

DIPHTHERIA CAUSED BY BAD SEWERAGE.

BELOW we give a synopsis of a paper read before the Pittsburgh Academy of Medicine, March 27, by Dr. W. Snively, Physician to the Board of Health, and reproduce from the Pittsburgh *Chronicle* a map showing the sewerage system of the city and the death rate in the several districts. The lines shown in the map represent the trunk and lateral sewers, while the dots represent the deaths and the localities in which they occurred during the five months of 1877, when the disease was epidemic.

The record for the month of August shows 54 deaths; September, 77; October, 113; November, 74, and December, 48; aggregating 366. Of this number, 141 occurred within the infected district.

The latter is of about ninety acres extent, and in form a triangle, bounded by Carson Street, Twenty-first Street and the base of the hill, which rises abruptly to an average height of 450 feet above low-water mark in the river. The average level of the district is 60 feet above low-water mark. During the last five months of the year there were 457 cases reported from this locality against only 399 from the balance of the city.

The sewers which are located in this district are defective in many respects. The Twentieth Street branch, $2\frac{1}{2}$ miles long, was extended in 1871 in such a manner that the older portion became choked at the point of connection.

About a dozen slaughter houses are located near the terminus, the offal and refuse from which are conveyed by it to the river. Originally this sewer had no traps connected with the street drops, but the complaints of offensive emanations became so persistent that they have since been attached. In long periods of dry weather, unless supplied with water from the street hydrants, the drops become dry and are practically useless. They are also constantly becoming offensive, owing to people throwing stale eggs, vegetables, and all sorts of material into the drop, under the delusion that they will be carried away. This sewer has no provisions for ventilation. Manholes are built at intervals, but are covered with tight fitting cast-iron lids.

DIPHTHERIA.

PERIOD OF LIFE MOST LIABLE TO SUFFER FROM DIPHTHERIA.

FROM the ages at death of nearly 70,000 fatal cases given in the returns of the Registrar-General, I find that of every thousand fatal cases the age at death may be expected to be distributed as follows:

Under 1 year	90
1—5 years.....	450
5—10 "	260
10—15 "	90
15—25 "	50
25—45 "	35
45 years and upward.....	25

It will thus be seen that diphtheria is pre-eminently a disease of childhood, and this, taken in conjunction with the exceptional rapidity with which in some cases this disease prostrates the sufferer, has an important bearing upon one chief mode of dealing with ordinary infectious epidemics. I have repeatedly seen in reports on outbreaks of this disease that, in order to guard against similar outbreaks, a sanitary authority has been advised to provide an infection hospital. Now, no one appreciates more than myself the value and necessity for all classes of such institutions, but every case should sail on its merits, and I do not think an infection hospital would ever be of much use in this disease because of the age of the sufferers. Mothers will naturally not part with their children, nor indeed is it reasonable to expect them to do so.

DIPHTHERIA IS THE TYPE OF PREVENTABLE DISEASE,

partaking as it does of the characteristics of those two classes into which infectious disease may be divided. It is in its origin and dissemination as intimately connected with structural defects as enteric fever on the one hand, and on the other, like scarlatina, is very liable to spread by personal agencies. Moreover it has, I believe, an equal and somewhat similar claim with ague, to be considered a disease

water, and in nearly every case in which the disease has carried off whole families I have found this defect; I have also seen the converse, where an epidemic did not prove fatal in a single instance in a large number of houses using a common supply brought in pipes, but proved fatal to eight children drinking water from two contaminated wells. In its dissemination diphtheria is governed by much the same laws as typhoid fever, and, like it, may be spread in various ways by excremental agencies. I do not think that any amount of filth will generate diphtheria, but that, except in certain special localities, diphtheria is always the result of importation.—W. N. Thursfield, M. D.

POINTS CONNECTED WITH DIABETES.

Lecture delivered at the Royal College of Physicians by F. W. PAVY, M. D., F. R. S.

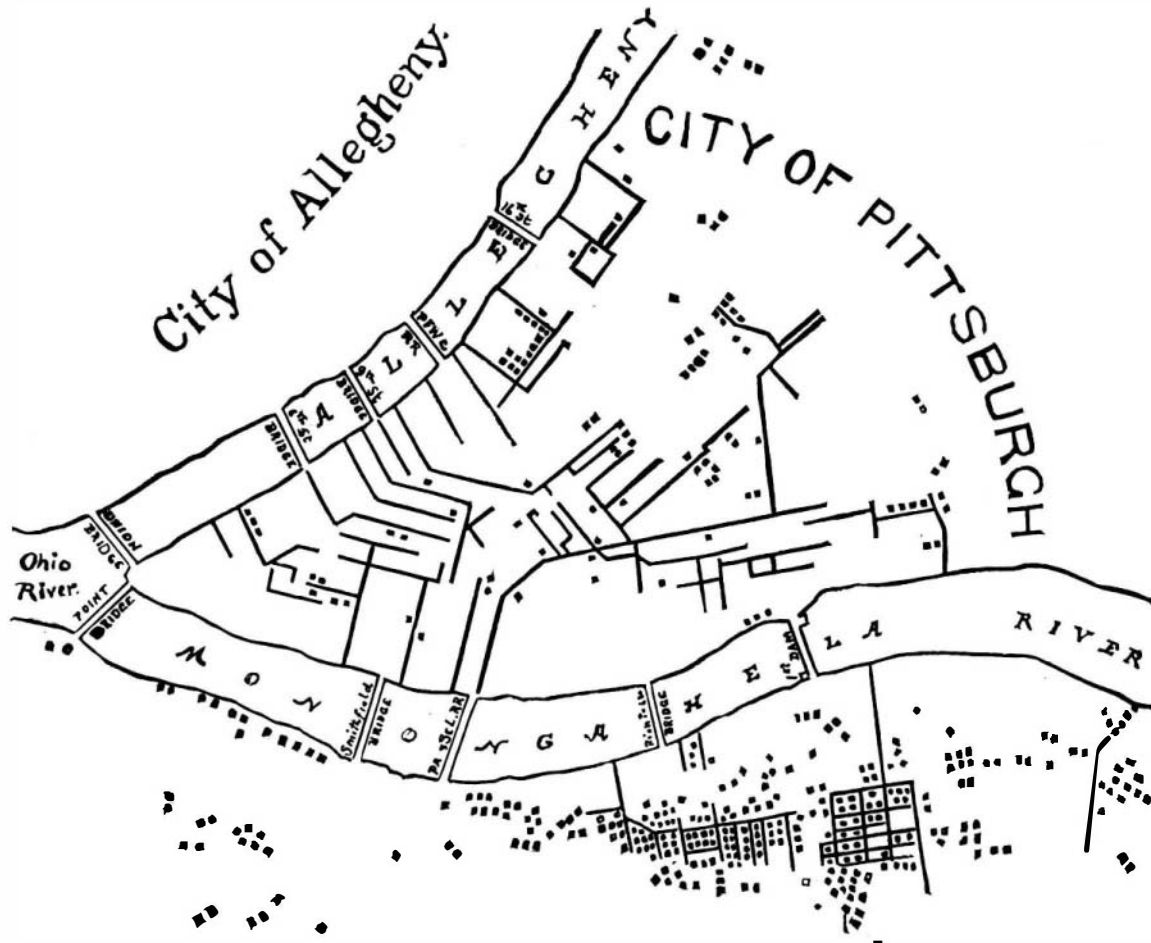
It is a minimum amount of sugar in the blood which is the character of health, and a larger amount which is associated with unnatural states. To maintain the minimum amount the liver exercises a sugar-detaining and sugar-assimilating function, and this prevents us from being diabetic. It has been asserted by Bernard, and my own observations confirm the assertion, that the blood of the herbivora contains no more sugar than that of the carnivora. Indeed, according to the results I have furnished in a former part of these lectures, the blood of the dog contains a higher proportion of sugar than that of the sheep or bullock. Now in the herbivora, besides the sugar derivable from an internal source, we have that to deal with proceeding from ingestion; and if the liver did not stop, as I contend it does, the passage of sugar into the general circulation, there ought to exist a marked difference adversely to what is noticed. The sugar which actually escapes from the liver is so small in amount that I cannot conceive it to have anything to do with the large operation of appropriation of this principle to force production that must occur as a part of the general phenomena of life.

Expressed in precise language, I would say that the liver is essentially a sugar-assimilating instead of a sugar-forming organ; and that when its assimilative action is properly exerted, so little sugar is allowed to pass into the general circulation that the quantity existing in arterial blood is insufficient for rendering the urine more appreciably saccharine than is observed in the healthy state; but that when its assimilative action is not properly exerted, sugar is allowed to pass, and in proportion as it does so the urine acquires a more or less marked saccharine character.

The question before us is one which resolves itself into the utilization or non-utilization of a certain kind—viz., the carbo-hydrate kind—of material. We know that in diabetes this material reaches the blood as sugar, and thence escapes unutilized with the urine. If in health it passed in a similar manner into the blood, to obviate its escape it must undergo appropriation in the circulatory system, and the difference between health and diabetes would then resolve itself into a difference in the capacity of appropriation within the circulatory system. This view, however, is not adopted by the advocates of the glycogenic doctrine, and the evidence afforded by observation is against it. We are therefore driven to the conclusion that the material in question must have a different destination under normal circumstances, and I contend that in reality the liver ought to detain and assimilate it instead of allowing it to pass as sugar into the circulatory system, and that it is by this action we escape being diabetic. Put in another way, it may be said that the sugar escaping in diabetes is the representation of the carbo-hydrate material which ought to be utilized in the system, but which, finding its way into the general circulation as sugar, is thence eliminated as it is. To escape being thus eliminated, it is obvious that the carbo-hydrate material in question must pursue some other path toward utilization than passage into the general circulation as sugar, and this is tantamount to saying that under normal conditions there must exist a capacity of appropriating carbo-hydrate material in this other direction equal to the disposal of that which is represented by the sugar escaping in a full-marked case of diabetes, and this embraces, if not all, certainly in the main, all the carbo-hydrate material which the system has to deal with. Not only, therefore, must there be this other power of disposal, but such power must be exercised, instead of the material being allowed to pass into the general system as sugar, as is represented under the glycogenic doctrine, to avert the manifestation of diabetes.

I have previously discussed what Bernard has said about the appropriation or destruction of sugar in the circulatory system, and have shown that my own analytical observations give no evidence of any significant amount of destruction occurring. It may be assumed—as, indeed, the aggregate of my results indicated—that a minute disappearance takes place. With an organic principle like sugar, susceptible of undergoing change such as occurs in the lactic acid fermentation, it is scarcely to be expected that it would remain uninfluenced by the molecular actions going on around it; but that nothing of a nature to be compatible with the large disposal of it as an alimentary principle that must ensue is to be recognized is, I consider, proved by the evidence that has been already adduced. If the destruction of sugar occurred within the circulatory system of the herbivorous animal to an extent sufficient to account for the disposal of that which is derived from ingestion as well as from alleged formation, what, it may be asked, ought to be the condition in the carnivorous animal which does not receive the supply of sugar from without? Surely, if the destruction is carried out with sufficient fullness to keep down the sugar in the system of the herbivorous animal, it ought to be equal to the entire removal of the sugar contained in the arterial blood during its passage to the veins in the case of the carnivorous animal. In reality, the sugar that has to be dealt with in the blood shows itself to be as much beyond the capacity of destruction in the peripheral vessels in the carnivorous as it is in the herbivorous animal. No material difference, in fact, is to be traced in the state of things in the two groups of animals. In both cases alike the sugar contained in arterial blood reaches the veins without undergoing any material diminution, and thence must needs circulate through the system over and over again. Whatever destruction occurs can only fulfill a subsidiary office. Admitting that the operation is to some extent carried on, it is altogether wanting in the magnitude required to be associated with the appropriation of sugar as a force-producing agent in the body.

My own version of what occurs is this: We know that in a large number of animals the food is of such a nature as to supply sugar in notable quantity for absorption from the alimentary canal. A portion of this may reach the thoracic duct through the absorbents, and thence be conveyed to the general circulation, accounting in part for what sugar is there encountered. The main channel, however, for the



DIPHTHERIA AT PITTSBURGH, PA., FROM BAD SEWERAGE.

The Washington Street sewer has a grade of one foot per 100. It has twenty-nine street drops, none of which are trapped. Until a few months ago it had not been cleaned since its construction in 1851—a period of 26 years. In August, 1877, the Inspector of the Board of Health reported it "choked" a distance exceeding 2,000 feet.

The Board of Health earnestly urged the authorities to have the sewer cleaned at once, but nothing was done until December. These choked and unventilated sewers naturally became filled with foul gases, which found their only vent through the houses in their vicinity, most of the connections being untrapped. Several heavy showers took place in July and August, 1877, sufficient, upon each occasion, to cause a large volume of water to be discharged from the steep hillsides into the sewers, and to drive the sewer gas into the dwellings. The date of occurrence of these disturbing events coincides in a very remarkable manner with the outbreak of diphtheria in this locality.

Dr. Snively concludes his paper as follows:

"That many of these deaths are to be referred to contagion is, of course, admitted, but we cannot ignore the fact that a very large proportion of these occurred in striking contiguity to the sewers, and particularly to the more elevated portions of them. Not alone upon the South Side, but throughout the entire city, we find this to be the case. Striking instances occurred in the Seventh, Eighth, Ninth, Eleventh, Fourteenth, and Fifteenth Wards. The disease did not prevail extensively in the most filthy and crowded localities, but mainly in those portions of our city drained by sewers."

In all during the year 1877 there were 900 cases of diphtheria and over 400 deaths.

The epidemic of last year placed Pittsburgh among the cities in the Union having the greatest death rate. Four hundred deaths from this cause, in a total of 3,400 deaths, with an urban population of not over 120,000, is a very serious state of affairs, especially in view of the fact that much of the mortality was preventable with ordinary care.

preventable by the removal of certain local conditions. When diphtheria gets an introduction to a house, if the children are living under good sanitary conditions, it generally falls lightly; but if the reverse is the case, and especially if they happen to be drinking excrementally contaminated water, in its occasional appalling fatality (greater than that of any of our ordinary infectious diseases of the present day) the disease reminds us of those epidemics of the middle ages, from which we are happily now free. I have in my own personal experience been called upon to investigate cases where, in one visitation to each house only, diphtheria has proved fatal to fifty persons in fourteen houses. If isolation, disinfection, and cleanliness are neglected, diphtheria will spread, and prove terribly fatal under certain bad sanitary conditions; if, however, disinfection and isolation are properly carried out, in no disease may we count upon more favorable results.

The general history of an outbreak of diphtheria is as follows: Either from direct importation or in certain localities spontaneously a case appears in a house. If the children are living under good sanitary conditions it is simply called sore-throat, and the children are not even kept from school. These throats are speedily transmitted, and become epidemic over the district, attracting little notice till, meeting with a family living under very bad sanitary conditions, some fatal cases occur. In other cases the first cases are fatal because being under bad conditions, and there is then less likelihood of an epidemic, as, the term diphtheria being used, precautions are taken.

My experience is that the severity of the disease is directly influenced by the conditions under which the individual attacked is living, but that the tendency of the infection to spread is much increased, as in typhoid fever, by the disease passing through an individual who happens to be newly resident in a diphtheria locality, and, as in typhoid fever, such persons are particularly susceptible. Of the sanitary defects which specially govern the mortality, the most potent is undoubtedly excrementally contaminated

passage of sugar from the alimentary canal appears to be the blood vessels, and transmission into them is permitted by the property of diffusibility which this agent possesses. Absorbed into the portal system, it is conveyed to the liver, where it becomes, if not entirely, certainly almost entirely, checked in its onward progress, and prevented from entering the general circulation. I have shown, by observations which have been for a long time made known, and which I need therefore here only allude to, that sugar leads to an increased accumulation of amyloid substance in the liver. The evidence adducible points to the occurrence of a direct formation of amyloid substance from absorbed sugar. As the sugar is passing through the capillaries of the organ it becomes picked out by its cells and converted into the principle I have mentioned. Nothing could be more favorable than the conditions that exist for the occurrence of this operation. Surrounded as the capillary vessels of the lobule are with rows of secreting cells, the blood is brought into the closest proximity with the secreting element, and thus most advantageously placed for selective action to be exerted.

Micro-chemical observation shows that the amyloid substance of the liver is confined to the cells, and doubtless immediately the sugar is abstracted from the blood it is transformed by the action of the cell into the principle named, for otherwise the organ would give evidence of the presence of sugar in a manner that it is not found to do. Moreover, sugar is a diffusible substance, and would not therefore be retained. Amyloid substance, on the other hand, belongs to the class of colloids, and with its non-diffusibility possesses the properties which physically contribute to its retention in the cells, where it presumably undergoes a change which forms one of the links in the series leading up to the final issue—the utilization of sugar as a force-producing agent in the system.

As regards, then, the sugar derived either directly or indirectly from the food and absorbed from the alimentary canal, my proposition is that under normal circumstances it is stopped by the selective or secreting action of the cells of the liver, and in these transformed into amyloid substance. When not thus stopped it reaches the general circulation, and as a result gives rise to a saccharine impregnation of the urine, standing in proportion to the amount of sugar absorbed from the alimentary canal. This is just the condition that exists in diabetes, and it is well known that in this disease the eliminated sugar stands in relation to the amount of sugar or sugar-forming material ingested.

But it is not only from the sugar derived from the food that the amyloid substance of which I have spoken takes origin. I do not know of any evidence to show that it is formed from fat. Nitrogenous matter, however, undoubtedly is a source for it. This is proved by its existence in well-marked quantity in the liver of the animal-feeder kept upon lean meat. In diabetes also, where a severe form of the complaint exists, sugar is voided upon a strictly animal diet, and such sugar may be put down as taking origin from the abnormal descent of the amyloid substance derived from nitrogenous matter. It is known that ingested nitrogenous matter leads to the production and elimination of urea, and it is believed that the production occurs in the liver. A splitting up of the nitrogenous compound ensues, and its nitrogen, appropriating a certain amount of its carbon, hydrogen and oxygen to form urea, leaves a complementary portion of carbon, hydrogen and oxygen, from which it may be assumed amyloid substance is generated. If we take the percentage composition of albumen and give to the nitrogen the amounts of the other elements required to form urea, we see the amounts of carbon, hydrogen and oxygen that may be applied to the purpose named. This table affords a view of how the matter stands:

Urea and Complementary Residue derivable from Albuminous Matter.

Albumen.	Urea.	Residue.
Carbon.....53.50	6.64	46.86
Hydrogen.....7.00	2.21	4.79
Nitrogen.....15.50	15.50	
Oxygen.....22.00	8.85	13.15
Sulphur.....1.60	—	1.60
Phosphorus...0.40	—	0.40
100.00	33.20	66.80

From this tabular representation it is seen that in the presumed splitting up of the albuminous molecule one-third passes into urea and two-thirds into complementary residue—that is, the relation between the urea and complementary residue is as 1 to 2. Now, some observations by Dr. Sydney Ringer on the relation between eliminated urea and sugar in diabetes that were published in the *Medico-Chirurgical Transactions* for 1860 present a conformity which is certainly striking, if nothing more. The observations show that during fasting and under a diet of animal food—when, in other words, there is no sugar from ingestion to influence the state of the urine—the eliminated urea and sugar stand in the ratio of 1 to 2.2. As might be expected, the figures representative of the eliminated products are much higher under the animal diet than during fasting, but, notwithstanding this difference, the same ratio was maintained. It is right to state that this correspondence I have brought into view must not be taken for more than it is worth, inasmuch as the complementary residue referred to does not express the composition of sugar or of one of the allied carbohydrates, the carbon being out of proportion to the hydrogen and oxygen, and particularly so to the latter.

Whatever may be the precise manner, however, in which the elements of nitrogenous matter become rearranged, it may be said that there are grounds, on the one hand, which have led observers to entertain the view that it is in the liver the production of urea occurs, and practically, on the other hand, it can, as I have mentioned, be shown that from nitrogenous matter amyloid substance is here formed. It is the latter point which essentially concerns us with reference to diabetes. The liver not only arrests the passage of sugar absorbed from the alimentary canal, and effects its transformation into amyloid substance, but also forms this substance from nitrogenous matter. This may be regarded as constituting the first step of an assimilative action exerted by the organ; and, if we are not able at present to follow the process on, and state what next occurs, we can, I consider, say upon the evidence I have advanced that the amyloid substance is not physiologically destined to undergo conversion into sugar, and pass as such into the general circulation. The glycogenic doctrine, it is true, implies the occurrence of such an event. Transformation into sugar is contended for, and Bernard speaks of this formation of sugar as the beginning of a series of phenomena of combustion ultimately resulting in carbonic acid and water.—*Lancet*,

DANGER FROM THE INJUDICIOUS USE OF ALCOHOL IN THE SICK ROOM.

Read before the Hartford County Society, May, 1878.

By T. D. CROTHERS, M. D., Superintendent of Walnut Hill, Hartford, Conn.

CLINICAL studies of the histories and early causes of many cases of inebriety indicate that the injudicious use of alcohol or its compounds, prescribed as a medicine, has been the starting point of many lamentable cases. There can be no doubt such cases are more frequent than we are aware of; also that irregular practitioners and domestic prescriptions are responsible for a large share of them.

A book on domestic medicine, quite popular a few years ago, and somewhat widely circulated, written by an irregular, in which alcohol was the common remedy recommended, has been the exciting cause in several well authenticated cases of inebriety, and has probably been the origin of many others.

The free use of bitters, containing alcohol in combination with very impure drugs, is responsible for a large per cent. of such cases.

Remedies that appear recommended in newspapers, with alcohol as a base, are also dangerous.

Medical men who have become enthusiastic as to the possibilities of alcohol have not unfrequently prescribed it for every condition of exhaustion for a long time. The results in many cases have been a possible transient good at the expense of propagating another disease more intractable and disastrous than the one they sought to relieve. The frequency of inebriety arising from such causes has brought out a special medical declaration in England, signed by most of the leading physicians and surgeons of the kingdom, calling attention to the belief that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients gave rise to intemperate habits, asserting that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past. Bad results are not always clearly traceable, and do not follow in every case, or even in a progressive order, and hence are doubted.

As an illustration, an excellent physician said he could not, in his long experience of the use of alcohol as a medicine, recognize a single case of inebriety which followed from any alcoholic prescription that he had given. A few weeks after a case of inebriety was brought to me for consultation, in which the patient had taken by this physician's order brandy and cod-liver oil for eight months for incipient pulmonary hemorrhage. He recovered in part, but became an inebriate. The brandy with cod-liver oil was the first alcohol ever taken.

The disease of inebriety may be compared to malaria, which, having once pervaded the system, leaves a peculiar predisposition which only awaits a train of exciting causes to spring into activity.

Inherited conditions of organism may exist which give direction to weakened functional activities, exploding in inebriety with great certainty. The medical prescription of alcohol to such persons becomes the exciting cause, awakening and fixing conditions which may not break out at once, but sooner or later will be manifest.

It is a fact well established in medicine that certain not well-defined states of the bodily organism decidedly contraindicate the use of particular remedies. This is manifestly so in the use of alcohol in many cases, particularly when there exist in the history indications of neural degeneration, or decided inebriate tendencies, or conditions of functional disorder which are susceptible and likely to take on organic disease. Anæmia, neurasthenia, and neuralgia, and some conditions of rheumatism, also asthenic diseases, belong to this class, and are often developed into serious disease by alcohol.

Where alcohol is given medicinally any length of time the danger is greatly enhanced.

The following are presented as typical cases occurring in the practice of excellent physicians:

Rev. — was the only son of a New York merchant, who became an inebriate at forty-five and died. His mother was an ambitious woman, always struggling into circles above her, and very nervous and impulsive. When a young girl she had St. Vitus' dance, and at the birth of her son had convulsions. She recovered, with an entailment of neuralgia, and various functional disorders. Her father was a hypochondriac for many years, and her brother, the uncle of the Rev. —, drank more or less all his life.

It is evident from this that a marked neural diathesis existed, with a tendency to inebriety, depending on circumstances. Rev. —, at twelve, developed a very sensitive nervous system, and at puberty suffered for six months from low nervous fever and general anæmia.

He was noted in his academical studies for his great mental capacity and irregular habits of work.

In college he secured several prizes, and was one of those good-natured boys who waste much time during the day and make it up at night. He drank soda and beer, and lived well.

During his studies at the seminary preparatory for the ministry dyspepsia came on, for which he used bitters, with some relief. At graduation he was in appearance slim, of light hair, with a strongly marked nervous diathesis.

His first charge, a Baptist church, brought him in contact with a people who gave rich dinners and lived high. His dyspepsia returned, and bitters were used with apparent good results. Two years later he married and was called to a city church, where the mental strain was continuous and severe. His habits of living were more or less irregular, and his dyspepsia came and went, although he continued to take medicine for this and various functional disorders. His pulpit work was impulsive and exhaustive. For weeks he would manifest great power and energy, then relapse into a condition of debility and indifference. After a revival season of much excitement he went away to the seashore for rest, and drank a bottle of porter a day, with great relish and apparent benefit. He returned to his work and continued drinking porter. His nervousness increased, and a low nervous fever followed, ending in general exhaustion and functional paralysis, from which he recovered very slowly.

The next two years were spent in retirement, and then he became pastor of a village church, and preached once a day. Five years later he had grown more nervous and neuralgic; any special excitement caused great prostration. He was often unable to continue his sermon from want of control of his nervous system. His mind seemed clear. He would work out in the garden for days, or go hunting or fishing, then remain in the house for an equal or greater length of time. He was very firmly opposed to the use of alcohol in

any form, but continued to use different kinds of drugs, and sometimes bitters, with electricity, etc. Exhaustion, both mental and physical, with persistent neuralgia, became more and more prominent symptoms.

His church sent him to Europe for three months. While traveling on the Continent he drank wine freely, and came home much better. A year later his old prostration and nervousness came back with renewed energy. His family physician called a consultation, and, after a long examination of the case, recommended Bourbon whisky, with cinchona bark and other tonics. The relief was marked, and the effects very agreeable. Increasing doses were demanded, and soon he was intoxicated. Then he became passionately fond of whisky, using it in large quantities three or four times a day. A few months later he drank to intoxication, and from this time the progress of the case was rapid. He resigned his church, to avoid the publicity of drinking. Retiring to the country, he is to-day an inebriate, broken down, and drinking to intoxication with every opportunity. His mind is enfeebled, and full of delusions of self-control and ability to stop any time.

This patient inherited a tendency to nerve degeneration; his early habits indicated an alcoholic diathesis, or condition of exhaustion, which sought relief through the appetite. Mental labor and strain of all kinds reacted in this way. As he grew older this exhaustion became a sense of general agony and depression, and the organs seemed in sympathy with an undefined want, which alcohol, of all other substances, alone seemed to relieve. His visit to Europe, with a free indulgence of wine, fixed this tendency, which had grown gradually from year to year through the use of wine, and bitters, and other remedies. The untimely prescription by the physician precipitated his case, and, as it were, exploded a long train of diseased tendencies.

CASE 2.—John H., a farmer. His parents both died of consumption in middle life. His grandfather drank very hard after sixty years of age, and one of his uncles was considered insane. Two sisters died of consumption, and one brother suffered many years from rheumatism, and finally died of some intercurrent affection.

Nothing unusual happened in childhood, except a severe attack of scarlatina, from which he suffered two or more years, with a discharge and deafness. This passed away without entailment, and through early youth up to manhood he was in good health and apparently of robust mind and body. He worked on the farm from seventeen years of age, doing the usual work.

At twenty-four he married, and became owner and manager of a large farm. He was temperate in everything except eating.

At twenty-eight he was laid up in bed from a fractured femur, and suffered from a bed sore and low form of fever, for which he was given porter, and brandy, and eggs for many weeks. On recovery he showed a marked taste for beer, and continued its use regularly. This was continued for over a year, and was alternated with whisky, during which time he became intoxicated several times. From various causes he signed the pledge and reformed, although using cider occasionally.

At forty he began, abruptly, to use whisky, at a political meeting, and became intoxicated; he continued to use it for some weeks, and then stopped, as before. From this time he was nervous, and very excitable, and easily prostrated after any unusual event that interested him. He became a hypochondriac, and patronized quack and patent medicines for supposed heart disease.

At fifty he gave up his farm, and came to the city to live; he was nervous, and full of whims and notions, and impulsive in his way and manner, using cider and occasionally beer. The changed circumstances of city life, and want of healthy occupation, increased his nervous prostration and mental disquietude. Hypochondriac delusions came on, and a physician was called, who treated him for six months; then came a council of physicians, who agreed that a whisky punch and a bottle of porter a day would answer the indications best. A few weeks later he was intoxicated every night. No effort to stop was of any avail now. His mind sunk down to the level of an animal whose only ambition was its gratification, particularly in drink. He seemed maniacal if alcohol was withheld from him. The physician who prescribed for him pronounced it incipient dementia, and urged that he be under restraint. And a few months later he died in a state of coma from alcohol.

This case was also marked for the strong inherited tendency to drink, which was present in the consumptive and rheumatic diathesis present in the family. These diseases are frequently associated with inebriety, and noted as phases of this disorder.

Inebriety not unfrequently appears in the next generation in rheumatic or consumptive diathesis.

The first intimation of this diseased tendency was intemperate eating. After the fracture of his leg, and its consequent debility, a desire for beer and stronger alcohols was prominent, developing and fixing all previous latent tendencies. This he was able to control, until a few years later it burst out again with abruptness, and from this time out there was evidence of permanent alteration of disposition and intellect. The emotions and motor functions seemed to have changed, and when he came under care of the last physician the indications of an inebriate diathesis were clear. Nothing could be more fatal than the alcohol prescription.

These two cases appear to the general physician as simply, one, of nervous prostration and general exhaustion, the other, a hypochondriac, with disturbed intellect and emotions. Had a careful history of each been made, the contraindicative symptoms would have been apparent.

The general rule may be laid down that all cases of physical and mental exhaustion are extremely susceptible to the poisoning of alcohol, and liable to take on diseased conditions that are more or less permanent from its use.

2. From the best authority of clinical observers in this country and Europe, the use of alcohol in the sick room is attended with great danger, unless judiciously used.

3. The conditions contraindicating its use are numerous, and should be studied carefully where alcohol is thought to be of value.

4. The value of alcohol as a medicine is not assured beyond all question; the evidence upon which it has been given will not stand the test of analysis or accurate clinical observation, and we should always be well assured of the diagnosis of the case, and have strong evidence sustaining its use as a medicine in a given case.—*Med. and Surg. Reporter*.

THE Guinard prize of 10,000 francs has been awarded to Prof. Melsens, of Brussels, for his researches on the use of potassium iodide in combating saturnine and mercurial affections.