

# THE JOURNAL OF INEBRIETY

*Incorporating The Archives of Physiological Therapy*

T. D. CROTHERS, M. D., EDITOR



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BOOK REVIEWS



with all the evils of civilization, awakening sympathy among those who are still agnostic. The motives which directed its foundation were half-million of persons have banded themselves together to attack at its source the drinking habits of our country with a view to the ultimate reduction of drunkenness, only a mere handful take a real practical interest in the drunkard himself, as a part from or in addition to general interest in the drink problem. Up to the present time general interest in the question has been wanting, and I fear that little progress will be made until such interest is awakened to a sufficient extent to impress upon our law makers the necessity for action, and to imbue them with the certainty that detailed treatment of the subject will meet with approval and support from the broad-minded.

Dr. Norman Kerr was an advocate of abstinence, and fully realized the necessity for conjoint action between philanthropists and scientists, without regard to the question of personal habits, in the hope that a study of the drunkard might be instituted, untrammeled by prejudices, and in order that some interest in the subject might be kindled among the moderate majority. With these objects in view, he invited all and sundry—lecturers, and otherwise—to form a body of persons who would engage in a cold blooded common sense inquiry into the matter of the drunkard—and temperance society for the study of inebriety. Convinced thus, and convinced on these principles, our society should wield an enormous power for good, and eventually succeed in

awakening sympathy among those who are still agnostic. The motives which directed its foundation were admirable, and no better purpose can be found to control its continued existence. In any case the belief that this original scheme still governs its constitution justifies me in speaking freely and without fear of censure for the possible assumption of an unorthodox or reactionary attitude. For many years past, under Dr. Norman Kerr's direction and under the able guidance of those who have followed him in secretarial and presidential offices, the Society has done excellent work. Many papers have been read and published bearing upon the pathological, psychological, medicolegal, and ethical aspects of the inebriate problem. We have heard a great deal about heredity, and ought to have learned much—at any rate, we know fairly well how opinions differ. On the whole, therefore, our Society may be congratulated upon the thoroughness with which it has tackled the study of the subject, the completeness with which it has warranted its title in so doing, and thereby carried out the intention of its principal founder.

So thoroughly has the scientific position been ventilated that I am conscious of my inability to add much of value to what has already appeared from time to time, nor do I propose to attempt the impossible. My unique position, however, as the only man in close touch with all inebriates under legal detention in England justifies me in assuming that some record of my personal observa-

tion may be useful in support of otherwise of scientific, more or less theoretical contention. In all forms of mental or physical variation from the normal, numerous advantages are obtainable from the study of cases in mass; definite characteristics which may escape notice when reliance is placed upon isolated cases, often become evident and unmistakable under collective conditions. Habitual drunkards, studied as a class, segregated from normal individuals, have proved no exception to the general rule. I therefore propose to confine myself to matters which relate strictly to practical work, endeavoring to describe the inebriate to you as I have found, studied and weighed him, through something like 25 years intimate association with his kind. Afterwards I may perhaps be permitted to indicate the principles which govern the treatment and control of drunkards, the directions where such efforts fall short of what is required, and the additions which are necessary for adequately dealing with the class.

In the meantime, a few words may seem desirable to indicate my interpretation of the word inebriate lest misapprehension arise, and subsequent remarks be taken as applicable to persons who do not merit inclusion. Viewed from an alcohol-drinking standpoint, all classes of society may be divided into those who take alcohol and those who do not. The alcoholic takers may again be subdivided into (a) strictly moderate, (b) careless and occasional excessive drinkers, and (c) habitual drunkards,

Eliminating the total abstainer and the moderate drinker, we have the last two subdivisions left for consideration—the careless and occasionally excessive drinker and the habitual drunkard. As far as the occasionally excessive drinker is concerned, merely passing attention will suffice, then we may also dismiss him from future notice. The essential difference between persons of that type and the habitual drunkard is the fact that the former retains the power to restrain soberly, if he desires, to exercise it. Lacking, perhaps, to some extent, in moral sense, power of control over impulses, and power of judgment, he is still on the right side of the line, and may therefore be practically eliminated from consideration for present purposes. He is a person who requires education into sobriety by moral means; if these fail, he becomes a nuisance to the community, depends his savings to the detriment of the public funds, or commits crime when under the influence of drink; he needs coercion in the shape of control more penal than reformatory, to bring him to his senses. It is possible that degenerative changes, consequent upon many weakened "drinks," bank-holiday spree, convivial meetings, or banquets, may eventually bring him into our hands; but until these changes occur he remains outside the class in which we are especially interested. So far, however, as a habitual drunkard, inebriate chronic alcoholic, or dipsomane is concerned, these terms are synonymous.

My conception of a definition is an exceedingly simple one, and as such is commended to you. An inebriate is a man who may or may not desire to live soberly, but in any case cannot unless and until some changes take place in his mental state. The more I see of habitual drinkers, the more I am convinced that the real condition we have to study, the trouble we have to fight and the source of all the mischief, is inherent defect in mental mechanism, generally congenital, sometimes acquired. Alcohol, far from being the chief cause of habitual inebriety, is merely the medium which brings into prominence certain defects which might otherwise have remained hidden, but for its exposing or developing influence. In the absence of alcohol the same persons, instead of proving unreliable in other ways, they would have been called meretricious, profligate, persons of lax morality, excitability or abnormally passionate individuals; persons of melancholic tendencies or eccentric. I do not believe that any drunkard has voluntarily and of intention made himself so; on the contrary, I am convinced that all who possess a sufficiently developed mental equilibrium to appreciate the seriousness of their condition have urgently and honestly desired to have a sober life, and have fought to this end and failed in a struggle against weakness, the strength of which a normal man is quite incapable of realizing. I am inclined to think that sufficient

credit has never been given to the honesty of an inebriate's fight against inclination, or to the inherent weakness of power to resist impulses which renders his struggle far victor and successful. When confirmed inebriety has apparently been acquired through persistent carelessness habits, the individual has, during the course of the transit from one condition to the other, been unconscious of advancing slavery; he has honestly believed that his power over himself remained unshaken long after it had gone. It seems to me exceedingly doubtful whether habitual inebriety, as above defined, is ever really acquired in the strictest sense of the word—that is, in the absence of some measure of pre-existing defects. In other words, I am sceptical—very sceptical indeed—as to the probability of any normally constituted individual becoming a habitual drunkard, even if he permits himself to indulge occasionally in a fair measure of careless drinking, without the intervention of nerve shock or other influence sufficiently potent to disturb the equilibrium of nervous and mental mechanism. Although the experiment cannot be regarded as a safe one, because of the possible existence of unrecognized mental defect, there is no doubt whatever, in my opinion, that the man who has taken alcohol regularly without apparent detriment, during a long life, has applied to himself one of the most perfect tests of mental equilibrium, power of control over impulses and power of judgment. This, I think, explains why so many of our hardest thinkers and hardest

workers are moderate drinkers; there is no reason for them to be otherwise, they are safe, and they know it. The fact that the unsafe also consider themselves safe does not appear to me to alter the position in the very least. The control of inebriates under the Habitual Drunkards' Act of 1879 and under the Act of 1888, enables us to make a detailed study of all classes and of all types of cases at close quarters, a position which is not shared by any other country. In fact, there has never been any time in the history of the world when the chances for observation and conclusion have been greater than they are at present. In State and certified reformatories we have to deal with the lowest stratum of humanity; that sad and hopeless layer composed of individuals who are habitual criminals, frequenters of police courts, and prison reformatives, mostly addicted to violence, brawling and immorality.

A small minority of persons who are committed to these institutions are capable of segregation from the general rank, on account of better education, social position, and a personal history of moral conduct. These selected cases may be considered, for our present purpose, some degrees better than those previously mentioned. Still better in many ways are the persons who have voluntarily applied for admission, and have been received into the lower and middle class reformatives; mostly artisans or their wives, they are decent, and usually without taint or criminal complication. Again, in the more expensively conducted reformatives we find tradesmen, professional men, and persons of no occupation who have sufficient means to maintain themselves. The most expensive reformatives contain members of good families and wealthy persons of both sexes. It will therefore be evident that our possibilities for study are not limited to any one class or sex, and that the types are extremely varied. It is customary for the writer of a monograph relating to a specific disease to restrict his attention in the first place to a description of those characteristics which are nearly always present in a typical case, and afterwards show how the same disease may exist without many such distinguished peculiarities. This manner of treating the variations commonly met with in mild attacks of nearly every common ailment. For instance, when an infectious disease is epidemic, cases often occur which would not be recognized but for the fact that they are found among others more definite. In these cases distinguishing characteristics are absent, notwithstanding the fact that the causative poison is the same to all intents and purposes. In other words the description of every disease amounts to a pen picture of a well developed, severe example, the milder cases being classes as variations of the same condition by reason of their association with bad cases or from the discovery, after careful search, of some unknown features in obscure or modified form. Without a thorough knowledge of

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severe types, the milder ones would undoubtedly escape recognition. In regard to my present subject I think I can hardly do better than follow the same course; deal first with cases which exhibit marked symptoms, such as those admitted to state or certified inebriate reformatories, and afterwards endeavor to show that the same special peculiarities are usually present in modified form among the milder cases in retreats, and therefore among all inebriate cases admitted to state and certified inebriate reformatories.

If a man or woman commits an offense which is punishable by imprisonment, or is repeatedly convicted of drunkenness and disorderly behavior and can be proved to be a habitual drunkard, our law permits a judge or magistrate to order a sentence of detention in an inebriate reformatory instead of a sentence of imprisonment. Many habitual drunkards have been committed to detention under this power, and I now propose to submit for your information some details concerning the mental states of 2,275 committed to special care previous to Dec. 31st, 1906. The following table relates to these cases and is a text for my subsequent remarks:

It classifies all the cases in question into four groups—insane, mentally defective, defective of average mental capacity. A brief glance at the figures placed against each section will show that upwards of 62 per

Classification According to Mental State	Number in each Class		Percentage to Total Number of Persons Admitted to Reformatories.
	No.	Per Cent.	
1. Insane—certified and sent to asylums	51	10.1	
2. Very defective—imbeciles, degenerate epileptics	317	62.6	
3. Defective—as above, but less marked eccentricity, still, and admission of sane to certain reformatories of the State	100	40.3	
4. Of average mental capacity—on admission, or after six months detention	281	57.4	
Total Admissions	2275	100	

cent have proved to be either insane or defective in varying degrees, and that only a little over 32 per cent can be described as of average mental capacity. In regard to the latter I may say, at the outset, that the standard of mental capacity adopted for the purpose of this classification is an exceedingly low one, if judged by what would be considered a normal standard in ordinary life; in other words, that the percentage here shown would have been considerably smaller had I not been anxious to avoid the least chance of an indictment for exaggeration. Among all the characteristics and peculiarities encountered during a study of inmates of inebriate reformatories, none are so definite as those ascribable to mental defects or disease. There are no other general distinctive peculiarities, or even hints of any other common condition which would point to a reason why these people are habitual drunkards and we are not. Every effort to find

other causes, apart from those associated with psychic or neurotic abnormalities, has failed utterly. The general presence of the conditions we do find and the negative result of search for other agencies have been the main influences which conclusively satisfied all in close touch with inmates of reformatories that the fundamental cause of habitual drunkenness is mental defect or disease—an amount of defect or disease which is clearly obvious in 62 or 63 per cent, and suspected in the remainder. When we remember the symptomatic variation met with in other diseases, and the absence of definite characteristics in many mild attacks of other affections, the fact that certain distinctive peculiarities, which are associated with the worst cases in reformatories, and not so apparent in milder cases becomes of little importance. Nevertheless, in my opinion at least, if careful search be made, the same characteristics can be found, although modified, even in the midst of all the cases which come under our notice. If then, the mental aspect of inebriety occupies such a position of importance in causation, it becomes necessary to refer briefly to the various forms of mental defect and disease found in inebriate reformatories, and reflect upon the bearing each is likely to have in the formation of habits of drunkenness. Among the fifty-one persons classified as insane, none had been included except those actually certified and sent to asylums during their reformatory sentence. At least four

or five times this number have justly been considered insane—that is, the subjects of mental disease in fairly advanced form, but have escaped certification owing to the transient condition of the more obvious symptoms, and the difficulty of finding sufficiently definite evidence of delusion, hallucination, maniacal condition, or melancholic state, to render detention in an asylum probably for more than a brief period. Furthermore, if certification is resorted to whenever such a course becomes possible, we should always be transferring our inmates to and fro between asylum and reformatories. The number of cases in this group, therefore, only represents the cases actually sent to asylums; not those which might have been sent without any misuse of too liberal construction of the word "insane." Some of the cases included in this group as actually sent to asylums were found to be suffering from delusions when first admitted to reformatories; others were in an excited state, which gradually merged into mania; a third section contained persons obviously demented; a fourth class were melancholic and suicidal; a fifth epileptic, with violent attacks of mania; and a sixth were the subjects of recurrent mania, which developed and subsided in some cases two or three times, during their period of detention as inebriates. It is, therefore certain that (1) the large majority of inmates of this description were either actually insane during their police-court history, or (2) in a state

bordering on insanity, and (3) that mental disease was the condition for which they were repeatedly impinged—mental disease merely masked by alcoholic indulgence. The exact relationship between drunkenness and insanity in these cases is extremely difficult to determine; their previous history, so far as we are able to piece it together, supplies too little reliable information to warrant definite conclusion. Notwithstanding this, when good information has been available, it has nearly always pointed to the existence of the brain disturbance, as evidenced by erratic behavior, excitement, or melancholy, previous to the commencement of habitual drunkenness. Ordinary experience indicates that the mental disease, in some cases, may be due to tissue degeneration produced by persistent alcoholism; to repeated alcoholic epileptiform convulsions and recurrent attacks of delirium tremens; or to shock after shock to the nervous system arising from the sudden discontinuance of alcohol which accompanies every sentence of imprisonment imposed during heavy drinking. But, for all that, I am satisfied that the majority of our insane inebriates have become alcoholic because of their tendency to insanity, not insane as the result of alcoholism, and that the preceding drunkenness was merely precursory evidence of approaching mental disorder. Whatever we may determine for the cause of drunkenness in regard to such types as are hereafter to be discussed, I think that there can

be no doubt, so far as the large majority of units in this group are concerned, that drunkenness is merely a symptom of mental disease, and not in any sense to be studied or treated in any other light. The "very defective" and "defective" groups in the above table may reasonably be considered together; the characteristics of both are the same, varying only in degree. "Defective," in the sense used here, includes every person admitted to reformatories who is found to be much below an average standard of mental capacity, but insufficiently so to justify a certificate of insanity, or only now and then certainly insane during short transient paroxysms. Certain peculiarities in cranial conformation, general physique, and conduct have long been recognized as evidences of congenital defect. Nearly all the 1,375 cases included in the two "defective" sections of our table have given evidence of possessing some of these characteristic peculiarities, and it is morally certain that the large majority of them started life handicapped by imperfect brain development. The smaller number of cases where evidence of early defect is wanting are probably instances of brain degeneration produced by persistent alcoholism, advancing nervous disease, senility or other cause. It is when degenerative changes are added to original defect that difficulty arises in appportioning the true significance of each.

Unfortunately for any hope of clear distinction, there are many in-

mates with family history strong enough to warrant a certainty of congenital defects, who are marked more prominently when sent to reformatories with the damage caused by a subsequent life of drunkenness and immorality than with the signs of defect existing at or resulting from birth. When antecedents can be traced, and the life history of cases during infancy and childhood is known, the evidence is strong enough; but too often the result of inquiry is negative, and reliance for approximate diagnosis must be placed upon other indications. Perhaps the most conclusive evidence of congenital defect, from a scientific point of view, is the common presence among inmates of certain physical signs of arrested or distorted development. Many instances of stunted growth can be found among our defective inebriates; abnormally small or mis-shaped heads; and case after case of developmental arrest or irregularity in upper or lower jaw. There are plenty of examples of the thin-face congenital, with high-cheek bones, deep-placed eyes, projecting ears, and shifty, hunted expression, but more common still is the heavy, repulsive, masculine type, with a tendency to violence and brutality, beady eyes, square jaws and dull, fatty, expressionless face. Features are often found asymmetrical, nose abnormal in shape of palat and indental formation have also been noted. In short, the same physical abnormalities are to be found in men-

tally detected inebriates as are present among idiots and imbeciles, only in less degree, because the defect is less severe. The sketches and photographs accompanying this lecture need little comment; they illustrate somewhat imperfectly the cranial and facial indications of congenital defects found in this type of inmates of reformatories. Even the untrained eye will have no difficulty in recognizing something wrong with all of them. Although there are so many physical signs to indicate a congenital basis for the impaired condition of inmates in these groups, by far the most practical evidence is to be obtained from a study of their character, conduct, and mental capacity when under control. But, notwithstanding my opinion I am not prepared to insist upon the universality of congenital defects. Unfortunately, the grounds for proof are not definite enough to justify more than a suggestion of something approaching a congenital basis for all the most evident peculiarities. After all, the main point is not so much whether the defects are congenital or not as whether, if it exists, it is preceded or succeeded the commencement of drunken habits. The chief characteristic mental symptoms observable in these cases may be considered under three main heads, (1) impaired mental development of moral sense; (2) imperfect control over impulse; and (3) defective power of judgment. Of all the three characteristics, impaired development of moral sense is, perhaps, the most

apparent in the largest number of cases, and the one of all others which is most likely to have existed previous to drunken habits. The early history of all cases where this symptom is marked has justified a probability of congenital origin. Odd and peculiar from birth, these persons have always seemed incapable of acting like other people. There is often a history during childhood of fits, chorea, or other neuroses; as children they have proved uneducable, and as adults unemployable from incapacity to learn the details of a wage-earning occupation. They appear to be unable to tell the truth and cannot be made to see any reason why they should do so. They are filthy in habits, and require supervision, even force to ensure a moderate amount of cleanliness when under detention. They do not care in the least for the opinion of others in matters relating to conduct, nor can they be induced to see any

(To be continued.)

reason why dictation from others should be obeyed.

Drunkenness is justifiable; prostitution is justifiable, any course they choose to adopt is justifiable, so long as they can show to their own satisfaction some so-called reason for their conduct. Deficient in moral sense they cannot be made to understand the ethics of social life, or the necessity of obedience, to moral law, and an unfriendly attitude is manifested towards all who endeavor to exercise refining influences. These persons are drunkards because they are anti-social; they are incapable of being otherwise, or of appreciating the advantages of even attempting to be otherwise. They help to swell the numbers of the habitual criminal classes to no inconsiderable degree. There can be no doubt, whatever, that these persons are mentally unsound first and an inebriate afterwards, and that their drunkenness is a direct result of mental defect, for which they are virtually, if not legally, irresponsible.

## THE USE OF OPIUM IN PREFERENCE TO ITS DERIVATIVES

By W. C. Abbott, M.D., Chicago, Ill.

*The New York Medical Journal* having offered a cash prize for essays on the above topic, it is possible that this would bring out all that could reasonably be said upon it. The first prize was awarded to Andrew F. Currier, and we would suggest as the best possible presentation of the alkaloidal side that the reader study Dr. Currier's prize essay.

Dr. Currier says that the opiates in vogue before the advent of the alkaloids compelled the ingestion of much inert material: "there is, therefore, an immense advantage in the use of morphine, cocaine, apomorphine, etc., when it is deemed desirable to introduce the minimum, as to quantity, into the body." Naturally, as presenting the doctrine for which his journal pays, he forgets to add that the uncertainty as to the nature and quantity of effect from his dirty erudites constitutes a further objection.

Another damaging admission: "Few drugs are so variable in their potency as opium."

"The indications for which opium or its derivatives are administered are pain, then excessive secretion, restlessness, sleeplessness, hemorrhage, and fever. If pain alone is the indication, and it is desired to relieve it as promptly as possible, there is nothing comparable to the hypodermic use of morphine; all other methods and substances must yield to this." Lesser pains may be

soothed by opium galenics, "and pelvic pains by suppositories of ext. opium." But if the pain is not enough to justify morphine why use any opiate at all? And why not make the suppository of morphine and save the time required to dissolve the indeterminate dose of that alkaloid out of the encumbering dirt of the extract?

For excessive secretion, paregoric. Is that his best effort? Doesn't he remove the cause of irritation, if in the bowels by flushing, disinfecting, stopping fermentation, and if secretion-excess be the main indication, doesn't he know the value of atropine? Or hyoscyamine? Does any reader of the *New York Medical Journal* rely on paregoric as his best remedy for excessive secretion? We do not quite like to take this as correct.

For fever, restlessness and insomnia, what can surpass the old and reliable Dover's powder? So many things that a reply would require a book. Does anybody nowadays administer Dover's for either fever, restlessness or insomnia? We trust not, preferring to believe that all of us seek to find and remove the cause of these symptoms, or to attack them directly with more effective and less perilous agencies, fever? With hydropathy, the numerous antipyretics, eliminants, vasomotor equalizers, to use an opi-



etc. Restlessness? Our last case was due to an unspoken desire on the part of a sensitive, retiring child to go to college. An opiate, Insonina? (Opiales).

Dover's powder has its uses, and when replaced by morphine and emetine we get its benefits as never in the old, uncertain crude form; but it is not as a remedy for the three indications mentioned.

For hemorrhage Dr. Carrier mentions cotanin, which he doesn't like; and leaves us in the impression that he relies on crude opium as a hemostatic. Well, we hope we do not fall into his hands with a patient bleeding if that be his hemostatic therapy. Cotanin has proved valuable in pelvic hemorrhages in too many hands to be condemned by even Dr. Carrier's failure. But opium as a hemostatic, when we have atropine, ergotin, digitalin and the many direct and effective agents in that line?

Grant that opium is a valuable hemostatic. Do we not need our blood-stanchers to be prompt and decided in their action? Then why give the slow and uncertain galenic when we get from a morphine hypodermic our desired action at once? The only hemostatic effect we can get from either is vascular relaxation, and sometimes a full, overpowering dose of morphine will afford this, as in post partum cases, when atropine is not at hand.

If that be the best presentation possible for crude opiates that a cash

prize can elicit, the case is weak indeed.

Take on the other side the beautiful applications of the therapeutic certainties, the alkaloids. For pain, atropine if the spasmodic element is prominent, as it is in most of the worst forms—gallstone and renal calculi, etc. Mechanical relief for the pains of constriction or compression—would you trust opium for strangulated tissues, with gangrene as a result if the circulation is not restored? Vasomotor relaxants for inflammatory pains, with heat or cold locally. Evacuants for gastro-intestinal pains—would you look up the irritant in the bowels and stop peristalsis? Would you give opiates for antitoxicemic headaches or neuralgias, or for osmenorhea? Even for inoperable cancers, no opiate compares with the alkaloidal combination of morphine, hyoscyne and atropine. So with any severe, continuous pain from similar intractable causes—the maximum of relief with the minimum of drug and of habit evils comes from that combination, which was an utter impossibility as long as physicians stuck to crude drugs. What further prizes await the investigator he exclusively in the path of him who utilizes the definite, uniform active principles, alone and combined, on the basis of their known action on the human economy. This can not be done with the crude drugs, because their action is not uniform, as to quality or to quantity; and no certainties can ever be founded safely and permanently on uncertainties.

## DELIRIUM TREMENS

By A. L. Benedict, J.M., M.D.,

*Consultant in Digestive Diseases, City and Riverside Hospitals; Attendant Mercy Hospital, Buffalo.*

In the discussion of any disease, the definition is an important matter and the difficulty in defining this condition is largely the excuse for its present consideration. All authorities are agreed that delirium tremens does not mean the delirium of ordinary alcoholic intoxication. Tyson uses the term as synonymous with mania a potu, although some physicians attempt to differentiate these terms, and states that the condition is "a special manifestation of chronic alcoholism, ascribed to the long-continued action of alcohol on the brain, though its occurrence coincides rather with the sudden withdrawal of alcohol. On the other hand, a delirium, however prolonged, is never followed by mania a potu, so that the relation of the illness to the withdrawal of alcohol may be more apparent than real."

It may be questioned whether a primary debauch might not be prolonged sufficiently to result in delirium tremens. For instance, one of my acquaintances is considered by his intimate friends to have been more or less drunk continuously for several years, unless through an unintentional oversight, remedied as specifically as possible, on awakening in the morning. But, of course, such a state is not usually meant by the word debauch, so that Tyson's definition is largely the excuse for its present consideration. All authorities are agreed that delirium tremens does not mean the delirium of ordinary alcoholic intoxication. Tyson uses the term as synonymous with mania a potu, although some physicians attempt to differentiate these terms, and states that the condition is "a special manifestation of chronic alcoholism, ascribed to the long-continued action of alcohol on the brain, though its occurrence coincides rather with the sudden withdrawal of alcohol. On the other hand, a delirium, however prolonged, is never followed by mania a potu, so that the relation of the illness to the withdrawal of alcohol may be more apparent than real."

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table, typhoid fever, etc. Sometimes a mental shock or surgical injury is the precipitating factor.

All things considered, it seems that a pretty clear statement can be made as to the question whether alcohol or its withdrawal is the etiologic factor in delirium tremens. A prolonged and excessive use of alcohol is necessary to the production of delirium, though the duration and extent of use necessary as a precursor, vary widely, according to idiosyncrasy and, some feel, according to the general nutrition, hygienic surroundings, etc. On the one hand, the periodic drinker does not usually develop delirium tremens, if the intervals between sprints are sufficient to allow a complete restoration to health; on the other hand, the very moderate, steady drinker, consuming not over 30 c.c. of alcohol a day, is usually immune. But the periodic drinker with short intermissions, and the tank who drinks steadily and excessively without getting drunk, are pretty certainly destined to develop delirium tremens at some time. The person who most certainly and most promptly develops delirium tremens is the man who drinks more or less every day, and who sprints on frequent sprints and exposures appropriate to such a life.

It may also be stated that alcohol may not be the sole factor in preparing the system for an attack of delirium tremens. Fused oil, wood alcohol, absinthe and other ingredients of alcoholic beverages, very likely co-

operate. So, too, unquestionably, are the semi-starvation, glutinous and malnutrition in the alimentary canal, all of which are likely to occur in drunkards, not to mention other hygienic faults, such as irregular sleep, exposure to cold, etc., or the various organic diseases to which drunkards are specially liable.

So much for the predisposing causes of delirium tremens. The exciting—or let us say precipitating—cause is unquestionably, in many instances, solely the withdrawal of a drug on which the system has become accustomed to rely. At least the word solely is correct in the practical sense, though we may advance question whether other, more subtle factors are not also present. On the other hand, an emotional shock, frost-bites, violence, amputation or other surgical operation necessitated by freezing or injury, an infection or inflammatory intercurrent disease, though usually occurring at the close of a spree, or in the midst of continued, heavy drinking, frequently seems to be the prime precipitating factor and may act when, on account of the fear of delirium tremens, the patient is allowed to continue the use of alcohol in pretty liberal amount.

Delirium tremens is commonly and correctly considered as a functional cerebral crisis, due to some form of toxæmia, not directly exogenous. While necropsies have revealed many lesions, both in the brain and cord and in the viscera generally, no one of these, nor any

combination, is recognized as essential. Stengel, for instance, ignores the entire subject in his systematic pathology. Neither is there any known metabolic basis of the disease, although it should be borne in mind that pathologic physiology is still in its infancy.

With this lack of a definite pathologic basis and we may almost say of an etiologic basis since it is only in a crude way that we can speak of alcohol as the cause, it is obviously impossible to formulate a satisfactory, scientific definition of delirium tremens. In any such case, great care must be taken in framing a symptomatic definition, on the one hand to include all characteristic features and on the other hand not to introduce features, for the sake of making a striking clinical picture, so as to exclude from the category essentially identical but not strictly typic cases.

The common conception of delirium tremens presupposes a history of quite chronic alcoholism and we must not let our prejudices as total abstinens, lead us to include as chronic alcoholism, the daily use of a glass of beer, for example. There is usually to be found the further factor in the history, of sudden withdrawal, or else some physical or psychic shock or strain, including the strain of an intercurrent disease like pneumonia.

The typic case, besides delirium and tremor, manifests hallucinations, especially of serpents or some similar reptile, or, at least, of some loath-

some vermin, or something else of a horrible nature, and there is present fear and horror of the object seen in the hallucinations. There may also be hallucinations of sound, color, touch, taste, etc. Physically, independently of any organic disease, infections, inflammatory or degenerative, that may or may not be present, a weakness, involving both muscles and glands and especially marked in the heart, there being usually a weak and rapid pulse of low tension.

Delirium tremens fully conforming to this definition is a relatively uncommon disease, at least in ordinary, respectable private practice. Both in private and hospital practice, it is common to observe, following a debauch or period of excessive drinking, considerable cardiac and general weakness, insomnia, nervous twinges, a state of apprehension of danger, bad dreams or slight nocturnal delirium but without distinct hallucinations, abrogation of intelligence or other marked symptoms. Whether we say that such patients have delirium tremens or not is a matter of personal opinion as to the propriety of extending the literal meaning of a technical term, but it should be clearly recognized that there is an essentially identical condition, of mild degree. At any rate, whatever our nomenclature, these cases must be treated on the same general line as delirium tremens and the mild attack must be recognized as a warning that, unless there is reformation

of habits, typic delirium tremens may be expected later.

According to one theory, the vision of snakes is not an hallucination, but an illusion due to the contraction of the tortuous and snake-like retinal vessels. I will leave to a more expert physiologist the explanation of how even a congestion of these vessels could lead to sensory impressions of objects of similar contour. That the explanation does not hold is evident from the actual rarity of ophioscopia and from the fact that passing paper over holes through which the patient saw the snakes either driving them out of the room, or otherwise humoring the patient's delirium, sometimes causes the hallucination to vanish. A much more rational objective explanation is that the blood corpuscles, whose shadows can actually and easily be seen by anyone, form the basis of a visual illusion.

Curiously enough, in about fifty cases of delirium tremens, I have never noted hallucinations of snakes; rats, horses, dogs, cats, and human beings have been the most frequent hallucinations. One patient saw playing cards on the ceiling. Sometimes the hallucinations have been general, sometimes individual. With rats, lions, tigers, etc. the patient would simply see such animals. Human beings are usually individualized. Domestic animals are sometimes seen as individuals, sometimes merely as animals. In one case, the patient, himself an Irishman, described his hallucinations as of red-

headed Irishmen, but apparently recognized none as individuals.

Probably no one would insist that a hallucination of one particular kind of animal is necessary to constitute delirium tremens, but if we depart from the serio-comic lay conception that the delirium tremens patient sees snakes, inevitable logic carries us very far from even the commonly accepted medical conception of this condition. It may be stated here, that in saying that I have had an experience of about 50 cases of delirium tremens, I exclude the mild cases without hallucinations and that in practically every instance, the diagnosis rested on the joint opinion of others. Simply as a matter of symptomatology, it is important to note that the symptom of ophioscopia is not invariably but, on the contrary, relatively rare, unless my experience has been entirely exceptional and, from inquiry of those who have had much greater experience in hospital and penal practice, it would seem that it is not exceptional. It is a curious fact that an idea which is striking and interesting and which is once formulated into a statement by authority, persists in spite of everyday experience. The relative inimportance of ophioscopia is especially important when we reflect that temperance literature and lectures, come journalism, the stage, and medical warnings, keep constantly before the laity, the suggestion that the alcoholic ought to see snakes, even if there were no original tendency to ophioscopia, we

should expect that auto-suggestion would lead to it in the great majority of instances of delirium tremens, but this is not the case. The very pretty theory about the tortuous blood vessels of the retina not only lacks scientific possibility, but is even unsupported by clinical experience.

But the fact that we must drop the word snakes as a popular synonym for delirium tremens, implies something much more important than the discarding of an individual symptom. With it must go all that is implied in that other popular synonym, the horrors.

You will note that our English word fear and the Greek ending *-phobia*, apply to two quite different states of mind, one a logical apprehension of a danger, equally logical whether the danger actually exists or is founded on false information, including that due to a hallucination, the other a morbid aversion and dread, independently of any danger. For example, the word ophiophobia implies, not so much that the individual is apprehensive that a snake may poison or constrict him as the peculiar horror which this animal engenders in many minds. Both of these kinds of fear vary greatly in degree. Actual danger may inspire little or no fear in one person, while an imaginary danger may make a coward of another. An army officer, asked as to the greatest instance of heroism he had witnessed, declared in favor of a brother officer who had died of fear, in battle, while striking to his post. Morbid, irrational aver-

sion is also of many grades. For instance, I dislike to see, and much more, to touch a corpse, or a toad, yet this aversion can be overcome when necessary, and produces no after-effects further than a feeling of uncleanness, quite in keeping with the ancient Jewish ritualistic conception. Similarly, the sight of a snake is decidedly unpleasant, but not so much so as to interfere with a scientific pleasure in viewing them in zoos, but I would not touch a snake, even a fossil one, nor even willingly put my hand on a picture of a snake or a life-like model. This aversion is entirely irrational and is even more marked toward the small, harmless indigenous snakes than toward a large and really dangerous snake. It is quite widely diffused among most races and is susceptible of an interesting evolutionary explanation.

If fear is an essential part of the symptomatology of delirium tremens, it ought to be limited to this latter kind, of morbid aversion. We might even say that it should occur independently of previous idiosyncratic tendencies or, at least, that the hallucinations of any given patient should be limited to some object of which he has a morbid fear. It is obvious that the hallucination should inspire rational fear or not, according to the object seen or the circumstances. For instance, a patient would naturally be afraid if he had hallucinations of tigers, lions, savage dogs, run-away horses, etc., not if he saw tame cats or dogs or even dangerous animals at a distance or be-

hind bars. Sometimes the patient sees dangerous animals but without clearly stating any such qualifications which would remove their danger, he is not afraid, perhaps because their is a subconscious realization that they are chimeric.

Rats, mice, cats, bugs, etc., are more or less abhorrent to many persons, aside from any possible danger. I recall one or two instances, however, in which patients had hallucinations of rats, without experiencing either physical fear or horror. Moreover, I am quite sure that patients who have had hallucinations without either kind of fear were idiosyncratically morbid with regard to snakes, etc., and if fear were an essential part of delirium tremens, they should have had hallucinations of that kind. My impression, not from personal experience, is that a patient may even have ophioscopia without ophophobia, if he is naturally not prevented from handling snakes by an aversion. There is a story of a bibulous scientist who took great pleasure and interest in seeing and handling the snakes of his hallucinations, among which he found various rare specimens, but I cannot vouch for the truth of this story.

Excepting with regard to ophioscopia, the following classification of cases of delirium tremens with regard to fear, may be established from actual experience, though it is abundantly confirmed by general medical experience, unless an exclusive symptomatic definition is adopted.

1. The hallucinations are of snakes, reptiles, insects, etc., causing loathing and aversion, of various degrees from acute mental agony, sufficient to drive the patient to suicide or possibly death from terror, down to a mild dislike.

2. The hallucinations are of lions, tigers, savage dogs, runaway horses, etc., with more or less logical fear of physical danger.

3. The patient has hallucinations but is not particularly affected by them. In other words, he sees things that have no present existence but pays no special attention to them. I have noted this with regard to rats, dogs and human beings of no definite personality.

4. The patient is more or less diverted, interested or distinctly pleased by his hallucinations, as in a case in which the patient thought that his pet dog had tracked him to the hospital and was beside the bed.

5. A somewhat similar classification might be made for hallucinations of hearing, touch, smell, etc. In typical ophophobia, the patient often imagines that the snakes are crawling upon him.

6. In cases conforming to the general conception of delirium tremens, there may be no hallucinations at all, so far as can be judged by the attendants or recollected by the patient.

Thus, the proper definition of delirium tremens would be a condition of auto-intoxication, brought on by the prolonged use of alcohol, precipitated by some physical or psychic shock or strain, including the nega-

tive one of the withdrawal of alcohol itself, marked by general weakness, especially of the heart, and by a disturbance of mentality, tending toward delirium with hallucinations, usually of animals.

It is plausible that there is not merely a chronic disturbance of the cerebrum, but an actual lesion, at least to the extent of a hyperemia or ischaemia. In cases of long standing alcoholism, pачечymeningitis, or some other definite lesions of the meninges or encephalon may be found, but delirium tremens may occur without these lesions, or vice versa.

In the viscera generally, we may draw a rather sharp line between pneumonic foci, the lesions of typhoid or other infection and similar lesions of more or less independent origin and marking cause rather than effect of delirium tremens; and secondly, cardiac and vascular lesions, including valvular defects and larger or smaller aneurysms, which are equally, though not synchronously with delirium tremens, results of alcoholism, or which may be of independent origin; and thirdly, hepatic sclerosis, chronic renal congestion or actual nephritis, etc., which may with some reason be regarded as causes of the general metabolic condition which produces delirium tremens. It is unnecessary to remind this scientific body that the cause of temperance has been injured in the past by a pseudo-scholasticism that has tediously recorded the findings at necropsy in alcoholics and has endeavored to

find in alcohol the cause for all the ills that human flesh is heir to. In many instances we should expect to find coincidental lesions of syphilis, which, indeed, in a sociologic sense, is largely due to alcoholism.

In many instances, it is difficult to differentiate between delirium tremens and the nervous symptoms due to hepatic, renal and other glandular failure. In two of my cases, considered by the attending physicians delirium tremens, it seemed to me that, in spite of the alcoholic history, the cases were rather to be considered as uraemic. Both had contracted fevers and there were albumin and casts in the urine. One was immediately fatal, the other has recovered, at least in general health, and is alive after three years. This latter case I saw in the beginning of the acute attack, and at first considered it a perfectly typical case of epilepsy. Certainly, there was an epileptiform convulsion, which a nervous specialist might have been able to distinguish from that of grand mal, but which presented no differences that I could detect.

Another patient, the one whose hallucination was of playing cards on the ceiling, had had at least one previous attack of delirium tremens and had had for several years, well-marked hepatic sclerosis. His father, a confirmed beer drinker, had never had delirium tremens, but had died from the effects of hepatic sclerosis. The son had no urinary evidence of renal disturbance, but the urine at death contained 7 per

cent of sugar. Necropsy could not be obtained.

Female alcoholics are rather apt to have thyroid disturbance, especially in the direction of excessive function. Hence, there may be a confusion or association of delirium tremens with such disease, the confusion obviously being rather with hyperthyroidism. Similarly, there may be, perhaps, a confusion with Addison's disease.

In such cases, there may be a difference of opinion in diagnosis, or rather in the conception of the process. It is questionable how far delirium tremens is a clinical entity in the sense of having a definite perversion of physiologic function, and it certainly is not an entity in the morbid anatomic sense. It is perfectly possible that cases of delirium tremens in which there are no gross lesions of the liver, kidneys and other glands, are characterized by precisely analogous functional failures. In passing, it may not be out of place to call attention to the fact that a functional disturbance is, for the time being, just as serious as an organic lesion, and that the latter is serious, not because of the change in structure that we can see with the naked eye or under the microscope, but because it tends permanently to disturb function. The normal heart that stops under a nervous influence, positive or negative, is worse than the degenerated, dilated, organ with leaky valves that keeps on beating.

We now know that anaemia consists in the accumulation of toxins,

largely of hepatic origin, or at least which would take on less toxic forms if the liver were competent, and that the kidneys are mainly or entirely concerned in their failure to eliminate these toxins. Diabetic coma and convulsions are closely related to, perhaps essentially identified with, uraemia. There are similar analogies or possibly identities in the case of disease of the thyroid, suprarenals and other ductless glands. It may very well be that delirium tremens is merely a phase of the effect of alcohol upon function and ultimately, tissues, sometimes of one, sometimes of another, sometimes of several glands. So, too, it is not infrequently associated with—or shall we say, distinguished by—intestinal putrefaction and indigestion including the elimination of its congeners, and plainly pointing to the excessive accumulation of these substances or their precursors, in the blood.

I do not deny that delirium tremens may be an entity, as it has commonly been considered, and, on the other hand, it is worth while to consider carefully and by systematic investigation by those favorably placed, whether one particular drug, aside from its direct physiologic action, produces in certain cases, a peculiar form of auto-intoxication, distinct from those otherwise produced in the system. In other words, is delirium tremens always due to the same poisons and, whether it is or is not, are these poisons essentially different from those produced by other disturbances of function, in-

cluding organic disease, of the various glands, ductless and duct-provided, concerned in metabolism.

However, these questions may be decided, I wish to urge as a practical matter that the expectation of delirium tremens and the case with which this satisfying but not satisfactory clinical diagnosis can be made, should not prevent a careful examination of the urine for indicating intestinal toxemia, for albumin and casts, indicating renal disturbance; for its adequacy in regard to total elimination of waste; for possible indications of diabetes and hepatic disturbance; and the general physical examination, blood examination and various other diagnostic methods, to determine the presence

or absence of other glandular defects, so far as the condition of the patient warrants.

Granted that we find evidence of organic or functional disease of the general nature mentioned, it makes very little practical difference whether we adhere to the time-honored conception of delirium tremens, or not, or whether or not we call the case delirium tremens on the one hand or uraemia, intestinal intoxication, diabetes, hepatic sclerosis, renal functional failure, etc., on the other hand. But it is of the utmost importance that our therapeutics should be directed as accurately and as efficiently as may be, toward the underlying condition.

## MALT LIQUORS IN INFLAMMATORY DISEASES OF THE SKIN

By Charles A. Kinch, M.D.

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New York.*

The skin covers the entire body, but covering and protection is not its sole function. Its total superficies is about a meter and a half. It exudes peccant material derived from the blood in an amount of liquid equal to about two-thirds that from the kidneys. Total interferences with this excretion invariably cause death. The number of coiled or sudoriferous glands is estimated by Krause at 2,380,000. There must be an equal number of sebaceous glands. The corium is highly vascular. According to Sappey, the papillae number about 150,000,000, and every one has a capillary loop or two. It is impossible to wound the corium with the finest needle without drawing blood. The amount of blood necessary to fill this great capillary system, as in blushing, must make a great draft upon the blood content of the internal organs,

blushing is not the flush of the face alone, but of all the cutaneous surface. If it were not accompanied by increased blood pressure and acceleration of the heart the results would be disastrous.

The more common inflammatory affections of the skin are eczema, acne, psoriasis and rosacea. Eczema is a catarrhal inflammation involving both derma and epidermis. Acne is a sluggish condition of the sebaceous glands, psoriasis a hyperplasia of the epidermal cells, and rosacea a dilatation of the dermal capillaries of the face.

Eczema is a catarrhal inflammation similar to that of mucous membranes. There is congestion of the corium with exudation and diapedesis. In the horny layer, cornification is interfered with, and there is scaling. The prickle cells of the rete are swollen and the cement between them loses its coherence. The exudation may loosen portions of the epidermis and form vesicles beneath them. The epidermis is soon cast off, and there remains a moist raw surface. Its exudate is mucilaginous in character and dries in friable yellowish crusts. The raw surface soon becomes infected with the bacteria ever present on the skin, and pustules may form. The skin becomes thickened, passing into the chronic stage. Eczema does not tend to recovery by itself, and this because it is usually a symptom, an epiphenomenon, a "danger-signal" of some grave disturbance within. We recognize a neurotic, a gouty and a dia-

betic eczema. Nervous prostration is often preceded or accompanied by an attack of eczema. Bronchitis in children and rheumatoid and gouty pains in adults not infrequently are associated with this complaint. Dry erythematous eczema and severe dermatitis of the genitals will drive a patient to the physician, who, if he is wise, will look for sugar in the urine. In other words, we have to treat the patient and not confine our attentions to the outward manifestations alone. Bulkeley in the Archives of Pediatrics, has summarized the whole matter in one sentence: "While eczema in children, as well as adults, is often directly dependent upon faulty action of some of the eliminatory organs, it must ever be remembered that it is a disease of lowered vitality, and that while remedies and measures are taken to promote excretion and assist assimilation the tonic idea should pervade all treatment." But woe to the man who takes or prescribes malt liquors for either tonic or stimulant effects! It is the practice of dermatologists to forbid the use of malt or spirituous liquors. Indeed, we are more strenuous on the beers and ales than on the whiskey. I well recall the case of a hotel waiter whom I relieved of an acute eczema and spent the whole summer in clearing up the last chronic patches. He celebrated his release from medical espionage and regimen by a mixed-ale party with his friends and returned to me in a day or two with an acute outbreak on hands and face looking like the measles in full bloom.

### Acne

Acne is probably the most frequent of all diseases of the skin. It certainly disputes the honor with eczema. Patients of the latter class more often consult the physician, but one cannot help remarking the large number of young people he meets in the streets and trolley cars, whose faces are disfigured with this disease.

Acne is primarily a disorder of the sebaceous glands. The ducts are clogged with inspissated sebum mingled with epithelial scales. This condition has been aptly called "conspiration of the oil-glands."

Irritation is set up in the surrounding tissues with congestion and blood stasis. Pus infection easily finds these areas, and induration occurs, often with softening and breaking down. They fester, and the plug and gland are thrown out like a splinter. Local treatment is of little avail until we have found and corrected some internal disorder. It may be indigestion, or constipation of the bowels, some irritation or perverted function of the genital apparatus, or impoverishment of the blood. For functional disorders of the digestive and reproductive systems alcoholic preparations are obviously of no avail, and in most cases positively harmful. Only in anemia we may sometimes prescribe a wine of iron.

### Psoriasis

Psoriasis shows its principal activity in the malpighian rete. The cells are enlarged and increased in number. Scaly patches result, often

of curious forms and capricious distribution, since their sites are determined by points of pressure or injury to the skin. A thin pellicle is to be found beneath the scales, which if wounded, bleeds. Some congestion of the corium always exists. But after death, and in a state of pallor, the redness disappears. Psoriasis never leaves a scar. It occurs on people who appear in perfect health. Arsenic will cure many cases of the declining and non-congestive forms. The addition of mercury will hasten the arsenical treatment sometimes. But arsenic and mercury are by no means specific. Those who have heard Bulkeley's paper in the Section of Cutaneous Medicine, A. M. A., last year, will remember his success in selected cases, with acetate of potash, dilute nitric acid, and tartarate of antimony. He quite rightly insists that psoriasis is due to faulty metabolism of some sort, and that the general condition of the patient should always be considered in treatment. The urine should be frequently examined, not only for pathological ingredients, such as albumin and sugar, but with reference to the daily quantity and density, and a quantitative determination of the amounts of urea, uric acid, phosphates, and indican. He places his patients on a strictly vegetarian diet, avoiding meat, eggs, fish and milk, and interdicts alcohol, even the lightest wine or beer, absolutely. Its effects are, as in eczema, to increase the trouble in the congestive and advancing stages, and to cause active

symptoms to return in the period of decline.

#### Rosacea

A full meal or a glass of wine flushes the face. Dyspepsia, especially of the acid type, is very often accompanied by a heated feeling and redness of the face. These active hyperemias, too many times repeated, give way to a passive congestion with permanent dilatation of the capillaries. The nose is first affected, and then the cheeks and the chin in a broad ring. Oily seborrhea is superadded and some of the sebaceous glands break down into pustules. Sufferers from this complaint are very apt to be accused of tipping. The affection has the name of "gin-blossom." Some have assumed to tell the variety of liquor consumed from the character of the disease. Thus the vinous nose, they say, is bright red and shiny, the beer nose is dark red and swollen, and the whiskey nose is slightly red or speckled with large veins, and very oily. Not altogether true. For we must remember, as George Henry Fox succinctly puts it, that "one can get a red nose as easily from excess in drinking tea as from indulging in the cup that inebriates." The dietary treatment of rosacea involves the curtailment of starches and sweets and measures to promote the intake of oxygen, such as deep breathing, walking in the open air, equitation and automobiling. Malt liquors are injurious both on account of the alcohol and the malt extrac-

#### Syphilis

The cutaneous lesions of syphilis are all of the inflammatory or congestive order. Local hyperemias, due to disturbance of the vasomotor system characterize the roseola, urticaria and drug erythemas. Local inflammations with congestions and crowded wandering leucocytes are present in the initial lesion, the papule, the tubercle and the gumma. These wandering cells are so crowded as to produce "coagulation necrosis," and then result the open chancre, rupia, and the ulcerating gumma. These exposed surfaces are open, of course, to infection by pus, cocci, and other saprophytes that are always present on the skin. They terminate in the destruction of a limited area and the cure of the disease at that point, but by an extravagance parallel to that of Charles Lamb's Chinaman, who burnt his straw dwelling whenever he wished to roast a sucking pig.

We see fewer cases of malignant syphilis now than twenty-five years ago. But not because the luetic infection has lost any of its virulence. It is because patients seek medical advice earlier and because physicians urge on them the necessity of persistence in treatment for two or three years, or until all syphilitic manifestations have disappeared.

It is the common experience of syphilographers that alcoholics do not do well unless they reform their habits. And it is their universal practice to forbid their patients even the milder beverages of wine and

beer during the course of treatment. Lydston says: "The question of alcoholics is the most important of all. There should be no compromise in this matter. Liquors, both vinous and malt, should be absolutely forbidden, excepting when ordered by the physician to combat some emergency, or to counteract some extreme debility."

Willard Parker used to say: "Liquor is one of the devils of which the syphilitic patient must rid himself, if he desires to give his physician a fair chance to cure him."

#### The Harm of Beer

Experience and practice thus combining to place the ban upon all sorts of malt liquors in inflammatory affections of the skin, we do well to inquire, and ascertain possibly, if there is a reason.

Alcohol in the form of vapor is readily absorbed by the mucous membranes of the respiratory tract. It is absorbed by the raw surface of wounds. Some sixty or seventy years ago, when it was the custom to dress stumps after amputation with spirits of wine or spirits of

camphor, the physiological effects of alcohol on the sensorium were often observed. When swallowed in weak dilutions it passes directly into the gastric and intestinal veins, and circulates in the blood unchanged. It can be recovered from the exhalations of the lungs, the urine and the secretions of the skin. So that this irritating substance is applied directly to the seat of disease. Its effects upon the glands of the skin are similar to those in the kidneys and the liver. Add to this its paralyzing effect upon the vasomotor system and its local harmfulness is explained. Besides this it inhibits metabolism, both constructive and destructive. It hinders elimination and delays assimilation. As N. S. Davis said before this: "The association seven years ago: 'The presence of alcohol in the blood and tissues of the living body repairs no tissue and liberates no natural force or vital energy, but by its narcotic or anesthetic properties it diminishes both metabolism and the evolution of all varieties of organic or vital force in direct proportion to the quantity present.'"

### THE NUTRITIVE VALUE OF ALCOHOL \*

#### A Critical Review

By Prof. Dr. Max Kassowitz

Since the appearance of my first article, two new productions, to my knowledge, have appeared on this

\* Translated by Kent Oakley Brown.

theme; an essay by Roseman and a larger work by Atwater and Benedict. Both merit consideration. Roseman sought to maintain that

alcohol acts in a way to spare the proteids of the body; against my argument to the contrary. He first attacked the evidence of the researches of Chauveau, then tried to discredit the importance of my theoretical objection to the nutritive value of poisonous substance. Finally turned to later researches, especially those carried on by Atwater and Benedict, and maintained that they furnish undoubted evidence that alcohol has a nutritive value. Chauveau maintains that alcohol in great part, is excreted, unoxidized. He arrived at his conclusion, as Roseman says, only through an erroneous calculation; and equally erroneous was his assumption that its rejection unoxidized was the only reason for the action of alcohol being unfavorable to muscular activity. Atwater and Benedict have just recently shown, that only a very small amount of ingested alcohol is again rejected as alcohol; at the highest, two per cent. From this Roseman concludes, that even the figures of Chauveau lead to a like result, if one employs them in a correct manner. I assert that he is entirely mistaken.

Now Roseman does not wish to call in question the objective results of these experiments. In brief, these results are as follows: A dog accomplished a certain amount of muscular work day after day, on a definite ration of meat and sugar, and yet gained in weight. By replacing a third of the sugar ration by an isodynamic amount of alcohol, he was unable to accomplish as much

work, and in addition, lost in weight. This proves that alcohol cannot take the place of sugar as a food. Roseman, however, maintains, that the narcotic action of the alcohol necessitated the expenditure of "just as much, if not more," energy to perform the less amount of work. The relation with alcohol, therefore, he asserts, was just sufficient to maintain the equilibrium and, "eventually" became insufficient and resulted in a loss of weight. Roseman's view does not accord with the facts. In the experiments of Boeck and Dauer, a dose of morphine that did not stupify the dog experimented upon, reduced the elimination of carbon dioxide about one third. Rumpf by the injection of chloral hydrate produced a reduction of 40 per cent and by the injection of cognac similar results were reached. We also know that while taking alcohol about one-fifth less carbon dioxide is produced. The expired carbon dioxide indicates the amount of oxidation and is a measure of energy expended. The diminished elimination of carbon dioxide during narcosis therefore makes it clear that less energy is expended at such a time. If in spite of the accomplishment of less work and the consumption of less energy, a distinct loss in weight is suffered, daily, on an isodynamic ration, it is clearly proven that alcohol is not only of no value to the animal organism, but being poisonous and harmful to protoplasm, its oxidation has a direct harmful influence upon the animal ingesting it. I cannot con-

ceive how two such skilled experimenters on metabolism as Caspary and Roseman can overlook the fact that their assumption is utterly incompatible with the observed facts. Neither can I understand how Roseman, in the same work, can maintain that alcohol has a nutritive value and then declare that its action is extraordinarily unfavorable to muscular work. This would be a sufficient reason for classifying it as a poison; for a very small quantity of a real food acts very favorably to muscular activity.

Roseman maintains that the matter can only be settled experimentally and that where experiment and theory differ one must conclude that the theory is incorrect. All of his theoretical assumptions, however, (such as an increased demand for energy because of the narcosis, the albumin-sparing and the life-supporting action of alcohol, and the early toleration of the protoplasm to alcohol) have been proven untenable by the results of the researches of Chauveau, which Roseman himself has shown to be incontestible. On the other hand, perfect agreement of theory with experiment and observation confirms a theoretical assumption. Now experience has shown us, that the best physical results are possible, only when one totally abstains from alcohol (Hueppe); Roseman's statement that a supply of alcohol acts extraordinarily unfavorably to muscular work, accords with experience; the figures of Chauveau, obtained from observa-

tions extending over several weeks, also agree; all data confirm the theoretical assumption that only such substances are nourishing as can serve in the building up of the protoplasm, but never such as are directly oxidized in the organism, and least of all, poisonous substances that are not only oxidized, but have a harmful action upon the tissue with which they come into contact.

The statements of Atwater and Benedict concerning the results of their own experiment are by no means so confident as those of Roseman. They represent as certain only what was already established, previous to their investigation, in the law of the conversation of energy—that with or without alcohol, as much heat is thrown off, as corresponds to the units of combustion of the substances broken up in the body. They appear to be acquainted with only two possible theories for the transformation of the potential energy of food into the kinetic energy of muscular work. They believe that the energy from the oxidation of the food and of the reserve laid up in the body, is either converted directly into the kinetic energy of muscular work or it is transformed first into heat and then, perhaps in some unknown way, into muscular work. Although it is considered seriously by many physiologists of today they do not appear to know of a third possibility; viz., that the food is appropriated, first, in the structure of the living and working parts and then, by the oxidation of the decomposi-



tion products of these complexly-built parts, heat is developed. The third view is the only one of the three that harmonizes perfectly with the most important facts of the physiology of nutrition. Therefore we have good reasons for believing that only such substances can be depended upon for the accomplishment of muscular work, as can take a part in the reconstruction of the muscular protoplasm. Alcohol, whose poisonous action is harmful to living protoplasm, unquestionably cannot help in its reconstruction. The investigators think it plausible that an isodynamic quantity of alcohol can replace fats and carbohydrates as a source of muscular activity, but they declare that it is only a theory for which they have no proof. They are candid enough to admit that their experiments furnish no information on this point.

The two investigators are also obliged to admit that they cannot tell how much of the kinetic energy is furnished by the alcohol and how much is supplied by other substances that we know are nutritious. If one could be nourished upon albumen and alcohol alone, we could be more certain of this point. Such an experiment is wholly impossible of execution, as they must admit, so we make use of an indirect method. The subject of the experiment is permitted to work and the diet is so regulated that the body weight remains constant or varies but little. Then a portion of the non-nitrogenous food is replaced by an isodynamic amount

of alcohol. In this method, we presume that all factors in the process of oxidation, except that of the measurable muscular work, are constant during the period of observation. But the measurable muscular activity and the unmeasured factors are more or less lowered for many hours, beyond the period of work, by the alcoholic narcosis and the basis for a comparison is lost, and with it our indirect method of proof.

Atwater and Benedict themselves say that differences in the activity of the subjects of experiment in these investigations are not easy to avoid. The subject may accomplish more work when he gets his sleep regularly and is careful about his diet and excretions. Differences in the amount of muscular energy expended, then, naturally cause a variation in assimilation and in strength. How these so-called rest periods, which are filled up with muscular action and involuntary muscular movements, and the work periods compare can be seen from the following example: A man performed a measurable amount of work on a stationary bicycle, and the amount of heat corresponding to this work appears wholly insignificant in contrast to the whole amount generated in 24 hours; namely, 186 calories for the work on the wheel against 3,746 calories for the 24 hours. During the rest period the subject of the experiment may either stand, sit or recline, and in each position will exhibit a different series of voluntary and involuntary muscular contrac-

tions and in consequence a different series of decomposition products. In the recumbent position the contractions are least and if in consequence of the effect of alcohol, he has a greater need of rest or sleep, the difference in regard to muscular contraction and corresponding to the difference in the decomposition products will be a very important one. The reduction perhaps will approach the result of 40 per cent, which Rumpf has observed with moderate doses of chloral hydrate or cognac. It would be certain to approach that smaller result of 22 per cent, which Pettenkofer and Voit pointed out as taking place during natural sleep. Atwater and Benedict consider it improbable, however, that the effect of this variable error should concentrate at any one time. I have just the opposite opinion. I maintain with all positiveness that the effect of the error must culminate during the taking of the alcohol.

If the subject of experiment is under observation two or three days and takes each day 2-1-2 ounces of absolute alcohol, narcosis results, muscular activity is lessened, the products of decomposition diminished and he demands about one-half as much sugar or fat. The useless oxidation of the alcohol would increase the elimination of carbon dioxide, but the diminished activity lessens it, so the amount probably differs little from that of the period while free from alcohol. From such results one cannot judge of the transformation of heat, for the de-

crease in the elimination of carbon dioxide through narcosis is well concealed by the decrease in the amount of real food taken. In the experiment where the work was performed on the bicycle, the diminution in the amount of food almost accounted for the reduction in the amount of work, but little more food than was given, and the deficiency was compensated for by the lessened activity during the period of rest. There is no necessity, therefore, to consider alcohol as a source of energy in these experiments, especially since its action is notoriously unfavorable to muscular activity.

The alleged fat-sparing action of alcohol, too, is inferred by the American investigators, from the fact that on the day of taking alcohol, the carbon dioxide is not increased by that amount to which the oxidation of alcohol would correspond. Instead only a small difference results, sometimes in favor of, sometimes against, the day of taking alcohol. The reduction in the processes of oxidation during sleep and narcosis is neglected here also. Through this artificial reduction, fat and other substances of the body are spared, of course, but this economy has a significance wholly different from that entertained by the authors. A comparison will make the distinction clear. Suppose a thoughtless youth squanders each night at card playing and other costly amusements an average of \$200. The parents administer to their son, during the evening, a

dose of chloral hydrate, and he falls asleep and stays at home. Each time the trick succeeds \$200 is saved, but is it on this account isodynamic with 20 grains of chloral? The money is saved because the spending is made impossible and the condition is analogous when fat is spared by alcohol. The same result can be accomplished by a dose of morphine or chloral and in that case no one would think that morphine or chloral has accomplished vital work in the place of albumen or fat. The irregular results favor this understanding of the case. Atwater and Benedict say that in some cases while taking alcohol reserved fat increases faster than while abstaining, while in other cases just the opposite is true. These differences would be entirely unintelligible if they are to be understood as due to a nutritive action of alcohol. Sugar and, even in the smallest amounts, fat also "spares," and one would be much surprised, if at one time the saving would be larger and at another time smaller or altogether absent. Here the sugar has the same function that in its absence is assumed by the reserve fat. It is altogether different with alcohol. The saving here depends on the narcotic action of the poison and the resulting depression of muscular activity. This depends on the individual susceptibility, and variations can be understood if referred to the changeable and inaccountable narcotic action.

There now remains for discussion the supposed albumen sparing action

of alcohol alleged to be undoubtedly proven by the experiments of Atwater and Benedict. Concerning the reliability of conclusions drawn from the nitrogenous balance, the investigators themselves say that it is extremely difficult to obtain a uniform elimination of nitrogen even under wholly similar conditions; that the inexplicable variations are larger than can be brought about by alcohol as a food; that we cannot impute to alcohol a definite uniform action in metabolism; that the daily elimination of nitrogen is a much less reliable standard for the action of diet, muscular work, medicine or poison, than is commonly supposed; that we cannot sharply enough emphasize how dangerous it is to draw conclusions from the figures of the nitrogenous balance, concerning the albumen-sparing action of alcohol, starch, sugar or fat. (Others agree with Atwater and Benedict; and yet the latter assert, on the ground of the nitrogenous balance, that the albumen-sparing action of alcohol is clearly proven. We must allow them to explain their own contradictions.

Turning to the data themselves, we find that the fat sparing depends largely on the individual of alcohol. The taking, however, is not so favorable to the nitrogenous balance as abstaining; one loses more or gains less while drinking. Atwater and Benedict with Roseman and others explain the fact, that the subject gains at one time and at another loses, by saying that alcohol both harms and spares albumen; and they

go on to say that at first the harmful influence predominates, but as the period of alcohol taking is lengthened, little by little the sparing action gains the ascendancy. This understanding is untenable. The experiments of Chauveau extended through a number of weeks and are inconclusive. The replacing of a part of the sugar ration by alcohol brought about an important loss in weight instead of a previous distinct gain, in spite of a lessened accomplishment of work. The experiments of Atwater and Benedict, on the other hand, extended over only a few days and are of little importance. They admit that the experiments should be extended through 20 or 30 consecutive days to give satisfactory results. The view of Atwater and Benedict that after a few days the organism tolerates alcohol and its albumen is not harmed by it, is inadmissible, for neither clinical observation nor pathology has revealed any such toleration of the tissues. Even the recent experiments concerning the harmful and retarding action of weak solutions of alcohol on the development of the internal organs, furnishes no ground for a belief that the tissues ever become accustomed to alcohol. Their declaration that the albumen-sparing action of alcohol has been confirmed in the beginning of many experiments, is not compatible with their own assumption that a toleration is set up after five days. Such contradictory statements and their denial of a disintegrating action of alcohol do not settle the difficulty.

It is not necessary for us to comprehend explanations so impossible, or those that demand explanation themselves; according to our understanding of it, the facts of metabolism fit in just as naturally as those of the production of carbon dioxide. When the diet is insufficient the sugar in the blood and the reserve glycogen is drawn upon. The restoration of the later is always followed by an increased elimination of nitrogen. The narcotic action of alcohol lessens muscular activity, decreases the demand for carbohydrates and hence for the sugar of the blood and the reserve glycogen and is therefore followed by a decreased elimination of nitrogen. When, however, a portion of carbohydrates is replaced by alcohol we find the usual increase in the elimination of nitrogen that goes with each reduction of a diet that is just sufficient to maintain the nitrogenous balance. When the period of alcohol taking is protracted the gradual improvement of the nitrogenous balance depends, at least in part, on the increase in the reserve fat which takes place because of the diminished muscular activity. Should the alcohol be again omitted without the addition of a corresponding amount of sugar the increased activity, due to the disappearance of the narcotic, makes the diet insufficient and nitrogen is again eliminated in increased amount. This, as we see, does not indicate a nutritive value of alcohol. Thus, all facts at present known, including the results

of the American investigators, favor the theoretical supposition that a substance that is poisonous and inimical to the protoplasm, can under- take, under no circumstances, the role of a food.

## NEURITIS AND ITS TREATMENT BY ELECTRICITY

By F. D. Granger, M.D., Boston, Mass.

*This very suggestive paper read at the March meeting of the New England Electro-Therapeutic Association and brings neurotics here some forms gives a very clear outline of the most effective modern measures of treatment. Our readers will readily in-*

terpret it. Ordinarily there are only certain points painful on pressure, though Starr says there may be a tender sensitiveness over the entire course of nerve accompanied by numbness, tingling, and burning. In neuritis the pain is constant Over the course of the nerve and its branches, pressure always causes pain. Motion is painful. Various parasthesias, such as numbness, tingling, etc., are present. There is atrophy of the musculature. The response to faradism is lost, and the reaction of degeneration is present. The reflexes along that side are diminished or absent.

Between these extremes there is a marked difference, but in the milder cases they blend so that the therapeutic results are the only guides as to the pathological condition.

In some severe cases of neuritis there may be no pain whatever. In such cases the attack has been sudden and sharp enough to destroy the

sensory fibers of the nerve, and hence cut off all chance of pain sensations being carried to the cord.

I have repeatedly seen cases of undoubted neuritis, where the atrophy of the muscles, the utter sense of weakness and weight of the part, the limitation of motion, and the reaction of degeneration proclaimed the true condition which yet had been treated, in one case for three years, on a vastly different basis, because the physician thought, as there had been no pain there could not have been a neuritis.

The cause for neuritis are many and varied, and upon the exactness with which we hit upon the etiology will depend, to a great extent, our uniform success.

Exposure to cold is one of the most common exciting agents, and a rheumatic diathesis another, hence in a fair per cent of the cases a routine treatment will achieve results.

Next in frequency are occupation habits, such as the neuritis seen in typewriters and piano players, or such as the sciatica induced by undue pressure due to sitting on the hard edge of a chair or stool. Traumatic and mechanical causes are also common, whether due to direct violence, or to the pressure of a foreign body, or of scar tissues, disease of the bone, tumors, aneurisms, displaced uterus, hernia, hemorrhoids, improperly fitting shoes, etc.

In general, the treatment is to secure absolute rest of the part in the acute stage, and guarded movements during convalescence. While medi-

ally, in simple acute process, strychnia in at least one-thirtieth grain doses three times a day should be given. If there is a rheumatic basis, administer anti-rheumatics; if malaria, quinine or Fowler's solution; if syphilis, potassium iodide and mercury; if a mechanical cause exists, remove that cause; and if a toxemia, procure free elimination and prevent, if possible, further exposure to the toxic substance. And lastly, but by no means of small importance, the proper electrical treatment. I should consider as the basis of all treatment this rule: Avoid all treatments that cause increased pain.

If vibration gives relief use it. The same applies to the high frequency current, static electricity, phototherapy, thermotherapy, galvanism, faradism, and the X-ray.

*Supra-orbital neuritis.* Here the direct current (galvanic) is best employed. The positive pole being placed over the painful nerve and the negative pad, of generous dimensions, being fixed over the upper cervical region, a current of from 2 to 8 milliamperes is used for at least ten minutes. Tablets of quinine sulphate two grains, and aconita one two-hundredths of a grain are given, to be used alternately every hour until numbness or tingling of the lips ensues or tinnitus causes discomfort. Rarely more than two treatments are needed.

*Tic Douloureux.* This is one of the most obstinate and painful conditions in the entire category. Repeatedly cases have defied all kinds of

treatments, including resection of the nerve by the surgeon. That in electricity we have means of combating even the most obstinate processes, the following case will show.

Mr. B, age forty; single. For the last fifteen years has suffered with the *douloureux*. Has been under the care of the best physicians in Boston. Everything medicinal has been tried, internally, externally, and subcutaneously. Was sent South without benefit. Was operated upon three times, and sections of nerve removed. Still not more than two months' relief ensued. A fourth operation was attempted for the removal of the Gasserian ganglion, but the patient's condition became so critical that the operation had to be stopped. When I saw him in July, 1903, he was having two pains every five minutes. Had not washed that side of his face for three years, except as the tears had done it. He ate, or rather gulped down all the liquids he could, between pains, and for five years had existed on a liquid diet. Often he would take half an hour to put on his hat. I began treatments in July, giving them every day during that month, twice a week in August, and once a week during September.

After the sixth treatment he was very comfortable, and during September he could chew solid food, blow his nose, and smoke a cigar without causing pain. The treatment consisted of a large pad covering nearly all that side of the face. This pad was connected to the positive pole. The negative pad was placed over the

upper cervical regions, and a current of 20 milliamperes was allowed to flow for 12 minutes. This was followed by an exposure to the X-ray for 10 minutes, using a medium tube, a tube in which the bones in the hand had just lost their black color at a distance of eight inches. This was followed by a treatment with the vacuum tube connected with a high frequency of 15 minutes more, treatment being applied over the face, lower cervical and entire thoracic vertebrae. I feel certain that by using the high frequency current after an X-ray treatment, I decrease the likelihood of burning. There was complete freedom from pain for eleven months followed by a return of much less intensity, which completely cleared up in seven weeks.

Then there was another remission for over a year and again a slight return, which yielded in less than a month's time, and up to date complete relief.

In case of long standing pain, whether it be due to sciatica or tic, I have found the X-ray, in order to produce absorption of any old exudate or scar tissue pressing on the nerve, of extreme efficacy.

Another treatment, one highly recommended by Snow, is to apply a piece of block metal over the affected side; the metal is connected to the positive side of the static machine, the negative being grounded, the patient on the insulated platform, the poles of the machine together. Gradually draw the poles apart until the pain is all that the patient can stand,

and treat thus for twenty minutes. The static brush discharge has also given good results.

*Sciatica.* This is another very common disease which is of long duration under ordinary forms of treatment, but which if it is a simple sciatica yields quickly and surely to combined treatments. First, be sure that it is a simple sciatica, and that it is not caused by such conditions as malaria, alcoholism, gout, syphilis, rheumatism, flat-foot, undue pressure due to badly fitting shoes, pressure on the nerve due to sitting on the edge of a stool or chair, osteoarthritis of the spine, diabetes mellitus, organic disease of the spinal cord, hip-joint disease, loaded rectum, hemorrhoids, malposition of the uterus, malignant disease, or uterine or ovarian tumor. Having decided the etiology and the proper medical treatment, we have a variety of electrical methods to choose from.

For a routine treatment I prefer to use the galvanism and vibration, and at times sparks from the static machine. The patient should remove or loosen all tight fitting clothing, so that the back and buttocks can be exposed; then recumbent on the table, back up, arms hanging down the side, head turned to one side, over the bare skin we apply vibration, first using the ball attachment with a heavy stroke and deep pressure between the transverse processes of the lumbar vertebra, and over the exits of the sacral nerves, in order to inhibit the various nerve fibers making up the sciatic nerve. This generally requires one

to two minutes at each point. Next we locate the sciatic notch, which is ordinarily situated in the crease of the buttocks a little to the inside of the median line of the gluteal muscles, and apply as great a stroke and as heavy a pressure as the patient can stand, for three to five minutes to complete the inhibition of the nerve. About five minutes more with the brush over the lumbar region, and the gluei completes the vibratory part of the treatment.

Galvanism is then used by placing a large sponge electrode, connected with the positive pole, over the lumbo-sacral region, while another large sponge electrode negatively connected is bound either over the popliteal space or over the foot and ankle, and a current of from 10 to 40 milliamperes is allowed to flow for fifteen minutes.

Sometimes we employ the static spark. Here the patient stands on the insulated platform, which is connected to the negative side of the static machine. The positive is grounded, the sliding rods are widely separated, and the spark ball electrode is connected via the earth with the positive pole. The machine is run at such a speed that sparks of 4 to 6 inches can be applied over the lumbar and sacral regions, into the sciatic notch, over the course of the nerve down the leg to the popliteal space, and over the calf of the leg (single sparks hurt less than several close together). After several minutes' sparking, have the patient move the leg into any position in which he can

cause pain, and apply the sparks to that painful region and into the sciatric notch as well. When there is no longer pain in any position the treatment is over. Ordinarily five to eight treatments only are needed to effect a cure.

In chronic cases, as mentioned under tic, the X-ray is of great value; only be sure to cover the genitals thoroughly. The wave current the high frequency and especially some of the high candle-power lights, as well as the blue light, have given good results. In sciatica we have the one exception to the rule,—not to cause pain in treatments.

*Cranial neuritis.* Here I use galvanism, high candle light, and libration. The last is employed to inhibit the cranial nerve at its point of exit, which is a point midway between the anterior superior spine of the ilium and the crest of the tubes.

Another important group is that connecting the nerves of the arm the brachial plexus. Whether it be ulnar, median, musculo-spiral or what not, the principle is the same. Try to find the cause. Insist on absolute rest for the arm. Make the patient carry the arm in a sling. Apply galvanism, the negative pad being placed over the lower cervical and upper thoracic region, while, with a current of from 1 to 5 milliamperes, the positive sponge is gently rubbed over the course of the nerve for ten to fifteen minutes. Vibration between the transverse processes of the appropriate vertebrae may be cautiously tried for inhibition. Massage, if it

does not cause increased pain, may also be employed. Lately I have found excellent results after using galvanism, to treat with a high candle-power lamp. The light first being applied to the lower cervical and the entire thoracic regions of the spine for fifteen minutes, followed by an intense exposure over the course of the affected nerve. After the pain has ceased and the arm feels weak and heavy, I use for a few minutes high tension faradism. This, if there has been no pain caused by its use, is gradually increased. In most cases, at the start, treatments every other day are needed.

There is one other condition which is frequently met with, and in which the pain is generally due to a true neuritis, and that is coccygodynia. Recent cases yield quite readily to the following treatment: Give a careful vibratory treatment to the part, then connect a large pad to the positive pole of the wall plate and apply it over the sacral region of the spine, and allow a current of 10 to 20 milliamperes to flow for ten minutes. To make the relief complete, treat for ten minutes with the high candle-power light.

In various forms of paralyses following a severe neuritis or the ingestion of certain toxic substances, I have found the interrupted galvanic current of great advantage. I apply the current over the motor points of the muscles, and as soon as power to respond to faradism has been regained using that as well. I am now using,

on one case, the high candle-power light and think that I am going to shorten the time of disability by its use.

Do not rule out a neuritis because of lack of pain. Do not, except in rare instances, cause pain in treatment. Stop any treatment which has caused increased pain. Keep the parts as still as possible. Remember that with the galvanic current the positive pole should be used where we wish sedation, and the negative for stimulation. The X-ray has absorptive powers which make it valuable in

long standing cases. In using vibration it is not better to go over the course of the nerve itself, but secure inhibition by appropriate inhibitory treatment over the exits of the sensory fibers in the spine. Often the high frequency and the high candle-power lights give immediate relief from pain. These failing, the static spray, brush discharge, and often sparks, will give the desired relief. We should remember that the patient is looking for quick results, and in justice to him we should use proper medicinal treatments as well.

## ALCOHOL AND CHILDREN

By William L. Storrell, M.D.

Before discussing the use of alcohol in the diseases of childhood we should recall its action in health. Galen, 200 A. D., forbade children any wine whatever. In "Martyr on Infants," 1734, we read: "Wine of all sorts taken too freely, as well as all sorts of spirituous liquors, destroys the natural ferment of all stomachs, especially of those of children." Eighteenth century pathology would not be accepted now, but

experience taught the men of that day as well as now, the twentieth century. Dukes, 1905, writing "on the impropriety of the use of alcohol in schools," says: "I never yet found cause to sanction the use of alcohol as an article of diet for boys in health." See Kellynack in "Drink Problem," 1907. Judson and Git-

tings, 1902, in "Infant Feeding," say: "Alcohol is not needed normally. Used judiciously it has decided value in furthering digestion in weak, sickly and anemic children." Fischer, 1907, emphasizes the importance of abstaining from habitual feeding of alcoholic drinks in any form to the young and growing child. He states, however, that 50 per cent of the tenement children have wine or beer with their parents.

Metabolism is very active in young animals. Kittens, calves and children all eat relatively large quantities, but by actively use up energy marvelously, and grow at the same time. Growth is accomplished chiefly by proteid food, albumen of milk, eggs, or possible meat. If a child takes an excess of proteid it

will be burned or oxidized along with the fats and carbohydrates to supply the boundless energy of youth. It is not so with the adult who takes an excess of proteid; his metabolism is less perfect, and the excess remains in the system, producing uremic, lithemic, or gouty symptoms.

During childhood the nervous system develops very rapidly, especially its most important part, the brain. This part of the anatomy is very susceptible to stimulation, mental, physiological or medicinal, hence we should give great care to the choice of remedies for the young.

It is evident from a review of the literature that alcohol is generally conceded to be injurious to the healthy youth. Its food values are not to be compared with its injurious tendencies.

We now come to peditrics proper. A child with pneumonia or typhoid fever takes little food, suffers from a toxemia and high temperature. The fever, of course, will cause loss of tissue, so that the protracted growth is soon drawn upon as fats are consumed.

We think of alcohol because of two very definite features. In small quantities it is oxidized in the system and so will protect or spare proteid destruction, which is so rapid in high bodily temperature. Late in typhoid or at the crisis of pneumonia, the heart may fail in force. We know that alcohol will temporarily increase the heart's contraction and give a fuller pulse. The effect upon the nervous system must

be remembered, for alcohol in all forms seems to have a predilection for the brain. The question of alcoholic stimulation, or other drugs, is largely a personal one, therefore I have consulted the newest books on peditrics to ascertain the prevailing habit in prescribing.

Cotton, 1906, gives alcohol only two lines, saying, in pneumonia "it may be given in zi doses in milk every two or four hours." Rywert, 1906, writes: "Strychnia is the best stimulant. Alcohol is preferred by some, and is especially useful for heart weakness of syncopal type."

Abt says of typhoid treatment, alcohol should not be administered in a routine manner; 20 or 30 drops, if needed, may be given to a child every two or three hours.

In pneumonia, Fischer, 1907, relies upon strychnia and whiskey, or both. Koplik, 1906, says: "At most, a limited amount of wine or whiskey is administered. Whiskey should not be given as a routine remedy." Strychnia and caffeine are of great value. Rotch, 1906, writes: "Stimulants, if used with judgment, are valuable. As a rule, the average practitioner gives much larger doses than are needed."

Very many authors make no mention of alcoholics in either pneumonia or typhoid, so that the necessity for its use is universally felt.

Whatever the college teaching, the fact is, every new house staff gives whiskey freely to nearly all patients. My first direction is to omit it entirely, except in extreme cases and for short periods.

In private practice I rarely order alcohol as a stimulant. There are upon the market two or three preparations of proteids and carbohydrates put up in 15 to 20 per cent. of alcohol. That known as liquid peptonoids I use in most cases of severe illness. By its use nutrition is maintained and excessive stimulation avoided. Some years ago I reported, *Medical Record*, Vol. 38, p.p.

#### ALCOHOL AS A THERAPEUTIC AGENT IN DISEASES OF THE STOMACH \*

*J. H. Salisbury, M.D., Chicago.*

Gastrologists generally do not recommend alcohol highly in the treatment of digestive disorders, although few are inclined to dispense with it altogether. The first question for the practitioner to decide is how much alcohol may be taken as a beverage without ultimate injury. This question cannot be answered by calorimetric experiments showing how much alcohol can be oxidized in the system since it is quite possible that a substance may be oxidized and yet do harm when taken for a long time even in small quantities. The permissible amount varies with individuals. Alcohol should be forbidden to the young, to those hereditarily inclined to its abuse, to neurosthenics, and should be used sparingly, if at all, by those of sedentary habits.

\*Abstract read before the American Medical Society for the Study of Alcohol and Narcotics, June 5, 1907.

Alcoholic drinks may stimulate the secretion of gastric juice (a) by arousing appetite, (b) by acting

directly on the mucous membrane. For the latter mode of action pepsin, trypsin, and the extractives of meat are much to be preferred. It may be used as an anæsthetic and to equalize the circulation, but its continued use for such purposes is open to many objections.

#### Conclusions

1. No harm can come from the exclusion of alcohol from the diet of normal men nor of those afflicted with disease of the stomach.

2. The amount of alcohol which can be allowed as a regular beverage without producing recognizable injury is undetermined, but probably does not exceed 15 grams a day, an amount equivalent to from two to three glasses (5 ounces) of 10 per cent. wine or a pint of beer containing 3 per cent. of alcohol.

3. There are no evident reasons why this amount should be decreased on account of a special injurious action on the stomach, but it is possible that the continuous use of small amounts for a long time may produce injurious effects that are not demonstrable by ordinary experiments.

4. Experimental evidence shows that alcohol increases the acidity, but not the pepsin of the gastric juice, favors the motility of the stomach, its readily absorbed and favors the absorption of other substances. In moderate quantities it produces no retardation in the chemical process of digestion that need be taken into account. Its long continued use in

large quantities produces hyperchlorhydria, acid gastritis, mucous catarrh, and finally destruction of the secreting structures of the stomach.

5. Alcoholic drinks are more or less objectionable in stomach disease on account of constituents other than ethyl alcohol. Brandy or whiskey containing an excess of fusel oil is especially irritating and readily sets up a gastric catarrh. Wines contain-

ing acid and aminin may be injurious in hyperacidity and other states in which the stomach is unduly irritable. Beer is objectionable in dilatation and motor insufficiency on account of the gas and yeast which it contains.

6. Alcohol is contraindicated in gastric ulcer and hyperacidity and in catarrhal conditions in which it has been a causative factor. It is doubtful propriety in neuroses on account of the possibility of the formation of a habit. In catarrhal conditions it is powerless to stimulate secretion, is much diminished and its irritating action as shown by the production of mucus is much more marked.

7. Alcohol and alcoholic drinks may be applied under due restrictions as a stimulant to the appetite. The taste of the individual should be considered in such cases. The arousing of the appetite by alcoholic drinks depends largely on their accessory flavoring materials. Their continued use tends to lessen the response of the gastric mucous membrane to the normal stimulus of the food.

8. The employment of alcohol for the relief of distress in the stomach is rational, and its effectiveness is

confirmed by experience, but it should be employed as a temporary resource only. The alcoholic content of many of the proprietary remedies for dyspepsia is highly objectionable.

9. The use of alcohol to counter-

### INEBRIETY AS A PHYSICAL DISEASE

By H. H. Mann, M. B., *Edin.*

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I venture to ask your attention to this question of alcoholism, as it concerns us of the medical profession, and more particularly with regard to its treatment by the hypodermic method by injections of atropine. Perhaps next to tubercle there is no question more pressing or more discussed at the present time than this question of Inebriety and the Inebriate; and certainly there is no one on which the charlatan and the advertiser, by and political, have thriven more abundantly. To this may in some measure be attributed the fact that medical men as a rule look sceptically and askance on the "Cures" and specifics so lavishly offered in the daily press and monthly magazine.

Happily of late years medical men of note have given this matter scientific study and attention, and by regarding inebriety as a physical disease, in many cases capable of cure, they have rescued it from the advertising quack, who too often exploited the inebriate to his own purposes. The late Dr. Norman Kerr was the pioneer in this, and his work has

been carried on by such men as Sir Victor Horsley, Professor Sims Woodhead, Mr. McAdam Eccles, Sir James Crichton-Browne, Dr. Clouston, to mention but a few of the more prominent.

In psychological medicine the great forward step in our times has been recognition of the insanities "as a physical disease with mental manifestations," as a condition cerebral in its essence rather than psychic, and on this recognition the modern treatment of this disease is based. Inebriety is one of the phases or varieties of the insane diathesis, and is akin to the folie circulaire or alternating insanity. It has its term of excitement, its depression, and its apparent equilibrium.

Inebriety has its etiology, its pathology, and its treatment. It is essentially an irresistible, uncontrollable, and periodic desire for alcohol. It is not thirst, and while the "crave" is present the appetite knows no satiety. In his book on Mental Diseases, Clouston places it under

"States of Defective Inhibition," and while conscious of its gravity as a social evil, clearly regards it as a neurosis of defective inhibition, as a lack of that control which is the highest function of the cortical centres.

Briefly considered, the following have a place in the causation of this condition: Traumatism, concussion, shock, injuries to the head, epilepsy is frequently associated with inebriety, and, like it, is a periodic nerve storm. Perhaps no association is more commonly observed than inebriety or the tuberculous habit, and it is remarkable in how large a number of cases a family history of tubercle is found to occur.

Among what may be termed

"Moral" causes there are the nameless social influences, adversity, prosperity, education imperfect and education to excess, ambition, worry, and all those undelimited states comprehended in the word "Society."

Though in such it is sometimes difficult to discriminate between cause and effect. Lastly, heredity has a prominent place in the etiology of alcoholism, and in this case undoubtedly the children do suffer for the sins of their parents.

The pathology of inebriety has received much attention of late years, and if any one fact in pathology is established, it is this—that alcohol, even in physiological quantities, is a direct nerve poison, affecting the cortical layers in the cerebrum, the cerebellum and the peripheral nerve endings. In a recent lecture Sir Victor Horsley has pointed out how

even by the ingestion of small quantities of alcohol the brain functions are affected, how the reaction time is lengthened, both simple and complex, as estimated by Kraepelin's method. And he has demonstrated that in continued absorption the nerve cell degenerates, the granules become obscured, the nucleus and nucleolus gradually disappear, and the active protoplasm is replaced by pigmentation, until finally the cell is inert and functionless.

In the peripheral nerve endings the same toxic process goes on and so in the confirmed alcoholic there are the pains of neuritis, affecting his peripheral nerves, while the tremulous hands and ataxic shuffling gait indicate cerebellar mischief, and the confused mind intellect corresponds to and is co-extensive with the destruction of the cortical layers in the grey matter of the cerebrum.

Ford Robertson, in his work on Cerebral Pathology, describes this destructive process graphically when he compares each successive bout of the dipsomaniac as resembling a hurricane of wind sweeping through a forest, which, when it has passed, shows to the casual onlooker no change, though the trained eye can see the broken stems, the torn branches, and the disarranged undergrowth. But, unlike the forest, to the alcoholic there is no new growth; no proliferated cells replace those lost.

With such a pathology of destruction it may well seem futile to talk of treatment, but with the 600 mil-

lion of nerve cells which has been calculated to be the average endowment of the average brain there may be always the possibility of calling up from this vast deep of subconscious cerebration some reserve and reinforcement of those altered and destroyed.

And so the treatment of inebriety, always granted the abolition of alcohol, amounts to a re-education. It must be borne in mind clearly that no treatment will help an inebriate unless he is willing to help himself. He cannot be cured against his will. If one can but control or abolish the insane impulse for alcohol then the case resolves itself into a dependence on time and the ordinary processes of assimilation and metabolism. What is destroyed cannot be replaced, but what remains may be utilized.

Various drugs have been used for the purpose mentioned—notably the bichloride of gold. An antiseptic serum was put forward some years ago, but with what success I know not. The treatment by hypodermic injection of atropine combined with strychnine has, in my hands, proved of great value in relieving the intensity of the appetite, and when thoroughly pushed it does confer an indifference to alcohol. I may be mistaken, but I think it is to Dr. McBride of Norway that the profession owes the first clear record of this method of treatment. The following notes of cases will illustrate this:

A. R., admitted July 24th, a case

of chronic alcoholism with degenerated nerve and tissue changes, ataxic gait, tremulous, twitchy fingers, plantar reflex absent on both sides, neuritis very badly, great mental confusion of time, place, and person; appetite for alcohol intense and continuous. He was given a calomel purge, and put upon atropine gr. 1-100, with strychnine gr. 1-100, given at 9 a. m., 3 p. m., with a cinchona mixture sandwiched midway between each dose of atropine. July 28th. Slept well, mental condition improved, quiet, calm, and clear; alcohol crave diminished. July 31st. Much better, complexion clearer, cheerful and pleasant, weight 9st. 2 1-2 lbs. August 7th. Atropine increased to gr. 1-80. August 23rd. Atropine gr. 1-100; atropine stopped. October 2nd. Continues well, no relapse, no desire for alcohol; weight 9st. 13 lbs. Is on parole.

Another case: August 29th. A. M. drinking for weeks, mainly soft-drinking; for a time he would square up, and then have a deeper and deeper debauch. Confesses his weakness; laments it and promises reform. Put upon atropine and strychnine with cinchona as in the other case. September 11th. Continues to improve, appetite for alcohol largely gone, is allowed to cycle out and go to and fro practically uncontrolled; has had no relapse. October 3rd. Improvement maintained and continuous atropine and strychnine given regularly and to the



full physiological limit; alcohol appetite disappeared entirely.

It is a remarkable fact that the dizziness and consequent thirst created by atropine is a thirst for ordinary liquids, and is allayed by them, and is not a thirst for intoxicants.

The use of cinchona given as tinct. cinchon. co., with spirits of ethanol and ol. cinnamon, is of great value. It cleans the tongue, braces up the appetite, and given in the early morning it assists in allaying the desire which in the morning is at its keenest. Beyond this drug treatment there is the dieting, abundance of vegetable food, and less of flesh meats. Milk in quantity and fish exercise in the open air, and indulgence in some hobby, especially when that can take the form of any outdoor occupation. I have found santalol to be of great value in the early weeks, and when there is as there often is, gastric trouble with vomiting or sickness, it is in my experience the best of artificial foods, easily retained and easily assimilated. I could give, at the risk of wearying you, similar examples of the influence of atropine in this combination on the "crave" which is the single real symptom of this disease. Its use is not wholly empirical, and the progress of such cases is well worth inquiry and investigation. It is no secret treatment, an ill has the advantage that it is quite in the power of any medical man to pursue it in his own practice. There are, unfortunately, too many cases ready to the hands of the ordinary practitioner for trial, and I

would urge upon the members of this branch to give this method their interested study, and to look upon this condition not so much as a serious social evil, but as a physical disease depending on physical causes, and capable of responding to physical treatment.

Behind this lies the great question of permanence. It is not possible to repair damaged tissue, or to alter a man's character and disposition. No drug can do this, but that many cases of inebriety are curable I am thoroughly satisfied. I personally have too short an experience to permit of saying that the cure is permanent, but I know from a study of the case-books in a well-known retirement that cases under this method have been traced, and known to keep well without relapse for more than a dozen years, and the permanence of the result is largely determined by the completeness of the treatment. I had one case, which came to me in April last, in which the agony of the crave was painfully intense. He had squandered his fortune, ruined his home, and in a fit of depression nearly killed himself. Today a sadler and a wiser man, he is steadily and soberly trying to regain something of his lost life, and is happy in his home. Such cases are common knowledge to us all, and it is precisely in such cases that the ordinary general practitioner can by this method, if regularly carried out, benefit his patient and those depending upon him.

It may be necessary for the State or the community to segregate the inebriate. It may even be desirable to adopt Dr. Renault's heroic method and sterilize him in the interests of the race, but neither segregation nor sterilization will cure him. But if the impulse, the crave, can be removed, if the inhibition can be made more complete, if the control can be regained, then he may return to the world and take part in its

work. It may seem absurd and incredible to lift against this (foliash the tiny hypodermic syringe, the fresh air and the simple life, but when one reflects how the lancet has controlled the horror of small pox, and the serum treatment has modified diphtheria, then one may hope that medicine has not yet said the last word regarding inebriety as a physical disease, controllable by physical treatment.

### THE PSYCHIC EFFECTS OF INEBRIETY

By J. Madison Taylor, M.D., Philadelphia, Pa.

Few subjects in the experience of medical men are more worthy of discussion and thoughtful formulation than the management of psychic disturbances resulting from the excessive use of alcohol. It comes within the almost daily experience of most of us to meet conditions which are due to the use of alcoholic beverages, direct or indirect. These divide themselves, first, into those which follow actual drunkenness, and those again, subdivide themselves into the effects of steady drinking or the occasional and apparently uncontrollable excessive use. Our responsibility too often is made to end here. There is another class of cases of even greater importance, where the subject has gradually acquired the habit of taking almost constantly an amount of alcohol which does not seem to subvert the consciousness, and yet produces disastrous effects upon the mind which can only be realized and demonstrated after the individual has been thoroughly emancipated from the habit. Several illustrative instances of this last have come under my observation, and the handling of which is always problematical. I think most of us fail to realize the necessity for eternal vigilance and long-continued persistent efforts to overcome a tendency which, in its effects, is most disastrous. The temptation is for the medical adviser, after a time, to let such persons alone. Oftentimes almost insuperable obstacles are placed in his way; the individual does not invite beyond a certain point any assistance, and at times resents advice emphatically, and at last uses every device to shake off control. Finally, the most difficult thing to overcome of all is the disinclination on the part of the physician to persist, because there is no apparent reward in sight commensurate

with the labor, trouble, and annoyance to which he is subjected in the discharge of conscientious obligations to himself. Almost always there will be found, in even the most difficult of these persons, a fair degree, sometimes remarkable, of intelligence; so much so that it becomes a proverbial saying that the most unconquerable drunkards are individuals of exceptional mental powers. This is not necessarily true, because oftentimes the brilliancy exhibited is rather apparent than real. We are liable to regard the degree of intellectuality which is evidently being destroyed, merely in contrast to others toward whom our solicitude is not so warmly elicited. One of the most absorbing quests in my experience was that of an extremely brilliant woman who came under my professional care irregularly many years ago, and for whom I was able to accomplish what was possible. She gradually acquired the habit of exceeding in first, cigarette smoking; next the use of morphia, and finally alcohol. Sometimes these were used almost alone for a period, but generally all were combined. During the early part of this period, when she was a young woman engaged in intellectual pursuits, she found that her brilliancy was enhanced by the use of small doses of morphia. During this period considerable work was accomplished which brought much fame. Attempts at withdrawal of the morphia resulted in such a diminution of creative power that the temptation to continue its use, in order that certain bits of work should be finished, was practi-

cally insuperable. One fact was clearly demonstrated to me by this case: that extraordinary mental products are capable of being produced by the mental stimulus of morphia. There are occasional instances where the use of opium in some form, habitually used, makes for a valuable degree of intellectual effort. Of course, it can be objected that the quality of work thus done is unreal, fanciful, inferior to that which is the result of the normal uninfluenced mental processes. Individuals vary widely in their susceptibility to the effects of morphia. I have in mind a case of a man who, if I can take his statement (and I think it is accurate), has used a moderate degree of morphia for over fifteen years, and his general health and intellectual vigor remain about the same, and they are good. Another patient, a lady, maintained good health after over twenty years. Another thought arises, of which I have never yet seen sufficient statistical evidence to enable me to reach a final conclusion, and that is the varying effects of morphia upon the sexes. The effect of morphia upon men is in many respects different from that upon women. I have never yet seen a morphia habitue who, when the habit was entirely overcome, was not rejoiced at the absence of the thrallences at work to complicate this and impair the powers of resistance. It is quite true, and almost an axiom, that the opium taker will return to the use of the drug under conditions of strain or overwhelming disasters, because of the relief which this affords

to depressing influences. The subject of this paper is rather the effects of alcohol, and the first instance cited, of the lady, hinges largely upon this factor. When she gave herself up to the use of alcohol the creative faculty seemed practically killed and has not been restored. There was a period, while under my control, when an entire freedom was obtained from all these three poisons, for a period of over three months, and the result was curious. Physically, everything was satisfactory, but the mental attitude was disheartening, because there arose a deliberate and overmastering desire on her part to return to the use, especially of the morphia, because there was recognized an inability to shine intellectually, even in conversation, unless a certain amount of this was used. It became impossible for me, or any one else, to control her at that time, and I am inclined to believe that she returned to the use of this and continues it. Her physical health is undoubtedly enormously better; practically good. In dealing with some exceptionally difficult neuroses, I have occasionally found evidence of the use of small doses of morphia. This appetite can only be overcome by forceful means and by the exercise of the utmost vigilance, which from various exigencies often becomes impossible to maintain. I have seen many intricate instances of the effects of continued use of alcohol. One is that of an intimate friend of mine, a lawyer of early middle life, who early exhibited great promise, which was of rather too varied a character to warrant the expectation of much real progress in his chosen career. He was unfortunately endowed with great musical abilities, an extraordinary charm of conversation and a most brilliant wit. These qualities naturally tempted him to waste a great deal of his time in mere social drivings. His digestive and general health seemed invulnerable. Little by little, however, mental depression set in, which progressed to a most distressing degree. For this he sought some relief, and, recognizing the influence, I begged him to abjure the use of alcohol. He asserted that the amount and the manner of his use of this poison produced so little effect, and so many of his intimates did much the same thing without obvious ill effects, that he was convinced my advice was little more than a prejudice against the use of his favorite beverages. I employed in his instance a number of rational measures, such as regulating his daily life, the use of exercises, and in a number of ways assisted him in remodeling his methods. Two or three years elapsed and his physical condition became distinctly worse; his mental depression was more pronounced, but known to no one but himself and myself. Finally, I was enabled to make a great impression upon his imagination by telling him that his liver would become irretrievably injured by the use of the alcohol; thereupon he promptly gave it up and has not used it since, except in such moderation as to do little harm. The interesting point in this case was the extraordinary change in mentality,

which amplified in a way not only to astonish me, but himself. It must be remembered that this was a man of exceptional vigor, and at no time would the casual observer have felt that the alcohol taken was in sufficient amount to produce any serious effects. Even a physician, not his personal friend, could scarcely have realized the truth. However, at the present time it is interesting to note his own conclusions. These are to the effect that in the matter of professional work, the time was when he felt perfectly content to have done a certain amount of work each day and be satisfied with a moderate advance professionally. Whenever he, to use his own words, could conscientiously excuse himself from work any one day, he promptly ceased and went about his amusements, which involved a certain amount of what he called work, and the same old round occurred, and in the morning the dreadful depression recurred, wearing off during the activities of the day. As the final effects of the alcohol gradually ebbed away, emphasized by an extended trip, in which he was able to get, as it were, a perspective on himself, a new heaven and a new earth were revealed. He suddenly found himself eager to undertake new and difficult problems. He acquired, almost instantly, a wider range of observation, a broader grasp of practical truths. Old items of knowledge which had rusted, became efficient in his hands, and from being merely a mediocre lawyer of ornamental and interesting personal qualities, he rapidly developed into a man of affairs

and usefulness, taking the utmost pleasure in his progress and results. My comment on this typical instance is that there are many such demanding our recognition and care. It is almost an unwarranted liberty to assume that many men, doing their own work in their own way with fair measure of success, are yet stultifying themselves and placing a barrier upon their progress by indulgence in what is ordinarily considered perfectly legitimate convivialities. This is merely the type of case which ought to come under the searching eye of the family physician, into whose jurisdiction they often fall. The chief difficulty in dealing with such is, first, the fact that they seldom seek relief, because they are conscious of no suffering; and second, that the medical man does not feel he has the right to interfere. In consequence, many lives are thus warped or fall of their full fruition. Another instance occurs to me full of significance. Fifteen years ago I knew, in London, the foreign correspondent of one of our strongest daily papers. He was of a race of brilliant journalists and had made a most admirable reputation for himself. Like too many men of his profession, he used a certain amount of alcohol habitually, and would occasionally exceed to such an extent as to disable him for a day or two, but this was condoned. Finally, however, the habit grew, the poison of alcohol subverted his resistance, until these happens were uncontrollable. He lost one valuable position after another. His was the particular type only too common, who can go for

weeks at a time without the inclination to touch a drop, and suddenly be overcome with our knowing why, and he became insane for a week or ten days, and then would wake as from a dream, to find himself in a deplorable condition and would lose his position. More through friendship than by professional relationships I got hold of him, and partly by earnest persuasion and partly by hypnotic suggestion I was able to control these episodes more and more. My chief power lay through the vigilance of his wife, who learned to recognize the premonitory symptoms, extremely vague, and I was able then to redouble my efforts and tide over many evil episodes. The chief lever by which I swayed his judgment was gained through full hypnotic suggestion. In that state I demanded of him that whenever he should touch as much as a drop of alcohol, always the beginning of a period of complete psychic subversion, that he should come straight to me, wherever he might be situated. The story of some of these experiences would be interesting reading; suffice to say that several times the drink-fever seized him and in an hour or two he would be compelled, totally against his conscious will, to come to me at most inopportune hours and places, and I would then take charge. He had dropped to the position of a mere reporter, but as we would be able to slave off these evil spells his intellectual abilities rose to their normal level and he was able to regain the position in the journalistic world which his capacities warranted. I do not consider him even yet safe, nor does he. The time may come when he will be so; meanwhile we have fought through some periods which were never even recognized by his employers, and I feel confident that he is practically safe so long as he has some one who can, and will, influence him, as I did, when the necessity arises. In this man's case there has been more than ordinarily a restoration of the proper intellectual point of view. His work, never lacking in brilliancy, has now more definiteness of purpose. A higher responsibility would double the safeguards which our combined efforts have accomplished. The effects of long-continued alcoholism upon cerebration are too well known to be related in detail, but it is always a revelation to the practical physician or humanitarian, how great a matter can be accomplished by omitting the continued efforts of the poison upon the cerebral cells for a sufficient length of time.

In a rather extensive experience in the use of suggestion and hypnotism in alcoholics this rule has become established. After the apparently most difficult cases are satisfactorily relieved, in those which seem easiest ultimate failure seems inevitable.

## EDITORIAL.

The International Anti-Alcoholic Congress at Stockholm.—This was in many respects one of the most important meetings of the year. It was the first international recognition of the alcoholic problem by the countries of the world, and this in itself is an advance that could hardly have been expected a few years ago. The spirit and energy of the Swedish government in giving this congress a national importance met with a hearty response from nineteen governments of the civilized world, who sent forty-one delegates to represent them. Fifteen hundred delegates were registered as members, and at least a thousand more attended the different sessions and showed their hearty interest. There was something in the spirit of the Congress that indicated a great new movement to study the alcoholic problem from a higher point of view, and along rational scientific lines. The personnel of the Congress was interesting and extremely suggestive. There were present about thirty physicians and medical specialists, many of them professors in medical schools, together with over 100 university teachers. Some of the latter were distinguished teachers and writers. There were over 100 diplomats or persons connected with the different governments in official ways. Many of these persons were legislators and members of committees of public health in the various cities in Europe. There

were over 500 delegates from various societies, principally temperance, hygienic and social organizations. The Good Templars of England and Europe sent very large numbers of delegates, which included many most eminent men from all the professions. Several prominent Anti-alcoholic Societies in Europe were represented by delegates, both men and women. Several theological seminaries and universities sent leading men. The remainder of the delegates were made up of teachers, clergymen and philanthropists from almost every country in the world. As might be expected, the character of the proceedings from such a gathering would give the popular side most prominence. Hence, a large number of papers were devoted to the ravages of alcohol, in home and society, suggesting all sorts of remedies and means for their correction. In the three different sections which the Congress was divided, an attempt was made to classify and arrange the papers. In the scientific section a number of very exhaustive papers were presented. One was on "Alcohol and Diet" by Prof. Max Kassowitz; another on "Alcohol in Treatment of Children;" and "Alcohol in Pneumonia." An afternoon devoted to "Alcohol as a Nutrient" was marked by the most scientific discussions of the Congress. They were, as a whole, very striking confirmations of the teachings of science regarding alcohol previously known. In

the general meeting, "Alcohol and the Sexual Questions," and "Alcohol and Crime," were very interesting topics, presented with scientific accuracy. Dr. Legrain of Paris presented a very strong paper on the "Degeneration from Alcohol Concerning the Races." These are only a few of the many subjects that were presented with more than usual scientific accuracy, and generally based on facts and statistics. "Alcohol and Its Effects in the United States" was a subject of a general meeting in which Dr. MacNicholl of New York and Dr. Ellsworth of Boston; also Mrs. E. S. Davis, representing the W. C. T. U., contributed very interesting remarks. The English-speaking members held a special meeting, which was addressed by Dr. Brantwaite, the Government Inspector of Inebriate Asylums in England. Dr. MacNicholl of New York, and others. Professor Edwards of London gave a special course of lectures every afternoon on "The Best Methods of Teaching the Dangers of Alcohol." This was crowded by teachers. The "International Order of Good Templars" held a special meeting, in which Miss Jessie Forsythe, the Superintendent of the Juvenile Order of Good Templars in the World, from Boston, Mass., made an address. Another important gathering was that of the "International Union against the Misuse of Alcohol," which seemed to be a very popular society, from the numbers present. Another society was the "Abstinent Union of Physi-

cians," which held a great meeting. Perhaps the most exciting discussion was the (Lottentburg) System, which occupied the whole forenoon. A great mass of evidence for and against it as a practical measure for the relief of the injuries from alcohol, was presented. Many smaller societies had international meetings, in which various theories were propounded and discussed. An International Bureau was organized, with Professor Herceord of Switzerland as secretary, for the purpose of gathering literature and forming a center for the promotion of exact study on the alcoholic question. Many papers were read on the "Influence of Alcohol on Children in Schools;" and an unusual interest was created in that phase of the subject. To the American student many of these papers would have appeared very elementary, but the subjects, as a rule, were presented with an array of statistics and figures that gave an original freshness to them. The oft-repeated arguments and appeals were subordinate to facts and statistical studies, thus indicating a decided advance along scientific lines. The Swedish Government treated the Congress to a garden party, and the city of Stockholm, a carriage ride and boat excursion, and it was very evident that the subject had taken rank with the great international questions of civilization. The next Congress will be in London in 1909, and the Duke of Connaught, brother of the King, is the Honorary President. Several rooms were used for the exhibition

of matters pertaining to the alcoholic problem. One of the most startling was that in which 1100 papers were on file, all devoted to the temperance cause. Of these less than 200 were published in the English language. The others were printed in Continental Europe, and gave one a startling impression of the anti-alcoholic periodic literature of the world. Another room exhibited copies of the Bill Posters' Crusade against alcohol, which is coming into prominence in Europe. A third room exhibited charts and diagrams of the effects of alcohol on communities, individuals and dissections of statistics and other studies, for use in the lecture room. Several other rooms were devoted to copies of papers, books and pamphlets written on this subject. Nearly all the great leading papers of Continental Europe published full accounts of this Congress. Several of the London papers gave large space to the transactions showing a recognition of its importance and magnitude. The American was profoundly impressed with the significance and importance of the alcoholic problem, and the intense interest which it excited in the wine and beer drinking countries of Europe. It is without doubt of greater magnitude and more vital interest to civilization than at present realized. The disease of inebriety and its curability attracted little attention. A very eminent man discussed the questions of accountability, but in a timid, hesitating way. Another

author talked for nearly an hour on the "Maniacs of the South." The "Physical Disease of Inebriety and Its Curability" was evidently largely unknown, except to English and American students. The studies of Americans in this field are far in advance of all other nations. The English Government has organized hospitals for its study and treatment, which is advanced work and more systematized than similar work in this country. Copies of **The Journal of Inebriety** were placed on file at this Congress and were recognized as the leading and only scientific journal in the world devoted to the discussion of this special subject. Although this was the eleventh International Anti-alcoholic Congress which has been held in Europe, it was evident that the subject had assumed a new importance and is now national in the broadest sense. The alcoholic problem has passed beyond the theoretical and speculative stage, and is now a question of facts and their meanings. The next Congress will bring out and concentrate the lines of study which are necessary to understand and apply correct means for this evil.

**Sane and Responsible.**—These words are often heard in the courtroom concerning the acts of spirit and drug takers, and are repeated as if they were absolute facts. Whenever any doubt is suggested, then medical men are brought in to mark out dividing lines, where sanity is lost and irresponsibility begins. Acts that are

abnormal in the spirit and drug taker are regarded as temporary conditions, and not infrequently planned with some distinct motive. It is assumed that a sane mind might use spirits and drugs to execute an insane act, with the view of escaping responsibility. Modern study brings no support to this theory, but on the contrary, shows that all use of spirits and drugs not only deranges but damages the cell and tissues to such an extent as to produce great abnormalities of functional activities and thought and conduct, and that there is no evidence of complete sanity in such persons. In a disputed case it is assumed that spirits and drugs may be taken without altering the sanity and responsibility of the person. The statements of the drinker and drug taker that they are in no way worse, and are as clear concerning their duties and relations to others is thought to confirm the theory that alcoholism is no defence for crime, or intoxication is an extenuation for acts of any kind. In many cases this is so doubtful that great efforts are made to draw boundary lines, and to find evidence of responsibility and sane recognition of the acts.

A man with a history of long continued use of spirits and drugs is declared sane and responsible, and the assumption that this continued toxic state has in no way impaired his mentality, is one of the most startling of delusions. In the business world there is no such questions of sanity or responsibility in such persons. The spirit and drug takers are promptly turned out from responsible positions as mentally unfit. If he is retained his thought and conduct are regarded with suspicion. On railroads and industrial incorporations there is no question of sanity and responsibility. He is discharged as incompetent. A state of mental uncertainty, instability and doubtful sanity is practically assumed. This is the result of experience and losses and not of theories. A man who for years had drank spirits and taken drugs committed a murder and was the subject of exhaustive expert study to determine the degree of responsibility and sanity. In the same city the railroad gateman, finding that an ordinary gateman at a railroad crossing was a continuous drinker, discharged him at once as irresponsible. There was no question of his partial sanity or responsibility. In one it was pure theory and in the other it was a practical recognition of his condition. A treasurer of a large industrial company was discharged when the fact of his spirit and drug taking was known. A few months after, a will which he made a short time before his death, was disputed, and after a long, tedious examination by experts, it was decided that he was sane and competent to dispose of his property. The company for which he worked doubted his insanity and refused to be in a position where a practical test could be made. The court decided that he was sane and knew exactly what he was doing. These are common examples seen

in all business circles, and most seriously reflect on the wide divergence of opinions between judges, lawyers and physicians and practical common sense of business men. Science has repeatedly shown that no user of spirits and drugs for any length of time, can be accurately called sane and responsible. The degrees of insanity may vary widely, but this will be determined by the history and the degree of chronicity of the case. All disputed acts in spirit and drug takers of necessity must come from deranged, disordered and irresponsible brains. The only question should be one of rational treatment and adjustment of the penalty or conditions which follow from the act, that will be just to all.

#### The Doctor as a Drug Inebriate.

—Dr. Stockard of Atlanta, Georgia, recently read before the Pinlon County Medical Society a paper on the above subject. It was based on the reports of a number of physicians who make a business of treating alcohol and drug takers. The general consensus of opinion reached was that physicians were more addicted to morphia disease than any other professional class. One physician reports to per cent. of all drug takers are physicians. Another thinks 25 per cent.; another one, 20 per cent., and another one considers that 80 per cent is not too large a figure. This wide variation probably is owing to some local conditions. Several of these physicians make a specialty of morphia

treatment, and, of course, the numbers received are greater. It would be difficult to determine how many of the profession become addicted to this most serious disease. At all events the number is very large, and this fact is a very strong reflection on the want of intelligence and training which the poor victim suffers. The doctor concludes his papers with these two statements: "The lecturers on therapeutics in medical colleges cannot be too emphatic in cautioning medical students concerning the dangers from the use of this drug, and no physician should, under any circumstances, take a dose of morphia of his own prescribing, except in a very extreme case, particularly by the syringe;" to which we add the caution that the strains and drains of the medical profession, particularly the sudden emergencies which come to all physicians, give a peculiar susceptibility to narcotics. The effects are so satisfactory that the physician is tempted to repeat them, and this repetition becomes imperative at last. Opium is a most excellent remedy when used discretely, but for neurotics and active brain workers, it is seductive to the last degree. The question is often asked, Do physicians who have contracted the addiction ever permanently recover? The answer is, Yes, but the conditions and the circumstances must be very exact and extend over a long time. Restoration is possible in every case, but the danger of recurrence is so great that practically physicians who re-

cover must give long months of change, nerve rest and quietness. It is a sad fact that there are some teachers in medical colleges who are drug takers, and without intention, and perhaps unconsciously, they convey the impression to their pupils that drug taking is very rare and never occurs except among the weak-minded and those who are not normal. One such professor announced in the lecture room that when worn out and tired a mixture of cocaine and morphia was an admirable stimulant, which could be used without danger. It is needless to say that a number of his students became drug takers in after life. Dr. Stockard's paper is a most timely protest that every physician should heed.

The pressure of new matter contributed to **The Journal** has reached such dimensions as to suggest a more frequent publication. Our contributions may rest assured that their productions will appear at the earliest moment and that the audience waiting for them is becoming larger and more imperative every day. Twenty different papers were read during the month of October on different phases of the alcoholic problem, in the various medical societies of the country. Many of these papers have been contributed to **The Journal**. It is very evident that the alcoholic problem is going to occupy a large share of attention in the medical meetings of the year. The degenerative effects of alcohol have

come into increasing prominence with the more minute studies, and the facts are reported by many authors as new.

We have omitted a detailed report of the Antialcoholic Congress at Stockholm, Sweden, for the reason that many of the papers read were complex and could not be reported with any satisfaction unless from the copy as it was read. The various addresses related to matters that are very familiar to our readers and hence could not have much interest. When they appear in full we shall be able to give an exhaustive report. Some of these papers have already appeared in foreign journals, but to the American reader they do not bring many new facts. It is a pleasure to note that the coming Congress in 1909 has already begun to take form and place, and will undoubtedly be a great event in the progress of this study.

In the *La Pette Journal* of Paris, Dr. Benmoud concludes an article with the following very pleasant compliment. **The Journal of Inebriety**, published at Boston under the editorial care of Dr. T. D. Crothers of Hartford, Conn., is not only the oldest but one of the most scientific organs of the great subject of alcoholism. The central facts which it has urged for over a quarter of a century has been the disease of inebriety and its curability by medical and other means. Many of the most important contributions to this sub-

ject have appeared in its pages and we commend this journal as the great pioneer to all scientific men.

An international congress on the alcoholic question has been projected to be held at Saratoga Springs, New York, in the latter part of June, 1908. It is to commemorate the centennial of the organization of the first temperance society in this country in 1808, in a little town near Saratoga. There is much significance in the fact that this society was organized and conducted by a country physician, Dr. Wm. Clark, and for many years it was a power in that neighborhood. The following preamble and resolution was presented and passed by our society at the Atlantic City meeting in June. Inasmuch as

it is proposed to hold in June in 1908, a national congress of all the temperance organizations of this country, together with representatives and delegates from all similar organiza-

tions having for their purpose the study of the alcoholic problem, also being in part to commemorate the centennial of the first temperance society in this country. Therefore, he it resolved, that this society join in this congress, and appoint a special committee to act with that of other committees in assisting in the plan of organization and program for the meeting.

Also Resolved, That the officers of this society shall constitute such a committee, and have power to appoint a special committee to represent them on this occasion.

### BOOK REVIEWS

**The Psychology of Alcoholism.**—By Dr. George B. Cinton, Ph.D. (Yale). Chas. Scribner's Sons, Publishers, New York, 1907. Price, \$1.50. This work is one of the Walter Scott Publishing Co. Contemporary Science Series and is the most advanced contribution to the subject of inebriety which has appeared. The first eight chapters including the introduction, Physiology, and the Effects of Alcohol on the Memory, On the Intellect, On the Will, On the Emotions, On Senses, and On the Morals, are exceedingly clear and graphic presentations of facts and conclusions of many writers. The

main points of interest and keep them foremost in all the discussions. Hence, the interest of the book never flags by obscurity and doubtful statements. The disease of inebriety is established on a broader scientific basis and the disputed points are cleared up by the author's studies in a more satisfactory way than in any previous work. This is an epoch-making book describing the effects of spirits on the higher mental operations and as such will rank among the great text books on the subject. We urge every physician, who is interested in the disease of inebriety, to procure a copy of this work. It is by far the best and most accurate, psychological presentation of the facts which have escaped attention and have never been studied with such minuteness before.

In a work of this kind there are so many facts stated so clearly that the critical reader is reluctant to mention the little lapses and faults which are so insignificant compared with the real excellency of the book. In the chapter on Physiology there are many very interesting illustrations of the changes in cells and nerves which form an admirable foundation and explanation of the farther studies. The author has evidently been a very close observer, and while compiling largely from other authorities, has himself noted the changes which he describes and made studies of the finer operations of the brain. The chapter on Hypnotism and Other Cures as well as that of Religious Conversion deserve a more extended

study, and will suggest to every practical man many things unnoticed before. We shall publish extracts from this book and urge all our readers to procure a copy from the publisher and make new studies from the author's point of view.

**The Drink Problem in its Medico-social Aspects.**—By Fournier Medical Authorities. Edited by N. Kelynick, M.D., M.R.C.P., Honorary Secretary of the Society for the Study of Inebriety. With Two Diagrams. New York: E. P. Dutton & Co., 1907.

This admirable volume, written by fourteen different medical men, presents a very satisfactory grouping of the facts relating to alcohol and inebriety. The Evolution of the Alcoholic by Dr. Campbell, The Pathology of Alcoholism by Trois Woodhead, and The Psychology of the Alcoholic by Dr. Shaw are among the most original contributions. Alcoholism and mental disease and the introduction and chapter on the Arrest of Alcoholism by the editor, are very valuable studies that suggest a great deal more than they describe. All of the chapters are scientific in tone and free from dogmatic conclusions, although giving the opinions of the authors in a frank, open way. As an argument for total abstinence addressed to both medical men and laymen it is most conclusive and already has attracted a great deal of attention. As a contribution to the subject it will take high rank and be among the great books of the year

showing the opinions of very able men who agree on the general topic of the danger of alcohol and the necessity of exhaustive medical study. This book has little to say about the disease from alcoholism. Moreover, the questions of responsibility are treated with timidity. The need of instruction to school children is clear and decisive and the deterioration as a direct result from the use of spirits is presented very forcibly. The book as a whole is a most valuable contribution and should be in the hands of every student of this subject. The publisher has presented a very attractive volume in type and arrangement, and every American interested in the alcoholic problem should possess this volume as a distinct contribution which must be recognized in the evolution of the subject.

**Insanity and Allied Neuroses.—***Practical and Clinical Manual.* By G. H. Savage, M.D., Superintendent of Royal Hospital, England. New and enlarged edition. W. T. Keener Co., Publishers, Chicago, Ill. Price, \$2.75.

This is the second edition of one of the most practical and useful of all the manuals on nervous diseases. It is fully illustrated and gives in 26 chapters a very lucid, clear account of insanity, and the various diseases of the brain and nervous system classified under this head. The particular value of this book comes from the fact that the reader can in a very few moments' reading obtain a clear idea of the subject, often much more

satisfactory than that obtained from a larger volume. The general principles of symptomatology, pathology, and treatment are given with admirable clearness, and on many subjects are extremely graphic and clear. No single volume published is so generally useful for the various questions that are constantly coming up in the consultation room. It will meet a want which general practitioners recognize in every-day practice. The author gives some prominence to alcohol and drug taking as causes of disease and as disease in themselves, which shows that the book represents the most advanced views in this field of study. Already this book has had a very large sale and we predict that the last edition will be sold more largely than the former, as one of the few books that should be in the library of every medical man.

**Hygiene of Nerves and Mind in Health and Disease.—**By August Forst, M.D., formerly Professor of

Psychiatry in the University of Zurich. Authorized translation from the Strand German Edition, by Herbert Justin Albus, Ph.D., Professor in Western Reserve University, G. P. Putnam's Sons, New York and London. The Knickerbocker Press, 1907.

This work covers a new field of study that is intensely practical. The author is both an enthusiast and very graphic writer. He has condensed in over 300 pages a great variety of facts that have not been mentioned before. Part third of

the Hygiene of the Mental Life and the Nervous System is exceedingly interesting and worthy of much study. The purpose of the book is shown in the words of the author: "To enable an intelligent layman with a fair education to govern his life in such a way as to avoid diseases and abnormalities as far as possible for himself, his fellow man and his offspring." The author is a very distinguished writer and student of mental diseases, and has given a most substantial contribution to the subject which we commend to our readers. This volume is one of Putnam's Science Series, and is presented in good type and attractive form. This book will be particularly valuable to students of spirit and drug taking by the very clear studies of inheritance and the action of poisons on the hygiene of the brain and its functional activities. Studies of school hygiene are also very interesting and point out many fields for both practice and study that will be taken up in the future.

\* \* \*

**Alcohol and the Human Body.—**By Sir Victor Horsley, F.R.C.S., London. Hon. M. D. Hallé, etc., M. D., Strang, M.D., London, etc. London, New York, MacMillan & Co., 1907. Price, \$1.50, postpaid.

Since the works of Dr. Richardson were published no books have appeared with more accuracy of statement and clear graphic representation than this. However much the reader may differ, the facts are placed in the clearest possible man-

ner and illustrated with unusual fidelity and clearness. The first chapter, "Alcohol as a Drug," is most suggestive in the breadth and general scope of treatment. The next chapter on the "Chemistry of Alcohol and Alcoholic Beverages," and the next one on "Cell Life," are exceedingly clear and accurate presentations of the facts of the present. "The Effects of Alcohol on the Nervous System" is well illustrated, and groups in a very graphic way a great variety of facts that are not found in other works. "The Effects of Alcohol on the Intellectual Processes," on the "Neuro Muscular System," and "The Action of Alcohol on the Skin and the Temperature of the Body," and the chapter on "Alcohol as a Food," should be considered the last word of science. The remaining chapters of the Action of Alcohol on the Liver, Kidneys and the Blood, and the Effects of Alcohol on the Tissues and Metabolism of the body are stated in the clearest possible terms, about which there can be no mistake. No other book has grouped the direct physical action of alcohol so thoroughly and fully as this. The book is the latest and most authoritative text-book on the alcoholic problem, and the bitterest critic cannot deny the facts and their calm, dispassionate presentation. This is not a partisan appeal or the argument of a partizan who believes that alcohol has no virtue whatever, but simply a judicial presentation of a mass of general facts, about which there can be no question or doubt.



**Dr. Petzey's Eastern Retreat.**—Dr. Geo. E. Petzey of Memphis, Tenn., has associated himself with Dr. Wm. F. Ridgway of Atlantic City, N. J., and they have opened a Retreat at 3393 Pacific Avenue, Atlantic City, for the treatment of alcohol and drug addictions by the methods introduced to the profession by Dr. Petzey. In announcing the opening of this eastern branch of his work, Dr. Petzey says that some years ago he had drug habits in his own clientele for whom he was unable to secure relief by any of the methods of treatment then in vogue. This led him to undertake a thorough study of the narcotic drug addictions. Two years spent in that work, he says, enabled him to form definite conclusions as to the pathology of these addictions. With that knowledge to guide him, a rational course of treatment was devised, every detail of which was published to the profession. See *Therapeutic Gazette*, October, 1901, and subsequent articles.

He says it was his hope that reputable institutions, engaged in the treatment of this unfortunate class of sufferers, would avail themselves of the benefits of his study of this subject, but thus far, few of them have done so. The majority seem to be still "wedded to their idol," the gradual reduction method. In Dr. Petzey's judgment that method of treatment does not give this class of patients the relief to which they are entitled. Since others do not seem to be inclined to acknowledge the advantages of Dr. Petzey's method and to give

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their patients the benefits of it, he is undertaking to meet the demand for such a treatment in the eastern states

by opening the Atlantic City Retreat. Dr. Wm. F. Ridgway, who has assumed the medical directorship of the new institution, is a graduate of Jefferson Medical College and holds positions of honor in the profession of his city. This, with Dr. Petzey's well-established reputation, is a sufficient guarantee that the new institution will be conducted according to the most scientific principles and upon the highest ethical lines.

Those wishing further information, should address The Dr. Petzey Retreat, 3393 Pacific Avenue, Atlantic City, N. J., or Dr. Geo. E. Petzey, Memphis, Tenn.

#### Antiphlogistine Versus Opium.

Inflamed states of the various organs of the body frequently give rise to pain of such urgent character as to demand active steps looking to its relief. Upon seeing the patient for the first time (he has called his physician because his suffering has become intolerable), the medical attendant is met with a peremptory demand for relief from the suffering.

With a willingness, which frequently overrules their better judgment, some physicians resort to the hypodermic needle indiscriminately, and, in many cases, a greater evil has followed the lesser one. The free habit of using morphine, or some other form of opium, is not a judicious practice, and for several reasons. The exact seat of an inflammation, for in-

stance, might become difficult to locate, and thus a clear diagnosis interfered with. But the greater objection to the use of opium is the possibility of adding a recruit to the ever growing army of habitues.

Every time there occurs to a doctor the apparent need for opium he should deliberate well before resort is had to the needle. If, after careful consideration, his best judgment advises the use of opium, it should be given in some form by mouth. If the needle is used, the patient at once knows what he is getting, but he is not so likely to acquire this information if it be given otherwise.

For relieving the pain of the inflammations, Antiphlogistine will easily take the place of opium. The relief following may not be so prompt and so complete, but the edge of the suffering is taken off within a short time, and soon the patient is in a comfortable condition and has escaped the possibility of becoming addicted to a drug. There is not the likelihood that a patient, relieved from pain by it, will begin eating or using Antiphlogistine in any other way—which likelihood is the greatest disadvantage of opium.

In the future let your morphine become stale, and keep your Antiphlogistine fresh—use it in inflammation. —*The Medical Era*.

The Scientific Temperance Federation and Bureau at Boston, Mass., under the charge of Miss C. F. Stoddard as secretary, has been chosen to represent the International Bureau of the World's Anti-Alcoholic Congress

for the purpose of collecting and supplying all anti-alcoholic documents pertaining to the alcoholic problem. This is one of the most practical efforts toward a better understanding of the subject that has been made. It is now possible to know through these two organizations everything that is done in all the corners of the civilized world to promote the temperance cause and indicate the means of prevention and cure. All writers are urged to send their productions to the Boston Bureau, 23 Third Street, so that there they may be noted and kept on file. Duplicates of these will be sent to Europe, and both bureaus will keep in close touch with everything written in the world on this subject.

A curious suit at law has excited a great deal of interest in Prussia. The proprietor and doctor of a sanatorium was charged with selling spirits without a license. The defence was that he used wine on the table as a beverage for his inmates, and that he charged them the same as he would for an extra article of diet, also that it was given dietetically and medically and not sold in the commercial or legal sense. It was urged against him, that wine and spirits were table luxuries, which he pressed upon his inmates for the purpose of pleasing them, and making their stay as long as possible in his institution; and in this way he derived a distinct profit and this must be construed as retelling spirituous liquors. He was convicted, but the higher courts refused to put aside the verdict.

The institution of sanitariums for alcoholic subjects is a topic which Dr. Knist, of Bromberg, has brought up for discussion in one of the German medical papers. He thinks there is a parallel for it in the institutions that have come into existence for the benefit of lung patients. The difficulty of getting an alcoholic to submit to treatment is well known. Properly qualified physicians are of the first importance. These can influence small circles, but not the masses, with instructive addresses. Both difficulties could be overcome by means of sanitariums for alcoholic patients, which would play a greater role in the battle against alcoholism than the sanitariums for lung patients do in that field. Dr. Knist has worked out a program for such establishments. The chief points are: Interesting entertainment, free medical examination and advice, inducing entrance into a total abstinence society or a drink cure, and advocating the means that are favorable for a cure, education through books and papers, etc.

Dr. Knist has already taken the first step toward the working out of his plan. At his instigation, the Salvation Army in Bromberg has opened

such a place, which has already found favor with the police, and patients are assigned to it by the courts.

With the terrible hereditary degeneration of communities and the allied poverty brought about by alcoholism, and the growing understanding of the injuries from alcohol spreading through the leading circles, one may expect a lively interest in the above proposal, and financial support for its development.—*From the monthly press circular of the German Abstinence Physicians.*

\* \* \*

In many ways the Lay Press have gone far beyond the medical recognition of the alcoholic problem. The following from the Tribune is an example: "What we want most now is a careful exhaustive study of the conditions of the drink habit and the possibilities of the means of cure. This study must be made by a number of experts capable of understanding the problem. It must not be forgotten that prevention is far more important than cure. Keep the child out of the public house and keep the saloon out of the neighborhood, then there will be fewer inmates for institution homes."

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millions of germs. These germs are of a harmless species, and their mission is to drive out of the system disease-producing bacteria, such as are always present in the intestinal tract in cases of *Intestinal Autointoxication*.

**Q**, YOGURT is our name for a remarkable lactic-acid-forming ferment discovered in Oriental milk preparations by Masson, of Geneva, and later investigated by Metchnikoff, of the Pasteur Institute, and other European medical authorities. It has proven a positive remedy for Intestinal Auto-intoxication, and is therefore invaluable in a large number of chronic diseases, particularly in many cases of arteriosclerosis, Bright's disease, skin maladies, chronic rheumatism, rheumatoid arthritis, and chronic biliousness. It is of service in all cases in which stools are putrid, the tongue coated, and the breath bad. It is of great value in typhoid fever and other febrile disorders; also in the intestinal disorders of children, rickets, emaciation and malnutrition.

**Q**, Hitherto this remedy has not been obtainable in this country. It may now be secured, freshly prepared and of superior quality.

**Q**, We have succeeded in preparing this ferment in concentrated form, so that it may be administered in capsules.

**Q**, Packages containing four dozen capsules, each postpaid, \$1.00.

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TO EVERY DRACHM OF FLUID ARE ADDED 15 GRAINS EACH OF PURE CHLORAL HYDRATE AND PURIFIED BROM. POT.; AND  $\frac{1}{8}$  GRAIN EACH OF GEN. IMP. EX. CANNABIS IND. AND HYOSCIAM.—IS THE ONLY HYPNOTIC THAT HAS STOOD THE TEST FOR THIRTY YEARS IN EVERY COUNTRY IN THE WORLD.

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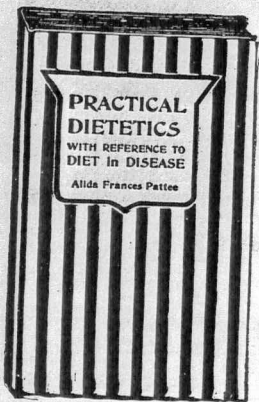
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OPPOSED TO PAIN.

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# Antiphlogistine

(Inflammation's Antidote)



A most useful adjuvant in the treatment of superficial and deep-seated inflammatory conditions when a local application is indicated.

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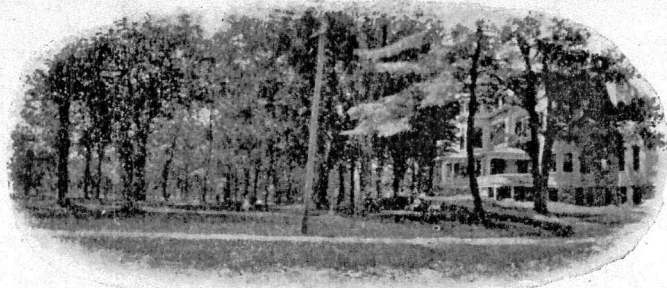
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# “INTERPINES”

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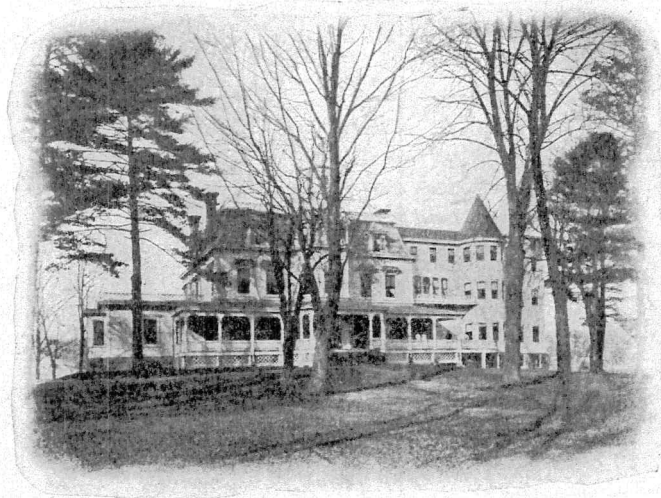
*Situated in the Village of Goshen, N. Y.*

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**No Pain beyond this Gate**

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HEADACHES  
NEURALGIAS  
INSOMNIA  
WOMEN'S  
ACHES & ILLS  
LA GRIPPE

FOR SAMPLES OF ANTIKAMNIA TABLETS ADDRESS  
THE ANTIKAMNIA CHEMICAL CO., ST. LOUIS, MO.

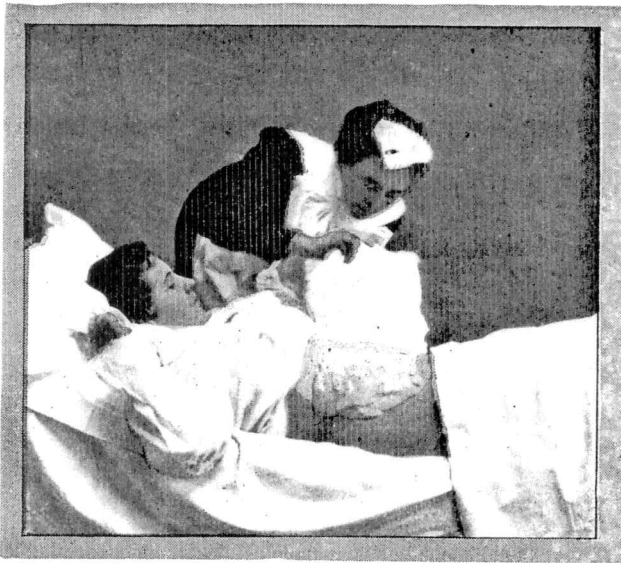
The advertisement features a central illustration of a large wooden gate with a prominent 'AK' logo on its center. The gate is flanked by signs listing various ailments: 'HEADACHES', 'NEURALGIAS', and 'INSOMNIA' on the left; 'WOMEN'S ACHES & ILLS' and 'LA GRIPPE' on the right. Above the gate, the text 'No Pain beyond this Gate' is written in a stylized font, with a small circle containing 'AK' positioned above the gate's center. Below the gate, a small rectangular box contains the text: 'FOR SAMPLES OF ANTIKAMNIA TABLETS ADDRESS THE ANTIKAMNIA CHEMICAL CO., ST. LOUIS, MO.' The entire illustration is set within a decorative, arched frame.

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(Inflammation's Antidote)

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A rational method of treating locally  
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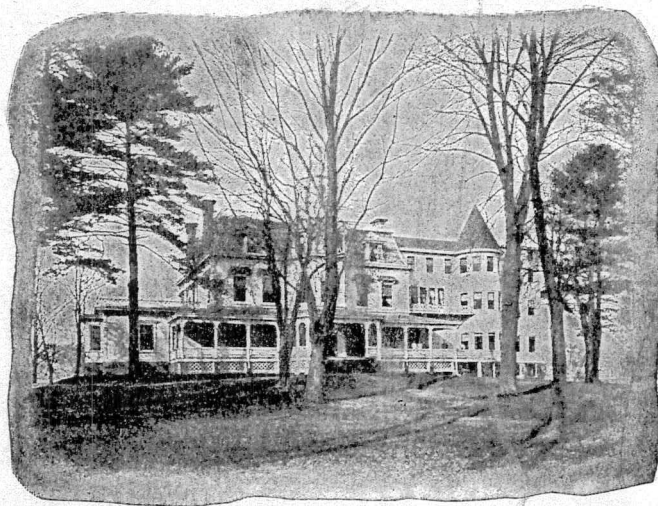
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# Antiphlogistine

(Inflammation's Antidote)



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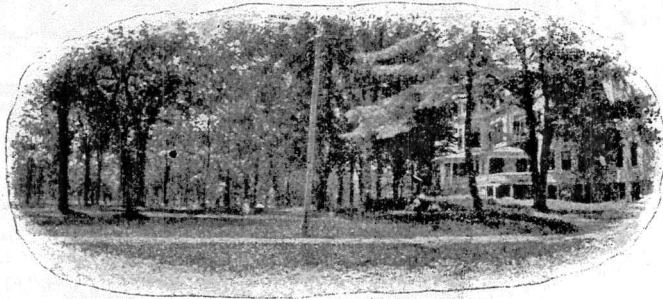
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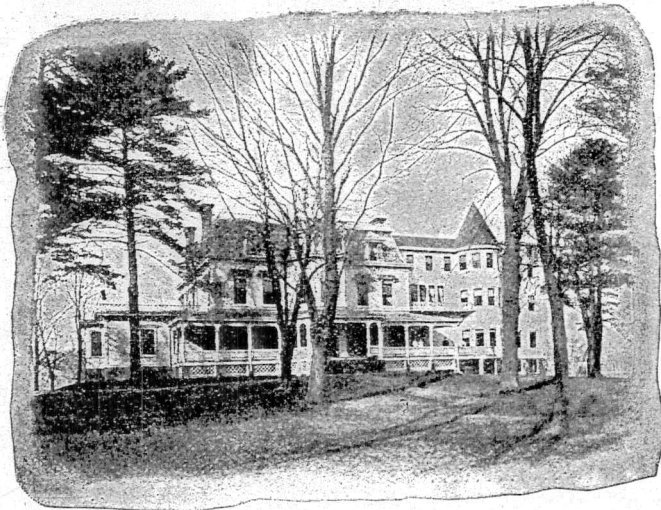
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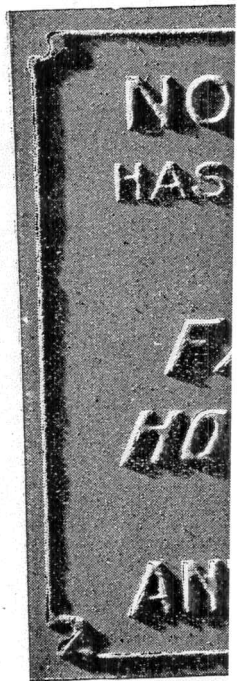
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