Hence any disturbing cause will act during this period at the greatest advantage, for instability must carry with it the liability to faulty action and even to disintegration. So every adolescent there is thus present a predisposing cause of insanity; what are commonly the immediate causes of breakdown will be considered later.

1. vide Sanity and Insanity (Herlecr), pp. 109 et seq.
Forms of Insanity in Adolescence.

Many forms of insanity may occur during adolescence, but we have here to consider only those which are characteristic of this period of life, and bear a definite relation to it. They may best be described under the following heads:

1. The simplest and most typical form.
2. Variations from this type, and the complications to which these are due.

Clouston was the first to describe a definite type of insanity characteristic of adolescence, and his observations have been so completely corroborated by other alienists that the disease which he named "The Insanity of Adolescence" is now universally recognised. Its developmental origin is emphasised by the fact that those who suffer from it very often show signs of delayed physical development, as well as by the fact that improvement in the mental symptoms, occurring pari passu with the gradual completion of physical development, gives good prospect of permanent recovery. In almost all cases in which a complete family history can be obtained, a hereditary predisposition to the neuroses can be traced, and this hereditary defect appears often to be sufficient of itself to upset the mental equilibrium, already endangered as it is by the stresses incident to the period of life. For this uncomplicated form of insanity, the name "hereditary"

1. Mental Diseases (Clouston), p. 561.
Insanity of Adolescence," originally employed by Tolstov, should, I think, be retained.

The Hereditary Insanity of Adolescence.

The symptoms of the insanity are merely grotesque developments of the ordinary mental peculiarities of the adolescent. The male adolescent has a new sense of self-importance and power, but at the best his schemes of activity are apt to be ill-considered. When insanity is superadded to his normal peculiarities he becomes egotistical in the extreme; he believes himself to be specially gifted, and propounds schemes of the most boundless extravagance. He fails entirely to judge himself by the standard of facts, or to interpret rightly the new sensations and emotions which he feels; he fails too to see things in their true proportions, and his thoughts and judgments are erroneous. From this condition of simple delusion to one of acute mania the distance is not great; the morbid activity may become disorderly violence, the ill-balanced thoughts may degenerate into pure incoherence, and the abnormal self-esteem may assume the form of delusions of grandeur. This maniacal condition is especially characteristic of the earlier years of adolescence; in the later years depression becomes comparatively more common, and delusions, frequently of a religious or sexual nature, more marked, but it is generally found that in the worst cases of this class inordinate masturbation has acted as a complication.

In the female adolescent, as in the male, maniacal conditions are more common than states of depression.
Indeed, depression is less common in the female than in the male, and probably this is due to the fact that masturbation is a commoner and more injurious complication in the case of the male than it is in the case of the female. The less acute forms of excitement in the female are very commonly associated with hysterical symptoms. There is less outlet for the new activities of the female than for those of the male, and these pent-up activities are apt to burst bounds and appear as the disorderly movements of hysteria. The specially emotional nature of the female also gives character to the dissected symptoms. A craving for sympathy is generally marked, and erotic tendencies are very common, and there are frequently conditions of religious destality.

In this uncomplicated form of adolescent insanity, the prognosis is eminently favourable. There is, however, a great tendency for relapses to occur before complete recovery takes place. The treatment may pass off, and the patient become sensible, within a week of admission to an asylum, but such recovery should not rashly be regarded as permanent. Relapses, not one only, but several, frequently occur, and no doubt depend upon the periodicity of the menstrual generation in the females, with the accompanying menstrual periodicity in the female.

The following are illustrative cases of the hereditary insanity of adolescence:

1. Mental Diseases (Blounton), p. 548.
A.B. was admitted to the asylum on the 6th September, 1887, aged 25 years. His whole family was highly nervous; his father was insane during the later years of his life, and his uncle was a delusional. No cause could be assigned for his illness except possibly overwork; he is a teacher of elocution. The present attack has lasted four months, but he has had periodic attacks of mania for several years. He is coherent, and free from active mania, but he suffers from marked mental excitement. He imagines that he was destined for a very brilliant career, but that he was misunderstood and subjected to persecution. He thinks that attempts were made to poison him in the asylum from which he was transferred; while there he was violent and destructive. Previous to his removal to the asylum he had exhibited much morbid religious enthusiasm, and had made himself conspicuous by walking barefoot in penance at a fashionable summer resort. The mental excitement and morbid self-assurance soon passed off under treatment, and he was discharged recovered on the 26th October, seven weeks after his admission.

This case illustrates the tendency to relapse during adolescence, but there was good hope that the recovery which took place at the end of this period would be permanent, physical development being complete and good.

A.M., aged 20, a farm servant, was admitted.
to the asylum on the 30th September, 1887. His mother
was insane previous to her death. No cause can be
assigned for his illness. He is a tall, gaunt, undeveloped
youth; the testicles have not descended into the scrotum,
and the penis is very small; there is no hair on the face
or pulse; the voice is unbroken. The mental attack had
lasted two days, but he has been "ailing" for two weeks.
On admission he had a depressed frightened look; he thought
he was going to die, that there were snakes in his boots, and
that horses were trampling upon him. The same day he
became very violent and resistive, striking, kicking, and
calling the attendants, and uttering piercing screams. For a
month he continued incoherent, resistive, violent, and often
noisy at night, and he frequently required to be fed. There
was a marked religious element in his attack in his be- 
inent; he often quoted snatches of Scripture, e.g. "The spiri-
and the flesh," "I am an unprofitable servant," and so on. He
then passed into a state of partial stupor, taking little notice
of anything and rarely speaking, but he had occasional
outbursts of excitement, during which he smashed dishes and
glass; these occurred without warning or apparent cause,
lasted for a short time — sometimes only for a few minutes
— and passed off suddenly. He brightened up in February
1888, and continued so, being and full of delusions, chiefly
about being in battle, for some weeks. He then gradually
quieted down, and was discharged recovered on May 14th.
He was now stronger and stronger, but his sexual devel-
opment was still very incomplete, and there was little
hope that the cure would be a permanent one.
He was re-admitted on the 20th February, 1891, being now noisy, incoherent, and boastful. This second attack ran a simple course; the excitement decreased steadily, and he was discharged recovered on the 30th July, five months after his admission. The probability, however, was that he would again relapse, his physical development having made little progress.

A. McD., aged 17, was admitted to the asylum on the 20th March, 1888. A brother is an inmate of another asylum. The patient was a clerk, and was at the same time endeavouring to prepare himself for the university; overwork was given as the probable cause of his illness. The attack had lasted for a few months, the symptoms being want of power of mental application, sleeplessness, and sudden outbreaks of excitement. In the asylum he was restless, showed marked mental exaltation and self-assertiveness, and had occasional outbreaks of violence during which he made unprovoked assaults on the attendants. He gradually quieted down, became able to apply himself to outdoor work and to reading, and was discharged recovered after three months' treatment.

He was re-admitted on November 13th of the same year. He was dull and listless, and vacant in facial expression. This condition alternated with attacks of excitement, during which he suddenly assaulted those about him, or laughed, danced, and took off his clothing. His thoughts were mainly occupied by religious and sexual subjects; at one time he would repeat a text of Scripture in declamatory style for the
benefit of his fellow patients, at another he would request
that his penis should be cut off as an unmanly
member. The symptoms were less favorable than those of his first
attack, and there was now reason to suspect masturbation
which had not formerly been detected. But he showed signs
of improvement in April 1889, made a good recovery, and
was discharged on July 31 .

The following is a case of simple adolescent insanity,
which, however, terminated unfavorably. J.J., age 21, was
admitted to the asylum on the 23rd July 1888. In a nutw was
insane. The first symptoms of insanity appeared six years
ago, in the form of mental delusion, carelessness in dress,
and some delusions which are not specified. At the same
time there was insomnia. His present symptoms are rest-
lessness, partial incoherence, offensive self-concious and
self-assurance, irritability, and delusions of suspicion.
Occasionally, he is depressed; once he jumped into a river
with the declared intention of committing suicide, but
rescued out again. He fears he has lost all sexual
power, and is probably addicted to masturbation.

In all appearance there were no unfavorable symptoms
nor complications in the early history of this case; apparently
the hereditary defect was sufficiently great to wreck the
brain during the stress of adolescent developement.

In some cases, the relapse continues even after
the period of adolescence is over; and ordinary recurrent
insanity results. F.C. suffered from attacks of delirium
and excitement during the last four years of adolescence. His hereditary history is bad; his grandfather suffered from melancholia, and there is evidence that the whole stock is highly neurotic. He is now twenty-seven years of age, but relapse continues to succeed relapse. Adolescence being over, the case has assumed an almost hopeless character.

The following are illustrative cases of the hereditary insanity of adolescence as it occurs in the female.

M. P., aged 22, was admitted to the asylum on the 13th April 1885. No family history of any kind could be obtained, but the case is one of the typical hereditary form, and no cause other than the developmental could be discovered. The attack had lasted about a week; preliminary depression having been followed by excitement. On admission she was in a state of acute mania, talking quite incoherently, shouting, singing, and laughing. She had an exaggerated sense of well-being, and was very prolix. The excitement continued for three months, and then for a short time dementia was feared, but after six months there was marked improvement. She spoke more sensibly, and had become a diligent worker in the laundry. She was discharged recovered on the 4th December.

E. L., aged 20, was admitted to the asylum on the 14th November 1887. A maternal uncle died insane. She had fits when a child, but had had none since then. She had an attack of insanity a year ago, which lasted three months, and for which she was treated in an asylum. She is vain, silly,
and hysterical; she laughed at great deal without cause, frequently giggling for hours in the night. When left alone she sits doing nothing with a vacant expression on her face, and takes no interest in anything. She cannot keep up a coherent conversation; when spoken to she generally laughs in a foolish way, and the answers questions with much hesitation. Her manner is introse. She improved very little for a year, then she gradually got brighter and more sensible, and became more industrious. She was discharged recovered on the 23rd April 1899.

The following case illustrates well the hysterical element and the morbid craving for sympathy, which so often characterize the insane female adolescent.

Miss F., aged 23, was admitted to the asylum on the 31st August 1897. She was of very nervous heredity; her father being a very "nervous" man. On admission she was depressed and self-absorbed, and complained of various indefinite ailments. She says she feels at times as if she had no head, and at others as if she had no body, as if her limbs were made of wood, and as if she were falling to pieces. She inclines to do nothing but complain her state and seek sympathy. Her illness has been encouraged by the constant attention she received at home (she is an only child), and by the bad influence of a hypochondriacal father. Regular employment and absence of morbid sympathy did much good, and she improved in a marked way. After four months she relapsed and again could think and talk of nothing but her "feelings." Masturbation was suspected at this time. In February
improvement is again noted; she was then gaining weight, and rarely mentioned her feelings. Except in her home letters, for a time she remained cheerful, contented, and industrious. In July she was again worse, always talking of her troubles, and craving sympathy from the officials to whom she declared she was always unhappy, though in their absence she could laugh and romp. Her letters home continued to be very lugubrious. She was very vain, imagining herself to be an object of special interest to everyone. She became too fond of asylum life and amusements, and frequently professed to dread the prospect of leaving it and again meeting her friends. Consequently a change was thought desirable, and she left on 20th July 1888, relieved certainly, but by no means in a normal condition of mind. She is still considered "peculiar" by her friends, but further asylum treatment has not been deemed necessary.

The following is an unfavourable case, in which the symptoms were melancholic from the beginning, and the improvement in bodily strength and development was not accompanied by corresponding amelioration of the mental symptoms.

A.C.T., aged 22, was admitted to the asylum on the 2nd November 1888. Her mother and eldest sister are insane. She was overworked as night nurse in an hospital. The attack had lasted about twelve months. On admission she was restless, depressed, suspicious, and much confused in mind, and she was unable to give a coherent account of herself. She was pale, anaemic, and emaciated, weighing
only 6 st. 10 lb. Physical examination revealed some consolidation at the apex of the left lung, and menstruation was in abeyance. She was unwilling to take food, saying she wished to starve herself; she fancied she was imprisoned for some crime, and would be put to death; she had hallucinations of hearing. After a few days she refused all food, and for more than a month she had to be fed almost constantly by the nose-tube. She had the delusion that the other patients had complete control over her will, and prevented her from taking food. The mental depression and confusion continued; she constantly endeavoured to explain what she thought and felt, but without success, usually ending some incoherent statement with the remark, — "I don't understand it at all; I was never clever like these other people." In March 1889 slight improvement was noted. She did not give much trouble with her food, and was a little brighter, but she was still much confused in mind and had many delusions. She was apt to be very irritable and wayward, and had to be stimulated to do anything. The physical condition improved very much, and to a less extent the mental; and on the 21st December 1889 she was discharged relieved.

On the 5th April 1890 she was re-admitted. Her weight was now 9 st. 8 lb. Her mental condition was now one of silliness and hesitancy; she would not do what she was told, and her conduct was foolish and somewhat erotic. She probably had delusions, but she would not express them. Her bodily health continued to improve, but her mind became gradually weaker, and she is still...
in the asylum.

The following is an uncomplicated case, with strong neurotic heredity, in which a good recovery took place.

J.T., aged 22, was admitted to the asylum on the 9th June 1891. Her father is in an asylum, and her sister had an attack of puerperal mania. She is a farm servant. The illness had lasted three weeks. On admission she was in a state of acute mania; she was very restless and sleepless, and talked incoherently and incoherently. She was very irritable in manner. For some months she had periodic attacks of excitation, but even when there was no active excitement she would laugh without cause, murmur to herself, and behave in a foolish and grotesque way. Subsequently she improved steadily, and was discharged recovered on the 28th April 1892.

M.G., aged 20, was admitted to the asylum on the 13th April 1891. She is a domestic servant. Her hereditary history could not be obtained, but the attack is of the simple hereditary type. Her illness has lasted six weeks. She is in a state of simple mania; she is quite satisfied with herself and her surroundings, is restless, is unable to give any account of herself, and usually laughs instead of answering a question. For about two months she remained in much the same state; she was obstinate, idle, untidy, and sometimes dirty in her habits; she laughed much without cause, would not look one in the
face, and was foolish and prostré in manner. She was
probably masturbated to excess at this time, and dementia
was feared, but improvement soon began, and she recovered
completely. She became active, tidy, sensible, and indus-
trious, and was discharged four months after her admission.

The following is a case, apparently of a simple and
hopeful kind, which however terminated in dementia.

Mrs. R. aged 38, was admitted to the asylum on the 2nd
July 1891. She was a mill-worker. No hereditary history
of insanity could be obtained. The attack had lasted for
a few months. On admission she had a depressed look and
confused manner. She answered some questions, but soon
became incoherent. She expressed no delusions, but appeared
to have a sense of impending evil. Next day she was
much excited, shouting 'Hallelujah' and various other gac-
ulations of a religious nature, and took no notice of
what was said to her. After a month she had not improved
at all; she was foolish and somewhat prostré in manner,
laughed much without cause, was idle and at times noisy,
and troublesome. She was never depressed. She is now de-
menced.

The last case which falls to be recorded here is that
of A.S. who was admitted to the asylum on the 7th July,
1891. Hereditary insanity is known to exist, though particu-
larly not to be obtained. She is twenty years of age,
and is employed at home. She has always been 'nervous',
and she had a previous attack of insanity, having been in
the asylum from August 1889 till March 1890. The exist-
ing attack has lasted one week. According to the history
given she shewed excessive irritability, and extremely violent
temper, and she is said to have epileptic fits. She
threatens those around her. She is sleepless. On admission
she was sullen, refusing to speak; her manner was foolish
and her conduct aimless. In a fortnight she was much
better; she was free from excitement, worked steadily, an-
swered questions sensibly, and behaved well if not interfer-
ated with. A month after her admission she was noisy, destructive
and dirty in her habits. This renewed excitement passed
off in a fortnight, and she again became quiet and in-
dustrious. There was no further relapse, and she was
discharged recovered on the 30th December.

This case is instructive, as it illustrates well
the lack of self-control common in adolescent insanity,
the destructiveness of the condition—a symptom common
to all the developmental neuroses—and its liability to
recurrence, which is frequently, as in this patient, depend-
dent on the menstrual periods.

The Masturbational Insanity of Adolescence.

The development of a pronounced habit of masturbation
in a case which has begun as one of simple hereditary
adolescent insanity, aggravates and complicates the symptom
and materially modifies the prognosis. But the most un-
favorable cases of insanity in adolescence are those in
which masturbation has preceded and been the main cause.
of the insanity. Such cases have distinctive features, and form a class by themselves. In all forms of insanity, masturbation is of common occurrence, and generally it is to be regarded rather as a symptom of the loss of self-control, which is associated with insanity, than as a cause of the insanity. But in adolescence, when the sexual functions are not yet matured, their abuse is especially liable to occur, and its effects are most injurious. Even in the case of youth who is much addicted to masturbation there are mental peculiarities often easily recognized. Lack of self-confidence, a dislike for healthy recreation, a tendency to shrin company, and a habit of self-absorption are common, and the first signs of resulting insanity are generally exaggerations of these symptoms. There is morbid diffidence, accompanied by morbid introspection; the patient is reluctant to look anyone in the face, he shrinks all company, especially that of the other sex, and he often displays a morbid religious emotionalism which is apt to blind his friends to the real state of his case. Marked melancholia follows, accompanied by religious and sexual delusions, — he has committed the unpardonable sin, his organs of generation are diseased, he has for ever lost his manhood — and he spends all his time in brooding over his miserable condition. Recovery may occur, but such cases are not hopeful. In another type of cases there is acute mania, with marked religious delirium, and a tendency to frequent attacks of impulsive violence, prompted often.
by visual and aural hallucinations. In masturbational insanity, the suicidal impulse is frequently strong, which it very rarely is in the simple hereditary form.

In the female masturbational insanity, cannot be regarded as a distinct type of disease; the vice does not lead to the same amount of nervous exhaustion as in the male, and is less frequently practised to excess. But even in her case unfavourable symptoms in an attack of adolescent insanity can often be traced to the presence of the habit. The occurrence of stupor and of wet and dirty habits are common accompaniments of masturbation in the female.

The following are illustrative cases of the Masturbational Insanity of Adolescence.

W. S. G., aged 19, was admitted to the asylum on the 20th May 1888. There is no history of insanity in the family. He has no occupation. He is a pale, thin, frail-looking youth, but no organic disease can be detected. He is said to have been peculiar for some years. He is exceedingly hypochondriacal, considering himself unfit for any occupation or exertion; he complains of abnormal sensations in his head, and of frequent attacks of palpitation. He is a confirmed masturbator, and has been in the habit of reading much pseudo-medical literature, and of sending for all sorts of quack prescriptions. No treatment had any effect. He became more and more listless, self-absorbed, and miserable, could look no one in the face, and could talk of nothing but the state of his genital organ. He is constantly caught masturbatig, spends
His time in cutting out of the newspapers advertisements of magnetic belts, and medicines for nervous exhaustion, and demands daily from the doctor powerful tonics to cure sexual debility. His case is now chronic and hopeless.

Acute restless melancholia is sometimes met with, as in the following case.

J. H., aged 22, was admitted to the asylum on the 13th July 1891. He is a labourer; his hereditary history is unknown. He has been masturbating to excess. The attack has lasted some weeks. He is in a state of acute restless melancholia; he walks about constantly, whining and groaning. He thinks he is going to die from a variety of diseases. He says that his heart is about to burst; that his head is coming to pieces; and he begs to be sent home to see his mother before it is too late. No improvement occurred during the first month, but I am unable to say how the case terminated.

Recovery may occur after prolonged treatment, even in cases of an apparently hopeless kind.

J. M. L., aged 22, was admitted to the asylum on the 2nd November 1887. He is a medical student, and the cause of his illness is said to have been overstudy, but the case is of the masturbational type; no hereditary history of insanity is discoverable. The attack had lasted for about two months, but he had been unable to study for a year. He has a dreamy, confused look, and says he feels as if all the life had gone out of him. He has varicose veins on the right leg and foot, and slight varicocele on the left side; he fears that his right side
is paralysed, and that the tic will injure his prospects in life. He complains of peculiar sensations, without pain, in his head, which he attributes to some extraordinary destructive or developmental change going on in his brain. He feels as if his brain had been decapitated in pieces, and put together again in a wrong way. He is evidently a masturbator, though he denies having practiced the habit since he was thirteen years old. He began to write an account of his illness, and his theories regarding it, while he was in the asylum, but what he wrote was quite incoherent. He was at times self-attractive, and abusive of the officials, who, he said, could cure him if they chose. He was very idle, and had to be forced to leave his bed. He had a sudden attack of excitement on the 7th April 1888, during which he smashed some crockery, but he soon relapsed into his customary dazed condition. It was thought that he was passing into dementia. He showed no improvement till September 1889, when he first began to speak more sensibly. From this time he improved steadily, and on 31st January 1890 he was discharged recovered.

The following is an interesting case, as it illustrates the maniacal form of the disease, and the presence of the suicidal impulse. The patient was of neurotic heredity, and though there was no proof that the illness was originally caused by masturbation, its course was certainly modified by the habit. A.P., aged 19, was admitted to the asylum on the 15th February 1888. A maternal aunt was insane. He was an apprentice iron-merchant. The disease was of six months' duration at the time of his admission. He had most
ideas of his own powers and importance, and expressed definite delusions of grandeur and of persecution. He said he was the son of God, the son of Queen Mary, and so on; he thought himself a great power in the social and political world, and believed he had been sent to the asylum to prevent his stirring up a revolution. He threatened to burn down the Institution, but at the same time shed tears of boyish grief and anger because of his detention. Before admission he had been in the habit of sending letters to various noblemen and politicians, and he fancied that they came in disguise to his father's house for the purpose of meeting him. He was often violent, destructive, and abusive. After four months he became quieter, but his manner was sullen and threatening. His ideas of self-importance continued, but his mind became weaker. He was now undoubtedly addicted to masturbation, and probably had been so all along. He complained of various ailments of an indefinite kind, and imagined that people came into his room at night for improper purposes. He laughed a good deal to himself without apparent cause. Little change occurred in his condition; he was passing into dementia, and was not thought to be suicidal. But on the 18th December 1889 he jumped into a river, and was drowned.

The three following cases illustrate the passage of masturbational insanity into dementia.

J. B. M., a clerk, aged 22, was admitted to the asylum on the 5th October 1888. There was no hereditary history of insanity. He was a boyish-looking youth, with no hair on his face. He was depressed and self-absorbed, and, except when forced to conversation, had a very vacant look. He was addicted to mastur-
-bation, and said he felt that his mind was becoming weak. In six weeks he improved considerably, becoming less self-absorbed and somewhat more active, cheerful, and intelligent; he said he had given up masturbation at this time, and there was no reason to doubt his word. But improvement never proceeded very far, and he was left in a state of mild mental infirmity, being entirely lacking in originating power.

G.R., also a clerk, whose illness had already lasted two years, was admitted on the 13th October 1888. He was 24 years of age. There was no history of insanity in the family, and no cause except masturbation could be assigned for his illness. He was a pale, anaemic, badly nourished youth; dull, listless, self-absorbed, and confused in mind, and vacant in expression. He took no interest in his surroundings, and could not give an intelligent account of himself. He appeared to have delusions of suspicion and hallucinations of hearing. Only a slight alleviation of his symptoms occurred; he was already demented.

J.W.C., an Engineer, aged 23, was admitted to the asylum on the 15th April 1891. No hereditary history of insanity could be obtained; the attack had lasted for ten months, and the cause assigned was masturbation. He was restless, suspicious, and confused; he rambled in conversation. He fancied that all his friends had conspired to ill-treat him. He said he felt as if all the blood had been taken from his body. He could not look anyone in the face. He never showed any sign of improvement, but gradually became more dull and stupid, being finally dis-
charged to the care of his friends.

A distinct type of insanity due to masturbation cannot be said to occur among women, but there is no doubt that indulgence in this vice aggravates the symptoms of adolescent insanity in the female, and often hastens dementia. Thus the unfavourable symptoms in the case of M. S. already described, were due to masturbation, and passed off when the habit was discontinued or moderated. Cases in which wet and dirty habits are pronounced, and those in which stuporose states occur, give ground for a suspicion of the existence of masturbation. Here is also a class of melancholic cases in which the symptoms are often associated with this vice; the following case supplies an illustration.

J. M., age 23, a farmer's daughter, was admitted to the asylum on the 21st April 1871. Her father had been melancholic towards the end of his life. The attack had lasted six months, and during this time there had been amenorrhoea. She was depressed in look, and listless in manner. She would stay in bed all day if permitted to do so. She said she felt as if her nerves had all gone out of her; she declared that she was lost soul and body, and that her conscience made her miserable. She did not incline to occupy herself in any way, and sat idly, brooding over her troubles. About a month after admission she made a feeble attempt to struggle herself with a string; subsequently she asserted that she was dead. At the end of three months she continued to lie, until...
Depressed, and full of dismal delusions; she would scarcely look up when addressed. The unpardonable sin, which she said she had committed, was probably masturbation. At the end of four months there was slight improvement; the menstrual flow re-appeared, and she was less idle and depressed. She recovered steadily, and was discharged on the 22nd of October.

The following case may be compared with that of the last J. M. J. The symptoms of acute restless melancholia are similar, and may have been due mainly to the same cause. J. L., a domestic servant, aged 19, was admitted on the 13th of June 1891. Her mother was insane. The present attack had lasted between three and four weeks, but she had a previous attack four years ago. She will not answer questions, but cries and moans constantly, saying she is not a human being, is a devil, and is doomed to live for ever and ever in this terrible state. She sleeps badly, and refuses food. After four months she improved much and suddenly, becoming cheerful, and doing a little work, but in a few weeks she relapsed into her former condition of acute restless melancholia. She had improved in general health, but amenorrhea had continued since her admission. I am unable to give the further history of the case.

The hereditary and masturbational insanities of adolescence are definite types, distinct to a large extent in
Etiology and symptoms. The cases now to be considered have
not the same claim to separate classification, but it is
convenient to group them together because of the special pro-
nominence in them all of a particular symptom.

The Stuporose Insanity of Adolescence.

Many cases of insanity in adolescence are charac-
terized by the occurrence of states of partial or complete
stupor. Sometimes these states alternate with attacks of acute
mania in cases of simple hereditary insanity, as in the case
of A.B., but stupor is especially associated in the male
with excessive masturbation, and in the female apparently
with uterine and ovarian abnormality. In the female it is
often combined with marked hysterical symptoms, and in
both sexes catalepsy may be an accompaniment. In severe
cases of stupor "complete apathy prevails, amounting at times
to fatalty; the expression is stupid and demented; the pupils
widely dilated; saliva dripples from the mouth; none of the
wants of the system are attended to; the hands hang help-
lessly; and both extremities are cold and quid. The subject
is usually profoundly anaemic, a haemie fruit may be heard
over the aortic values, or the fruit-de-diable over the sub-
clavian. Such symptoms are almost invariably associated
with suppressed menses, and frequently the viceous habit of
masturbation prevails." 2 (Between this state of complete stupor
2.

1. p. 10.

2. A Text-Book of Mental Diseases (Burn Lewis) pp. 341-2.
and the condition of listlessness and self-absorption, all stages of partial stupor may occur.

The following are illustrative cases.

W.S. M.W., a divinity student, aged 23, was admitted to the asylum on the 13th January, 1888. There was no hereditary history of nervous disease, and the probable cause assigned for his illness was masturbation. The attack had lasted three weeks. He had threatened to take away his life. On admission he was in a state of great mental depression and confusion; he fancied that he was mesmerized, and he had hallucinations of hearing. In a few weeks he began to refuse food, being under the delusion that he could not swallow on account of some obstruction in his throat. For the rest of his life feeding by spoon or tube was generally necessary. In two months he passed into a state of partial stupor with marked cataleptic symptoms; he would remain in any position in which he was placed for almost any length of time, and a sharp word was needed to rouse his attention. The stupor became more and more complete; he never spoke, and his habits were very dirty. He masturbated excessively and openly. In spite of all treatment he grew worse, and wrote, and complete dementia ensued. He died from pneumonia on the 18th January, 1891.

The next case illustrates the difficulty, here often is in distinguishing between stupor and dementia, and the advisability of giving a cautionary prognosis in doubtful cases.

F.W. M., aged 19, a coal miner, was admitted on the 10th July, 1891, said to be suffering from dementia with suicidal and
dangerous tendencies. He had a vacant look and confused manner, appeared jumbled when asked questions, and answered in a slow hesitating way. He looked depressed, but could give no reason for this; he expressed no delusions. His illness had lasted about three months, but no account of its early symptoms could be obtained. No very soon showed signs of improvement, and in less than a month after admission he had become active, cheerful, sensible, and a good worker. In six weeks he was discharged recovered.

J.H., aged 21, a labourer, was admitted to the asylum on the 26th June 1890. His family is said to be "worthless," but there is no hereditary history of insanity. He has been addicted to drink, and other excesses. He was admitted in a stuporous state; no account could be obtained of the duration of the attack, nor of the manner of its commencement. He has no power of initiative, and would sit all day in the same idle attitude; he does what he is told, but rarely speaks. He shows cataleptic symptoms. The trophic energy is low; the extremities are blue and cold. His habits are dirty. After six months he brightened up, and answered questions readily. At the end of nine months he was strong and active, but in a state of marked mental disorientation; he was irritable, irritable, and quarrelsome. The excitement passed off, and he was discharged recovered on the 31st May 1891.

As soon as he left the asylum he fell into bad habits again, and in a few weeks he was re-admitted in a state of mania. During this second attack no symptoms of stupor manifested themselves; the mania continued till his death from pneumonia in the spring of 1891.
The following is a good example of Stupor in the female. The patient was 26 years of age, and therefore should, in the ordinary course of nature, have passed the stage of adolescence, but her physical development was poor, and the menstrual function had never been thoroughly established.

F.L.H. was admitted to the asylum on the 9th August 1888, in a condition of complete Stupor. No hereditary history of insanity was admitted, but her mother is most eccentric and sedentary, religious. She never spoke, required to be dressed and fed, and was wet and dirty in her habits. In six weeks there was some improvement; she would speak in the evenings, though she appeared to be in a state of Stupor during the rest of the day. In the beginning of October further improvement was noted. She rarely spoke in the forenoon, but her expression indicated that she understood what was said to her; she brightened up after dinner, and in the evenings she talked sensibly, played, and sang. A few weeks later she began to occupy herself with knitting in the forenoon. Her habits were now clean. She was much emaciated at the time of her admission, weighing only 5 st. 2 lb.; in the end of October she weighed 7 st. 2 lb. She made a good recovery, and was discharged on the 29th January 1889.

She had a subsequent attack, the hereditary evidence being very bad.

The following is a case in which sexual excess only, less injurious than masturbation in the adolescent, was supposed to have been the immediate cause of the insanity. In this case the condition of partial Stupor was well marked.
J.S., aged 20, was admitted to the asylum on the 8th January 1891. Her hereditary history was unknown. She had been a cashier, but had led a very irregular life. She had had a previous attack, but had been treated at home. On admission she was excited, sleepy, often noisy, incoherent, hysterical, and erotic. She went through all sorts of foolish gestures, postures, and antics; sometimes she refused to speak, and at other times she talked incoherent nonsense. She would not occupy herself in any way. After two months she quieted down, and gradually passed into a condition of partial stupor with cataleptic symptoms. She would stand in a corridor, or wherever she happened to be left, in a fixed posture, gazing vacantly before her. After four months she began to do a little work, but she required to be constantly roused out of her apathy. Steady improvement continued till she was discharged recovered on the 22nd July. She suffered from amnesia during her illness; with her mental recovery menstruation became regular.

The Moral Insanity of Adolescence.

There is one other class of cases of insanity in adolescence which demands separate consideration. In them there is no marked impairment of the intellectual faculties, and therefore the term "moral insanity" may be conveniently employed to describe them. They are characterised by the lack of inhibitory power, and by the absence or impairment of the moral sense.

All the developmental neuroses are explosive in type, and therefore defective inhibitory power may be said to characterise
all forms of insanity in adolescence, but the cases to which special reference is here made are those in which the loss of self-control is the predominating feature, and is not accompanied by any marked impairment of the intellectual powers. Adolescence is the period of development of those bodily functions which tend to tax most severely the powers of self-control; and at the same time these powers are themselves immature; hence it is not surprising that they sometimes give way entirely under the strain. To a certain extent this is seen even amongst the sane; the male adolescent frequently yields to the temptation of sexual and other excesses, and the female becomes irritable and capricious at the menstrual period. Adolescence is also the period of development of the higher moral sentiments and emotions, and hence a lack of moral sense must be liable to follow any disturbance of the normal development.

The following cases illustrate this type of adolescent insanity.

F. S. J., aged 19, ran off from home because of some restraint exercised upon him there, and spent seven weeks in getting, gambling, and sexual excess, returning home only when his funds were exhausted. He was sent to the asylum by his friends when all attempts to manage him at home had failed. He is restless, often irritable and impetuous, and wholly lacking in power of self-control. He is not in the least ashamed of his conduct, showing an almost Entire absence of moral sense. He is of nervous heredity; his father is in an asylum. Discipline had little effect upon him, and after three months
his friends took him home. His subsequent career was entirely unsatisfactory.

M.A.L., aged 22, was admitted to the asylum on the 13th November 1888. She had just left school. No hereditary history could be obtained. The cause of her illness was said to be temper and pride; it had been of gradual development. She had threatened to commit suicide, and to injure her friends at home. She is said to be addicted to the use of filthy language. She is a well-nourished, healthy-looking girl, with a depressed sullen expression. She sits idly, with folded hands, swinging her legs and dozing. She answers questions curtly, and is threatening in her language. She is quite coherent, and her memory is good. She refuses to do any kind of work, and is obstinate, impertinent and thoroughly disagreeable; she appears to have lost all moral control and perception. She remained utterly idle, and showed no sign of improvement in any respect. Her influence on the other patients was bad, and she was accordingly discharged as an unsuitable case.

Causes of Insanity in Adolescence.

In describing the forms of insanity which are prevalent in adolescence something has been said on the subject of their causation, but this question demands further consideration. In all cases the period of life, with its developmental changes and consequent instability in the higher region of the brain, acts as a

a predisposing cause of insanity. The two main direct causes are heredity and masturbation.

**Heredity.**

Undoubtedly the main cause of almost all forms of insanity is heredity. In many cases no doubt it furnishes merely a predisposition to mental disease, but in the case of insanity associated with developmental changes it may be a sufficient cause in itself. Clouston finds a hereditary history of insanity in 65 per cent of his cases of adolescent insanity.

Brian Lewis gives an estimate of 40 per cent for the female, but only 27 per cent for the male cases. No doubt the smaller percentage in the case of the male sex is due to the fact that masturbation acts as a potent cause of insanity. Even in cases in which the heredity is not markedly neurotic, when it is considered how difficult it is to obtain a complete hereditary history, either from the absence or ignorance of friends, or from their desire to conceal facts which they somehow regard as discreditable to themselves, it is evident that heredity is an exceedingly powerful cause of insanity in adolescence. It is a commoner cause of insanity at this age than at any other period of life. Clouston gives 23 per cent as the number of cases of insanity at all ages in which he was able to trace a hereditary history of insanity; Lewis's estimate is 29.5 per cent. It must further be remembered that there may be a hereditary predisposition to insanity, even where

2. *A Text-Book of Mental Diseases,* p. 345.
There has been no actual mental disease in a family's history. There are many diseases of nervous origin which indicate instability of cerebral tissue, and may lead to insanity, or may take the form of insanity in the offspring. Among such neuroses are certainly epilepsy, chorea, hysteria, paralysis of some forms, and alcoholism. And even diseases, not of a distinctly nervous kind, that lead to profound impairment of nutrition, may cause weakness in the offspring which predisposes to insanity when combined with the stresses incident to the period of cerebral development. Stearns considers that more than one half of the admissions to asylums in this country and in the United States present evidence of some inherited taint.

The powerful influence of heredity in the causation of so many cases of insanity in adolescence is explained by the fact that although an attribute which appeared in the parent at a certain time of life tends to appear in the offspring at a corresponding time of life, it much oftener appears at one time than at another. Few cases of insanity occur before the period of puberty, because in its development the child is exposed to few stresses likely to bring out the weakness of the inherited nervous constitution. But during adolescence the rapidity and variety of development are so great that there is a strong predisposition to the appearance of any ancestral taint. If this stage be passed over in safety, the probability that insanity will occur at all, as the result of hereditary instability, is much diminished.

1. Insanity: its Causes and Prevention (Stearns), pp. 129 et seq.
Heredity may be the sole, or at least the overwhelming cause of insanity during adolescence. It is so in the typical uncomplicated form which has consequently been termed the "Hereditary Insanity of Adolescence". The ancestral bias is so strong that the higher regions of the brain are driven into morbid lines of activity during the crisis of developmental instability. Of the thirteen cases of this disease which have been detailed, a history of hereditary insanity was obtained in nine; in one of the remaining four the family was known to be highly neurotic, although no actual outbreak of insanity could be traced; and in the other three there was no means of getting any family history at all. In the more complicated forms of insanity in adolescence, other factors have to be taken into consideration, but it may safely be asserted that in the great majority of all cases there is at least present a hereditary predisposition to some of the neuroses. The exceptional cases most frequently take the form of typical masturbational insanity.

**Masturbation.**

It is obvious that any agent which causes excessive activity, and consequent exhaustion, of the nerve-centers in the brain, at a time when they are undergoing development, must be liable to induce their temporary or permanent injury. Masturbation is pre-eminently such an agent, and consequently it is not surprising that, when practiced to excess during adolescence, it should often lead to widespread disorder in the cerebral centers in which the sexual activities and emotions are gradually becoming represented. The disorder is frequently so great, and spreads so widely, that the
whole mental fabric is overthrown, and complete permanent dementia results. It is no doubt the children of neurotic parents, in whom the hereditary mental instability is apt to take the form of weakened power of self-control, who are most likely to practice the vice to the point of complete nervous exhaustion; but even in the case of those who are apparently of good heredity, precoceful masturbation is not uncommon. There may be a tendency on the part of some to exaggerate the evil effects of masturbation, but that there is a danger, in the case of the adolescent, of its leading by itself and directly to mental as well as physical breakdown, there appears to be no room for doubt. And when it makes its appearance during an attack of insanity, with whose origin it has not been associated, it has the power, as has already been illustrated, of modifying and aggravating the symptoms, and of greatly lessening the chances of recovery. "Above all agencies does it prove most powerful in leading up to chronic delusional insanity, or into hopeless dementia."

1. A Text-Book of Mental Diseases (Lewis), p. 355
History at all could be obtained; and in the remaining five, there was no trace of any hereditary predisposition to insanity. Only one recovered; one was passing into dementia when he committed suicide; the issue of one case was unknown; and the remaining four became more or less completely demented.

**Minor Causes.**

Hereditary and masturbation are the main causes of insanity in adolescence, and either may be a sufficient cause in itself, but there are many minor causes which may be super-added to them. Hereditary instability may be great, and yet in most cases it is probably not sufficiently so to cause mental disorder if all the minor exciting causes of insanity be absent. Thus these minor causes furnish the occasion of the attack, modify its symptoms, explain the presence of special delusions, and have to be taken into consideration when an estimate is formed of the probable duration of the disease and of the patient's chance of permanent recovery. If the circumstances of the patient be such that it is impossible to remove the minor exciting causes of his insanity, the probability of the recurrence of the disease is greatly increased. The adolescent may, of course, be exposed to most of the exciting causes of insanity, but only those have to be considered which the period of life renders especially frequent and powerful.

(a) **Physical**

There are many minor causes of insanity which act by interfering with the nutrition of the brain centres, or by exhausting the energy of the cells. All agents which interfere with the nutrition of the body must interfere with the nutrition of the brain, and therefore must weaken its power of resistance to the
diseases of which insanity is a symptom. Bad food, want of fresh air, unhealthy occupations, and various diseases may be mentioned, and it is the case that the subjects of adolescent insanity are frequently in bad health from one or other of these causes. They are generally poorly nourished, and mental improvement is almost always heralded by improvement in the general bodily condition. In the female amenorrhea is very common, and is sometimes regarded as in itself a cause of the insanity; in reality it is only one symptom of general physical impairment. Here is, however, the direct cause of brain exhaustion, which is perhaps more apt to be exaggerated than minimized, but which is frequently found to bear a direct causal relationship to an attack of adolescent insanity. It is too constant mental work, associated as it generally is with want of sufficient sleep. In these days of keen competition the standard of success is often the standard suited only to the strongest, and in the struggle to reach it the weaker are apt to be overcome. It is a common occurrence for a young man whose early career has given promise of a brilliant future to break down during the period of adolescence. And this is explainable on physiological grounds. A certain amount of instability must characterize nervous tissue, otherwise its activities would be impossible, and up to a certain point the greater the instability the greater will be the power of differentiation and development. The youth, therefore, whose acquisition of knowledge is rapid and easy, has nervous tissue of considerable instability, or, in other words, he has a brain in which new centers and new connections between centers are easily formed, and he it very often found to be descended from a highly neurotic stock. When the period of adolescence is reached the hereditary defects are tested to the utmost, and if the brain be overworked, and also
deprived of sufficient rest and nourishment, the whole edifice whose erection was so rapid and easy may fall in ruins. In a brain of normal stability, simple overwork rarely, if ever, causes insanity, but overwork frequently acts as the immediate exciting cause of an attack in a young man or young woman of neurotic heredity at the period of adolescence. And if several vice be superadded, as it often is in the case of those who pursue severe mental work and neglect physical exercise, and are at the same time of neurotic temperament, all the causes of mental breakdown are present in strength.

Among the male cases already detailed, there was good reason to conclude that overwork had some share in the causation of the insanity, in the case of A.B. (p. 10), who was a teacher of Eloquence and a hard worker, and in the case of A. Mc. B. (p. 12), who was following his occupation as a clerk, and at the same time endeavouring to prepare himself for entering a University. Among the females, A.C.F. (p. 16), broke down while working as a nurse in an Hospital, and her case illustrates well how unsuitable to the highly neurotic is any form of work which involves constant mental strain without plenty of sleep and abundance of physical exercise.

(b) "Moral."

Moral causes of insanity are the "class of indirect stresses which arise from the action on the higher nerve regions of the circumstances in which the individual is placed." If the circumstances be such as are liable to
To cause excessive action in the highest nerve regions, it is obvious that damage, temporary or permanent, may be done to these regions, and insanity may be the mental symptom of the injury. The emotional element in the character of the adolescent is normally great, and liable to become excessive; in other words, the form of activity in the highest nerve regions whose mental equivalent is emotion, preponderates, and is easily excited. Hence emotion-producing impressions have especial power over the adolescent. And such impressions are by far the most powerful moral causes of insanity, for if the physical basis of an emotion be a humoral discharge from many centres over a wide area, it follows that impressions which arouse this activity must be much more liable to cause cerebral exhaustion and disorder than those which merely stimulate the passage of currents from centre to centre, or lead to the formation of new connections between centres—processes which appear to be the basis of intellectual activity. "Without doubt," says Maudsley, "if man could attain to freedom by moderating and controlling the affective or emotional element in his nature, he would vastly lessen the sum of insanity upon earth; for he would get rid at one stroke of the so-called moral causes of the disease."

Although it is during adolescence that the moral causes of insanity have the greatest power, they are rarely, if ever, sufficient to cause insanity, except in those who have a hereditary predisposition to the neuroses. It is impossible

2. Responsibility in Mental Disease (Maudsley), p. 299.
to enumerate all the moral causes which might contribute to the production of insanity during adolescence, but there are two groups which the period of life renders especially common and powerful, viz.,

1. Those connected with the sexual relationships.
2. Those connected with the religious environment.

Disappointments in love are popularly regarded as common causes of insanity among the young, and though their influence is much exaggerated, it may at times, in combination with other factors, be considerable. But apart from such causes the sexual emotions may be unduly stimulated, and in the absence of any healthy outlet for the new energies of the body, may lead, in the case of the neurotic, to disorderly cerebral activity, and even to insanity. This is seen notably in girls of the upper classes, in whom idleness, combined with constant stimulation of the emotions by unhealthy literature, and by the morally restrictive social atmosphere in which they are frequently placed, leads often to the disorderly explosive activity of hysteria with its mental accompaniment of morbid craving for sympathy, if not to the graver disorder of insanity with its accompaniment of erotism. In the case of the male there is usually abundant outlet for activity, and hence the emotional nature is not so apt to be unduly fostered.

Religion cannot be regarded as a common direct cause of insanity at any period of life; but during adolescence the religious emotions are in active development, and are therefore intense and powerful, and hence, if they be unduly
stimulated, they tend to become morbid. The neurotic youth frequently exhibits a punctilious conscientiousness, and an exaggerated habit of introspection, and these symptoms are apt to be misinterpreted and admired. There is no doubt that, if encouraged by an exciting religious environment, they may lead to marked melancholic insanity. Many such cases recover only after passing through a stage of mental exaltation, often also misinterpreted as a normal religious manifestation; others pass through an attack of acute mania; and some are doomed to swell the crowd of hopeless elements in our lunatic asylums.

There is, moreover, a curiously close relationship between the sexual and the religious instincts of the adolescent; the natural tendency of the time of life is to the exaggeration of both, and if there be an undue depression of the former, there is apt to be a morbid extravagance of the latter.

Some of the cases already described illustrate the influence of these moral causes in the production of adolescent insanity, or in the modification of its symptoms.

The cases of A. A. B. (p. 12) and B. B. (p. 19) are good examples of the simultaneous exaggeration of the sexual instincts and the religious emotions. In the cases of A. B. (p. 15) and J. L. H. (p. 32) the influence of the home surroundings was in-

1. On the relation of religion to insanity, vide—
   Mental Derangement (Combe), pp. 189, 190.

2. For an explanation of this relationship, and of the way in which the religious environment may act as a moral cause of insanity, vide—Sanity and Insanity (Mercier), pp. 281, 282.
-urious, tending as it did to foster the emotional nature, while no sufficient outlet was provided for the new energies of adolescence.

No case has yet been given in which the religious environment was the immediate exciting cause of an attack of adolescent insanity; the following is an example.

J. P. was admitted to the asylum in July 1870. He was a clerk, 18 years of age. He belonged to a very religious and highly nervous family. He had always been an abnormaly good boy, and had recently been much exercised about the state of his soul. His parents had taken him to a series of revival meetings, the excitement of which led quickly to the attack of acute mania on account of which he was brought to the asylum. It was found that he was addicted to masturbation, which he now practiced to great excess in spite of the various preventive measures which were tried. He passed quickly into a condition of complete stupor, characterized by very filthy habits, which it was feared would end in dementia. I am unable to give the issue of the case.

The Prevention of Insanity in Adolescence.

Unfortunately, the application of preventive medicine to mental disease has as yet made little or no progress. This is due less to the absence of definiteness in the scientific basis of such application than to the popular ignorance and prejudice which deny to the physician the opportunity of adopting preventive measures even in cases
where they are most strongly indicated. But with the spread of a knowledge of the true nature of insanity, this difficulty, must disappear, and "to lay down the principles of mental hygiene on a scientific basis" will no longer be "to offend many cherished beliefs, and to go counter to the convictions of all but a small minority of mankind." Where the same readiness seen to apply the results of scientific investigation to the rational conduct of life in matters of mental as in matters of bodily hygiene, a great reduction in the total sum of insanity might be anticipated.

Marriage

Insanity is a strongly hereditary disease, and heredity acts most powerfully during adolescence, hence to get rid of the disease at this period of life it would be necessary to stop its propagation entirely. This is obviously impossible, but something may be done to check the evil by spreading a knowledge of the relationship of heredity to insanity, and by giving careful advice, when opportunity is afforded, in regard to marriage in particular cases. Our knowledge of the laws of heredity is not of sufficient definiteness to enable us to predict the results in many cases with any certainty, but it is enough to indicate the directions in which danger especially lies.

Sometimes marriage is recommended as a cure for what are in reality early symptoms of adolescent insanity.

1. Mental Diseases (Clouston), pp. 7 and 8.
2. Responsibility in Mental Disease (Maudsley), p. 288.
Whatever may be its physiological effects upon the individual, and they are frequently bad — the danger to the progeny is so great as to make the experiment impracticable.

The danger to the offspring is greatly intensified when both parents are highly neurotic. Hence the very strongest advice should be given against such marriages. Unfortunately, there is an elective affinity amongst the neurotic, and therefore it is the duty of parents and guardians of the young to prevent as far as possible the danger which arises from the constant association of individuals of similar highly neurotic temperaments. There need be no sentimental reluctance to take the necessary measures; the object of the affections of the adolescent is determined by propinquity rather than by suitableness. If the highly neurotic, in whose family history insanity can be traced, must marry, they should marry not too young, and into an entirely opposite stock; in this way the danger to the progeny may be lessened, if not entirely removed. In many cases, no doubt, entire prevention of marriage would be preferable.

As regards the marriage of those who have actually been insane, it would be well if it could be prevented altogether, and especially, if this true in the case of women.

1. Responsibility in Mental Disease (Maudsley), p. 281.
Education of neurotic children. There is no doubt that a
great deal might be done to prevent outbreaks of insanity during
adolescence by the proper training and education of the children
of neurotic parents. Greater results can be hoped for from this
line of treatment than from attempts to diminish hereditary
predisposition. It has not yet been generally recognized that
the training and education of the young is a matter of such
importance as it really is. The negligence shown by parents
and guardians in this respect is undoubtedly responsible for
a large number of the cases of insanity in adolescence
which reach our asylums. The mental peculiarities of children
are rarely studied by their elders, and no means are taken
to guide their brain development in accordance with the ni-
dications given by these peculiarities. A full knowledge of
psychology is unnecessary; a knowledge of even the most rudimentary facts would prevent the disasters mistakes which absolute ignorance caused. And if parents cannot interpret all the symptoms of bodily and mental peculiarities in their children, they at least have abundant opportunities of observing these symptoms, and can call to their assistance those whose special knowledge may be of the greatest value in interpreting them. One of the most important duties of the family phy-
sician ought certainly to be to give advice regarding the
education of the children. He has, or ought to have, a know-
ledge of their hereditary history, and therefore of the bodily
and mental diseases to which they are especially liable.

The value of such knowledge with regard to bodily
disease is generally recognized; special faith is placed in the
advice of the medical attendant who has acquired by long experience a knowledge of the diathesis of a family; but the application of the same knowledge to the prevention of mental disease is apt to be overlooked. Bodily disease may be prevented from developing, if care be given to physical surroundings; and it is no less true that insanity may be prevented from becoming actual, in those in whom it is latent, if precautions be taken soon enough. Children of a brainy diathesis may never become consumptives if kept in a healthy atmosphere; the most highly nervous children may never become insane if their cerebral development be carefully directed. Disorderly mental action accompanies disorderly cerebral activity; and cerebral activity is directly dependent upon external stimuli. In brains of different stability, stimuli of different intensities are required to produce the same reaction. Circumstances in the environment of one will produce a nervous discharge which will cause permanent damage to the nervous tissue, while in the case of another the discharge will be slight. Put one child in surroundings which stimulate the instincts strongly, and mental abnormalities will soon appear. Premature too constant study in another, and the current passing from centre to centre will gradually destroy the connecting channels, and lessened power of application and loss of memory will result. Thus, if it be recognised, as it ought to be, in what direction a child's brain shows weakness, it is possible to prevent the weak point until by completion of development, the time of greatest strain has been safely passed. It is possible to train the Co-
ordinating centres in the brain so that their control over the muscles may be accurate and complex; it is equally possible to train the highest centres of all, whose action is mirrored in thought and feeling, so that their activity may be regular and orderly, and so to prevent the "perturbed streams of thought and feeling which make for madness."

The parents of highly neurotic children are often totally unable to train them rightly; they tend to encourage their defects, and furnish them in many cases with the worst possible surroundings. Bright precocious children are stimulated to work, and their successes at school, which may be exhausting their brains and preventing all possibility of healthy development, are a perpetual source of pride to the parents. The medical man alone could point out with authority what the ultimate result in such cases is likely to be, and the total failure to fulfill the promise of early years would not then come as an intangible surprise. Another class of children should also be subjects of the family physician's care. In them there is a precocious development of the moral sense; they are perpetually afraid of doing wrong, and may even torture themselves with fear of everlasting punishment. Their parents regard them as precious examples of early conversion, and their friends say they are too good to live. That such children do frequently die young is a well-known fact; but it is not so generally recognised that they do so in many cases because they suffer from the strains of diathesis, and, so far as the special needs
of their organisms are concerned, have been totally neglected during the dangerous years of early development. And if they survive till the period of adolescence, their liability to attacks of insanity is great. The morbidly discontented child becomes the morbidly introspective youth, who, if his environment continue to foster his unhealthy proclivities, readily falls a victim to the worst forms of mental derangement.

The ordinary upbringing of such neurotic children is in marked contrast to what it ought to be if conducted on physiological lines under medical advice. The rules are those laid down by Dr. Clouston. "Such children should all be brought up in the country, and fed mostly on milk and cereals, and should have lots of fresh air, and no improper excitement; they should have well-ventilated class-rooms, short school hours, and their lives and time should be systematized. Their weak points should be connected by their modes and conditions of life. They should be kept fat, if possible, one and all. . . . . . Some especially neurotic children need very special modes of education. I have seen cases who could not safely be sent to school. Through preeminently stealing, lying, and vice they were constantly getting into trouble. They were without much moral sense or self-control, and had erratic,motieless ways. I have seen good results with such children sometimes by placing them in a quiet family in the country, under motherly care, under special rules and guidances, and away from much.

2. Mental Diseases, p. 634, 635.
Temptation. Such children are the shocks out of which the insane, the masturbators, the dipruriaeas, and the motiveless criminals arise, with a poet or a genius to redeem the class once in a century and to vindicate nature's law of compensation in the world.

Training at Puberty

The importance of education does not cease with childhood; it is even more important that the training of the neurotic should be conducted with care at the time of puberty and during early adolescence. Parents rarely watch over the development of their children at puberty with a proper realisation of the insidious power for evil which bad surroundings must necessarily have upon them. At this age there is great danger of the formation of bad habits, and every effort should be made to prevent this. The ruinous effect of masturbation has been described, and there is no doubt that the vice is often learned and practised in perfect ignorance of its harmful results. If ever obtained such mastery before its true nature is realised that it cannot be easily abandoned. At the period of puberty a whole crowd of vague desires and emotions comes into being, and some help to interpret these should be given; much new activity awaits an outlet, and some care should be taken to guide it into proper channels. The danger to boys at this age is great; to girls it is in some respects even greater. At a public school a boy may learn many of the real dangers of which has probably never been pointed out to him, but in the manly sports which he has in abundance there is an antidote which is generally sufficient to
prevent injury. Except in the case of the most highly neurotic, but to girls a similar safeguard is too often denied. Drawing, embroidery, and other sedentary occupations are apt to take the place of real physical exercise. "Young females of the same age, and influenced by the same novel feelings towards the opposite sex, cannot associate together in public schools without serious risk of exciting the passions, and of being led to indulge in practices injurious to both body and mind.

Dr. Copland observes that "whenever numbers associate prevent to or about the period of puberty, and especially where several reside in the same sleeping apartment, and are subjected to a luxurious and over-refined mode of education, some will manifest a precocious development of both mind and body, but in proportion to precocity will tone and energy be deficient, and susceptibility and sensibility increased." Frequently, too, the daily exercise is little more than a strolling walk in two and two files; and consequently, the sensory system becomes charged (as it were) with excitability, for nothing diminishes the affectability of this system so much as labour, or heats it so much as indolence."

A more rational system of education for girls has no doubt come into vogue since Dr. Laycock wrote, but the "strolling walk in two and two files" continues in many cases to be the substitute for proper physical exercise.

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**Choice of a Profession.**

Of great importance for the neurotic is the choice of a suitable profession, the term being used in

its widest sense of life work. This is a matter of much greater moment than it is commonly supposed to be. Those who meet with cases of insanity in the later years of adolescence know how frequently the patients are found to have been employed in work for which they were totally unsuited. Little help is given by parents and guardians in this important step in life, for the simple reason that they are generally incompetent to give advice, either from their own prejudice in favour of some particular calling, or from their culpable ignorance of the propensities of their children and of their pathological tendencies!

Dr. Blundstone's rules for the neurotic at this period of life are as follows: — "They should have no alcohol and no tobacco till after twenty-four. At the coming on of the reproductive period of life special care should be taken with them. The sexual appetite is most difficult to manage in them and by them. It is often strong, disturbed, and apt to take unnatural forms, while the power of control over it is apt to be small. The occupations they choose should not imply intense head work, or a sedentary life, or excitement. Make them colonists, sending them back to nature, or get them into fixed salaried places with systematic work and a regular holiday. The worst of it is that such persons often tend to do exactly the reverse of all this."  

1. vide - Sir James Brighton-Brown's address at the opening of the winter session of the Medical Department of the Yorkshire College, in The Provincial Medical Journal (November 2nd, 1891).  

2. Mental Diseases, p. 634.
Treatment of Insanity in Adolescence

The treatment of insanity in adolescence naturally divides itself into treatment of the disease when only its promonitory or earliest symptoms are visible, and treatment in the acute stage and during convalescence. Unfortunately, cases seldom come under treatment until the disease has made marked progress; even when they come under observation at an early stage, the symptoms are often overlooked. Asylums, as at present constituted, are seldom suitable places for the treatment of insanity at its earliest stages; until a thorough system of classification of patients has been introduced, they must continue to be of all places the worst for cases of incipient mental disease among the young. It is the general practitioner, therefore, and not the specialist, who is most frequently called upon to treat cases at the stage when treatment is most hopeful. But the popular belief that physical and mental ailments are essentially distinct, and that mental abnormalities ought to be concealed as in some way involving disgrace to the patient and the patient's friends, leads very often to the absence of early treatment altogether. The irrational methods of treating insanity which prevailed until comparatively recent times did much to encourage the superstitious terror of the disease in the public mind, and it is the duty of medical men nowadays, whose knowledge is more enlightened, to combat in every possible way the prejudice fostered by the ignorance of their predecessors.

Diagnosis.

If opportunity be obtained for their investi-
Tigation there are many circumstances connected with the development of insanity, and especially of insanity during adolescence, which aid in its early diagnosis. Most valuable of all is the prevalence of heredity. No doubt it is very difficult to obtain a complete family history, for mental diseases in relatives are often forgotten, concealed, or deliberately misrepresented. But much information may be extracted by judicious questioning. And it must be remembered that hereditary predisposition is not confined to those in whose family there is a history of attacks of well-marked insanity. Many nervous diseases are known to have a close relationship to insanity; neurasthenia such as epilepsy, chorea, and hysteria in the ancestry may take the form of insanity in the descendants. Hence inquiries must be made to cover a wide field. The value of the information which may be obtained from the observation of hereditary deformity has recently been emphasised by the results of an investigation, undertaken by Dr. Clouston, into the forms of palate which occur amongst the insane. He found that of 171 cases of acute adolescent insanity, and the secondary dementia resulting from it, only 12 per cent had typical palates, while 33 per cent had "neurotic", or highly arched, palates, and as many as 55 per cent had deformed palates. There is thus a means of discovering the presence in many adolescents of the hereditary taint, even when a hereditary history cannot be obtained.

The actual symptoms of onset, moreover, are generally...

2. The Neuroses of Development (Clouston), pp. 42 et seq.
gradual. It is true that in some cases the symptoms of acute adolescent insanity appear with alarming suddenness, the patients being of strongly neurotic diathesis, and some apparently trivial cause being sufficient to upset the unstable mental equilibrium. But there are usually more or less marked premonitory symptoms, and in the great majority of cases the natural instability at least is discoverable, for a long time before an outbreak of insanity occurs. T. Clowes Has classified developmental diseases and defects of neurotic origin, with the ages at which these are commonly seen; and in cases where any of these defects have been manifested during the earlier years of development there is especial reason to guard against an attack of insanity during adolescence, and to note with suspicion even the slightest signs of departure from the normal. Thus there may be a history of convulsions of teething, fever nocturna, liability to feverish attacks of temperature, night fever delirium at temperatures from 99° to 101° F., and child melancholia or even child mania—these being the neuroses characteristic of the first seven years of life—; of chorea, epilepsy, asthma, somnambulism, and migraine, which are liable to occur during the period from the seventh to the thirteenth years of life; and at puberty, and during early adolescence, of mental peculiarities, which, if not amounting to actual insanity, are very closely allied to it; for example, hysteria, impulsiveness, perversion of the moral sense and volition, incompatibility of temper, fiery religionism, perverted sexual

instincts, and unformed aversion to relatives. If such mental peculiarities occur during adolescence in subjects who have exhibited neurotic developmental defects at an earlier period of life, there is every reason to fear that they may be the premonitory symptoms of acute insanity, and it is time to employ all resources of treatment calculated to prevent such a consummation.

Among the more definite premonitory and early symptoms may be classed inability to settle to any kind of work, "laziness," which is often a pathological condition in the adolescent than it is commonly recognised to be, headaches and feelings of confusion in the head, sleeplessness, want of power to make up the mind even in simple circumstances, occasional loss of self-control, shrinking from company, greater restlessness than is natural to the period of life, and on the other hand undue hilarity. Variability of mood from depression to boisterous mirth is probably the most suspicious symptom of all.

Treatment in the Early Stage

It is at the earliest stage that so-called "moral" treatment is of the greatest value, and it is to cases of insanity in adolescence that such treatment is most applicable. Much is claimed for moral treatment in the case of the insane in asylums, and undoubtedly it occupies an important place there also, but in the majority of cases the best time for such treatment is past when the disease has become so acute as to necessitate the confinement of the patient in an asylum. It is becoming more and more
Recognised that during the acute stage of insanity, just as in the acute stage of other diseases, what is most urgently needed is as complete rest as possible to the diseased organ. Where there is acute cerebral disorder, harm must often result from the atmosphere of excitement and amendment with which the term moral treatment is chiefly associated in some asylums. The true place for moral treatment is during the stage at which treatment is generally nil, or of an entirely inappropriate kind.

Most important of all is entire change of scene and surroundings, with cessation from the routine of work in which the individual may be engaged. To remove a patient to an asylum during the early stage of his mental malady is certainly to provide him with a complete change of surroundings, but in the case of the young especially, this should only be done in the absence of all other resources. The essential matter is that the patient be removed from the care of his or her friends. It is impossible to treat satisfactorily an insane person in his own home, where he must have some power to exercise authority or to exact attention, and where "the eager impatience, the restless anxiety, the meddlesome interference, and the quarrels of friends thwart the best efforts of the physician." Every medical man has seen the harmful influence which a fond mother exercises over an hysterical daughter, who may even pass into a condition of acute dementia as a direct result of the care and sympathy lavished upon her. Change of surroundings means

1. The Physiology and Pathology of the Mind (Maudsley), p. 421.
The bringing into exercise of new tracts of brain tissue, and a partial throwing out of action of the areas whose activities have become exhausted or disorderly. The surroundings of home and friends are peculiarly apt to arouse the emotions, and it is from emotional instability that the adolescent is chiefly in danger. Plenty of healthful exercise in the country, where mental work and worry are at a minimum, in the society of cheerful and sensible companions who will discourage moods of introspection, and exercise a firm control when any tendency to bad habits is shown, will often cut short an incipient attack of adolescent insanity.

The food should be plentiful and nutritious, but much flesh meat should be prohibited. It is well known that the neurotic tend to indulge in animal food to excess; its stimulating effect is pleasant to them, but decidedly injurious. Danger of excitement is directly increased by such a diet, and the sexual passion is roused. Milk in abundance, eggs, farinaceous food, and vegetables should be given, and exercise in the open air should be sufficient to insure refreshing sleep. Everything calculated to stimulate the sexual appetite should be avoided; the bed should have a hard mattress, the hours of sleep should not be unduly prolonged, the bedclothes should be light, and all unhealthy literature should be prohibited. No alcohol in any form should be allowed.

Drugs should never be employed in the early stages to allay excitement or to cause sleep; in the young exercise is sufficient. If this natural method of procuring healthy sleep be neglected, acute disease is sure to follow. And in
the young and neurotic a craving for drugs, as for alcohol, is easily developed. Tonics are useful, the best of these being quinine; in the case of anaemic girls iron may be added with advantage. But tonics are only valuable adjuncts to good air, good exercise, and good food. Neurotic adolescents are usually thin, and it is generally found that increase of body weight is accompanied by decrease of mental instability. Hence every effort should be made to promote nutrition and fattening substances, such as cod liver oil and the extract of malt, may be added advantageously to a liberal diet of easily assimilated food.

Treatment in the acute stage.

When the disease is acute, the question of the necessity for asylum treatment has to be faced. If it can be avoided, it certainly ought to be avoided; for in spite of the more enlightened views on the subject of insanity which are beginning to prevail, there is still a stigma attached to those who have been confined in an asylum, and this tells especially hard on the young, whose prospects in life may be seriously impaired by it. Nor is this the only objection to asylum treatment in the case of the young. Comparatively little has yet been done to classify cases even in the best modern asylums, and the adolescent lunatic is bound to be exposed to the evil influence of insane or vicious associates during the period of illness, and to sights and surroundings during convalescence which may well leave a lasting impression of a far from pleasant nature. And even with the best classification it is difficult to see how these drawbacks
Could be entirely prevented: an atmosphere of sanity must always be better for the insane than an atmosphere of insanity.

But to treat a case of acute adolescent insanity outside of an asylum is a most difficult matter, and can only be attempted only in cases where the question of seclusion does not require to be considered. The patient must not remain at home, and the charge of him should not devolve mainly, if at all, upon the members of his own family. An entire change of surrounding scene is absolutely necessary. A home in the country should be obtained, and one or more trained attendants, as the case may demand, engaged, who will have complete control of the patient under the frequent direct supervision of a medical man. Great care should be taken in the selection of these attendants; the success of the treatment will depend largely on whether the patient is placed under the firm, yet kindly, and intelligent, control of trained nurses, or under the vulgar tyranny of ignorant "keepers." That the society of near relatives should be entirely prohibited is probably best in the majority of cases; in every instance they must at least be made to understand that interference with the prescribed line of treatment will not be permitted. This removal to the firm control of strangers has generally the result of quickly allaying excitement, and restoring the weakened power of self-control. The restraint and regularity of asylum life has the same effect, and in cases where thorough treatment in a private house cannot be obtained there should be no hesitation in sending the patients to an asylum. But it is important to remember that rapid passing off of excitement does not
necessarily imply a rapid cure. Relapses are found to occur in about 60 per cent of cases, and may recur time after time before a permanent cure is effected or the disease becomes hopeless. It constantly happens that an adolescent is discharged from an asylum as cured, only to relapse as soon as all supervision has been removed.

In the mania of adolescence the diet should consist of abundance of nourishing and easily assimilated food. Milk and eggs are especially valuable in the form of custards. Flesh meat should be diminished, and farina and foods increased. True feeding should be resorted to if abundance of nourishment cannot be given in any other way. Fattening agents, such as colliar oil and malmie, should be given to aid the nourishing power of the food. The disease is essentially one of exhaustion, the organism having proved unequal to the demands made upon it during the process of development, and therefore nutrition should be carried to the limit of the power of assimilation. Exercise should be moderate in amount to favour sleep, but should never be carried, as it often is, to the point of complete exhaustion. In fact, if there be much weakness along with the excitement, the patient should be kept in bed if this can be done without the employment of forcible measures; only harm can result from still further diminishing the patient's scanty supply of strength. Tonics suited to the physical condition of the patient should be employed. Hypnotics and sedatives should be avoided if possible. But excitement may lead to dan-

1. Mental Diseases (Clouston), p. 560.
-gnous exhaustion; and if it continue sufficiently acute to cause persistent sleeplessness for several nights in succession, a single full dose of some certain hypnotic, such as chloral, should be given to ensure one night's good sleep, but the drug should on no account be used continuously. In cases where there is much sexual excitement or perversion large doses of bromide of potassium may be given for a short time, provided that plenty of nourishment is being taken.

Melancholic and hypochondriacal states require a more stimulating régime as regards both diet and drugs; the use of strychnine often proves valuable in cases of stupor. Very careful attention must be paid to the amount of nourishment being taken, and artificial feeding is indicated as soon as there is any refusal of the quantity prescribed.

When menstural derangements are marked, attention should be paid to the regulation of the function; and as anaemia is a common accompaniment, the administration of iron, and especially of iron in combination with aloes, is generally beneficial. No doubt the menstural irregularity is rather a symptom of the general developmental disorder than in any way a cause of the insanity, and the menstural condition is likely to be relieved only by treatment which is calculated to improve the condition of the system generally. In cases of masturbational insanity treatment can alone be successful which aims at the direct cause of the disease. Much can be done by moral means, regular employment being insisted upon, and all surroundings removed which are calculated to excite the sexual passion. Much also can be done by cold baths, short hours in bed,
and the administration of bromide of potassium. Mechanical preventive measures, such as blisting of the glans penis, are often useful in combination with the other methods of treatment; they may check the habit for a short time during which the patient's power of self-control has become stronger to resist it; by themselves they are of little value. Unfortunately, treatment is often delayed until the vice has got such a hold over its victim that nothing can break its power. Cures, however, have been effected in apparently hopeless cases, and attempts at treatment should not readily be abandoned. Dr. Clouston insists that masturbational insanity is not such an incurable disease as it is commonly supposed to be, and he gives a recovery rate of 25 per cent in the cases not limited to adolescence, which have been under his own treatment.

1. **Prognosis.**

Insanity in adolescence is eminently a curable form of mental disease, being second in this respect only to puerperal insanity. Dr. Sun Lewis gives the recovery rate as 73.3 per cent in the case of females, and 58.4 per cent in the case of males; and probably the latter rate is too low an estimate. The difference in the ratio of recoveries in the two sexes is due to the fact that the melancholic form of the disease, though less common than the manic-depressive, is more common in males than in females; it is frequently associated with masturbation, and false delusions are apt soon to appear. In treating

1. Mental Diseases, p. 500.
2. A Pass-Book of Mental Diseases, p. 362.
cases of insanity in adolescence there is thus the stimulating hope of a complete and permanent cure; but on the other hand there is the fear of the not improbable termination in a form of dementia which is worse than death. No ladder sight can be seen in our asylums than the hopeless wrecks of this disease, many of whom must owe their condition to neglected or incompetent treatment. The secondary dementia that results in 30 per cent of adolescent cases is of all acquired dementias by far the most complete. It is a pure degradation in function of the mind tissue, without in some cases many motor, or sensory, or trophic nervous accompaniments. Many of the patients will live in health, under favourable conditions, long lives. The change that takes place in the mind cortex in this developmental dementia is unique in organic nature.-----A typical secondary dementia after an attack of adolescent insanity does not think, does not feel, does not will, does not imagine, and does not remember in any proper sense. Place fifty of them in a rich country, and they will neither sow nor reap, and will die off at once. If any other single organ in the body were in the same state as regards its function in which the mind organ in the brain is as regards its function in dementia, the body would die.

1. The Neuroses of Development (Blundston), p. 117.