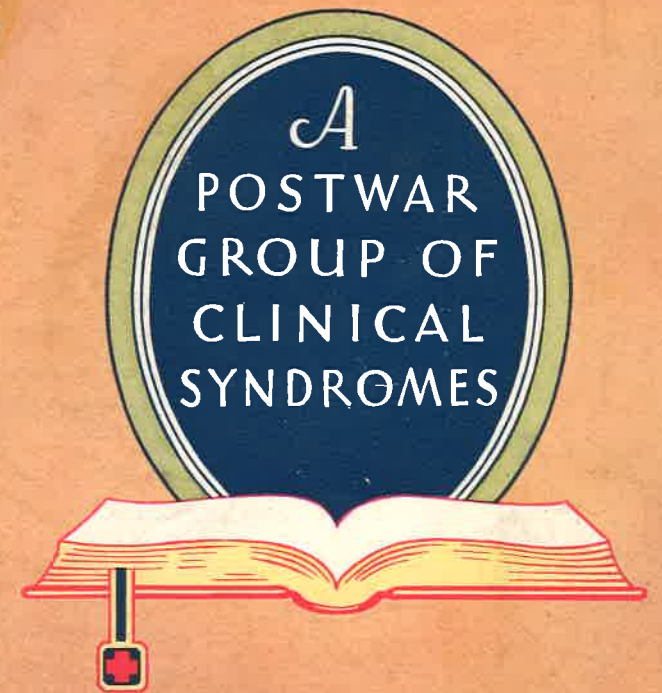




ALCOHOLISMUS AMERICANUS



THIS brochure, written by a registered physician, has no bearing whatsoever on the social, moral or political aspects of Prohibition. Its only aim is to describe the great change in the postwar clinical picture of acute and chronic alcoholism in America, as an aid to effective treatment. Let politicians argue PRO or CON. Let physicians treat conditions as they find them.

ALCOHOLISM AMERICANUS

ALCOHOLISM in America today no longer corresponds to the clinical picture described in medical textbooks. In the last twelve years a new group of syndromes has sprung up, differing markedly from alcoholism abroad or in this country before the War. On the other hand, some of the old familiar sequelae of reckless overindulgence, notably delirium tremens, have largely disappeared.

Two factors are conceded to be responsible for the altered character of alcoholism:

- (1) The greater toxicity of illicit liquor.
- (2) A change in the drinking habits of those who ignore the law.

At the Cook County Psychopathic Hospital, Chicago, Gerty¹ has contrasted the prevalent alcoholic poisoning with alcoholism of previous times. He finds that the following important changes have taken place:

- (1) The poison takes effect more rapidly, and the patient is brought to the hospital sooner because of the gravity of his symptoms.
- (2) A smaller amount of the prevalent beverage is required to incapacitate and the effect is more profound and more often fatal.

(3) Mental deterioration is a common sequel, even after a few sprees.

From the medical standpoint, the treatment of cases of alcoholism today is therefore a more difficult and serious problem than before the War.

LIQUOR, THE GREAT UNKNOWN

To the New Year's Eve reveler, a drink is a drink. To the physician, however, it is the great unknown quality. It may be whisky, but it may also be moonshine or synthetic hooch.

The liquor being consumed today by the defiant element of the public falls into three classes:

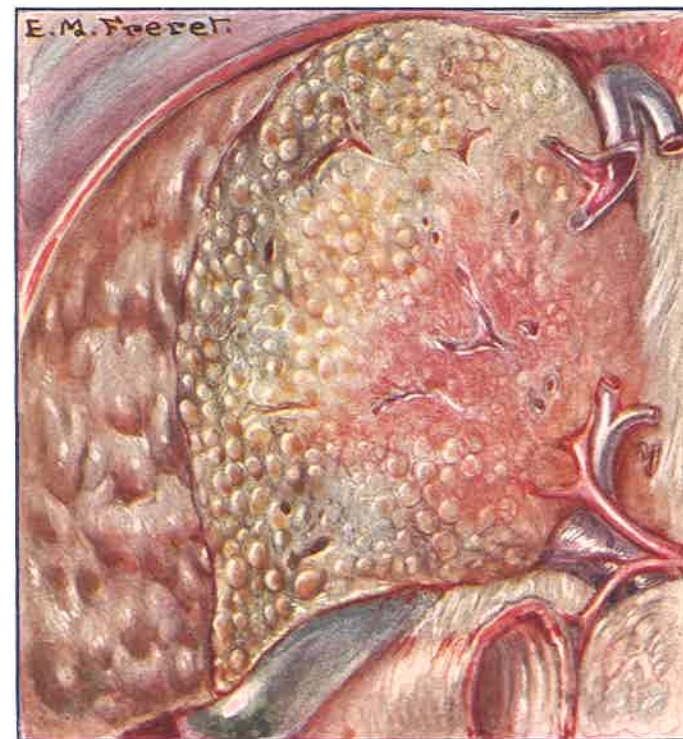
(1) SMUGGLED LIQUOR. A certain amount of liquor, difficult to estimate, is smuggled into the country or obtained fraudulently through forged prescription blanks. Very little of this, however, reaches the consumer. The bootlegger makes it a practice to "cut" such authentic whisky as he can lay his hands on with moonshine or synthetic hooch. The flavor thus conveyed deceives the purchaser into the belief that he has bought "the real stuff."

(2) MOONSHINE WHISKY. Much of the seized liquor comes from the moonshine distilleries. This is definitely more deleterious than true whisky.

Eager for quick profits, the bootlegger does not throw away the "heads" and "tails" of his distillate. The "heads," or first runnings of the distillation, have been shown by Doran and Beyer² in thousands of analyses to contain an unusually high amount of acetaldehyde. The ranker the liquor, the greater the content. The "tails," or last runnings, contain a large quantity of fusel oil, an impure mixture of higher alcohols, principally amyl alcohol.

The presence of these impurities increases the toxicity of moonshine and the rapidity and depth of its intoxicating effect. Absence of aging, also, results in a more irritating liquor.

(3) SYNTHETIC HOOCH. The bootlegger attempts to make a substitute for whisky by combining grain alcohol of good



Hobnail liver (Laennec's cirrhosis) in a man who had been a heavy drinker of bootleg liquor. There is marked fatty degeneration.

quality with artificial flavoring and coloring and perhaps a "cut" of real liquor. But how to get good alcohol often presents a quandary.

Distillation and redistillation of denatured alcohol present the solution, so far as the bootlegger is concerned. If a

specially denatured alcohol is distilled, such as a formula containing brucine for instance, the result is more or less successful, provided the chemist is skillful. But in order to obtain this formula, one must be engaged in making beauty preparations or barbers' supplies, and is placed under heavy bond.



Optic neuritis due to liquor containing wood alcohol. Earlier stage.

Hence the bootlegger turns to completely denatured alcohol, containing a large quantity of wood alcohol, which he can buy very cheap—no questions asked. Anti-freeze mixture for automobile radiators is a frequent source of supply. Since wood alcohol boils at 65° C. and grain alcohol at 78° , it is possible to boil off most of the former, but not all. Even

at 78° , when grain alcohol begins to boil, a small amount of wood alcohol will remain behind. The result is that, no matter how skillfully distillation and redistillation are carried out, a certain amount of poisonous wood alcohol will be consumed. If the procedure is carried out carelessly or hurriedly, this quantity may be dangerous.

Most important of the denaturants remaining over in spurious hooch are methyl alcohol, diethylphthalate and isopropyl alcohol. (Howard³.) Of 100 samples of illicit liquor tested by Hunt⁴, six contained small amounts of methyl alcohol.

Lead and copper are further poisons which may be present in illegal liquor. Vaughan⁵ reported three typical cases of lead poisoning, following sprees of drinking moonshine whisky. Samples of the liquor contained a relatively large amount of lead, which came from a worm in the still made from lead piping. Similarly, Mallory⁶ found that poisonous amounts of copper may be consumed in "home brew" from the action of the distillate on the copper worm of the condenser or a copper cocktail shaker.

QUANTITY AS IMPORTANT AS QUALITY

Many believe that the more violent manifestations of Alcoholismus Americanus are due to excessive consumption of ethyl (grain) alcohol, rather than to any insidious poisons carried by spurious liquor. They point out that, even before the War, most hard liquor sold over the bar was a synthetic mixture of grain alcohol, water, caramel color and flavoring matter. Also, raw, unaged spirits were served in saloons to all but select customers. Mellow, aged whisky was the exceptional drink, reserved for the privileged few who could afford to pay for it.

These men are not insane, although they act as if they were. They are average persons who drink chronically or drink to excess at intervals. Much of their colorful emotional reaction Cowles⁸ attributes to meningeal irritation and edema in the central nervous system.

"A study of the history of these cases reveals that they are now more quickly affected by alcohol than formerly," he says. "Where the patient could formerly take ten drinks with mild effect, one drink is now sufficient to set him off and he is unable to stop. With an increase of the edema there is also a disintegration of the personality. The patient's sexual indulgences become excessive and promiscuous. Cunning trickery takes the place of an open frankness. Their ethical values are disordered. They manifest peevishness and irritation and are harsh in manner and vulgar in speech in total contrast to their normal reaction to life. They will argue with you and take oath before God that they will not do this or that, and have scarcely left you before their oaths have been violated."

Acute alcoholism today, according to Richardson and Blankenhorn⁹, is characterized by early loss of consciousness in a large percentage of cases, a slight febrile reaction, and a transient albuminuria in addition to other signs of intoxication. Bizarre clinical pictures and unusual complications are not uncommon, and sudden death may occur. Alcoholic neuritis at present is characterized by rapid onset. Weakness is the outstanding complaint in 72 per cent of cases and may appear within four weeks of the time of intoxication. Cirrhosis of the liver is essentially the same as before the War.

With respect to acute alcoholic hallucinosis at present, Dr. William C. Garvin¹⁰, Medical Superintendent of Binghamton State Hospital, New York, notes the following differences since the War:

"Patients, owing to the character and quantity of the liquor imbibed, appear more toxic on admission; there is a greater degree of physical prostration than formerly; many of them have to be kept in bed and in order to relieve the toxic and dried-out state, hypodermoclysis of normal saline solution and intravenous injections of solutions of glucose often have to be administered; the sensorium is more clouded; confusion and disorientation are often present; there are more delirious admixtures; hallucinations are often dream-like in character and are frequently of the combined type, *i.e.*, both visual and auditory in nature; they have a hazy recollection of the acute phase of the disease. This is in striking contrast to the acute alcoholic hallucinant observed prior to the war, who could ordinarily give quite an excellent account of all that transpired during the acute stage. Recovery is more gradual now-a-days. While the onset is usually fairly acute, the auditory hallucinations are not so outstanding as formerly, and there is a great deal less systematization. Moreover, on account of the prostration, toxic delirious state and clouding of the sensorium, there is less acute anxiety and fear. Hallucinations, when they do appear, are usually of a threatening, persecutory, defamatory character, and in men there is often observed hallucinations of a homosexual nature, while accusations of immorality and infidelity are common in women."

At the Central Oklahoma State Hospital, Dr. Charles A. Brake¹¹ has observed that clouding of consciousness is deeper and more noticeable in the post-Volstead type of alcoholism. He also comments on the action of raw distilled corn in giving abundant "kick" and at the same time developing a rather severe trophic neuritis, accompanied by a dermatitis which closely resembles that of pellagra, both as to appearance and distribution.

Sudden blindness (toxic amblyopia) may result from a single spree. It is generally due to a poisonous content of wood alcohol. In moderate cases gradual recovery takes

place; but, if the content of wood alcohol is extremely high, loss of vision may be permanent. In some cases there is temporary recovery followed by gradually increasing amblyopia.

ALCOHOLIC INTOXICATION SIMULATING ACUTE SURGICAL ABDOMEN

Severe abdominal pain, vomiting, muscular rigidity, shock, fever and leukocytosis may be the outstanding features in some cases of moonshine poisoning. (Brams and Vaughan¹².) The condition may resemble "acute surgical abdomen" so closely that operation may be considered when the patient first enters the hospital.

The history of an alcoholic debauch often cannot be obtained, because some patients deliberately make misstatements. Others are incoherent.

The simulation of abdominal symptoms of "acute surgical abdomen" may lead to much confusion when appendicitis, empyema of the gallbladder, ruptured gastric ulcer or generalized peritonitis is suspected. Errors in diagnosis may be avoided by keeping in mind the possibility of acute alcoholism and ascertaining from sources other than the patient himself whether there has been a spree.

RENAL IRRITATION

Albuminuria is much more common in alcoholism in 1932, as contrasted with the disease before the War. The cause, as has been abundantly proved, is renal irritation.

The nature of the substance in moonshine liquor that irritates the kidneys is not known, except that it is not ethyl alcohol. At the University of North Carolina, MacNider¹³ found that ethyl alcohol administered to dogs over periods of weeks did but slight injury to the kidneys. But when an unrefined distillate (corresponding to moonshine) was given, it caused pronounced albuminuria in normal animals. In nephropathic dogs the effects were still more pronounced. The quantity of urine was reduced, the elimination of phenolsulphonephthalein decreased, retention of nonprotein nitrogen in the blood increased, and the alkali reserve reduced. Both the glomeruli and tubular epithelium showed evidences of injury.

Since renal irritation is so common a feature in the present form of alcoholism, it is wise to examine the urine repeatedly in every case and watch out for the earliest indications of nephritis or nephrosis.

TREATMENT OF ACUTE ALCOHOLISM

The aim of treatment in acute alcoholism is to procure sleep and restore strength. To this end a sedative should be administered, but one which is entirely free from toxic effects.

For years a combination of bromide with chloral was a favorite prescription, but more recently chloral has been omitted because of its depressing action on the heart. Hare¹⁴ admonishes that chloral must be given cautiously in alcoholism, for fear it may depress the heart, which is already diseased by alcoholic excess. "Cases are on record," he continues, "in which chloral has caused sudden death from

cardiac failure in alcoholics with fatty heart — an accident the liability to which is increased by the fact that owing to the addiction of the patient to a narcotic drug it requires large doses of the chloral to produce sleep.”

Jelliffe and White¹⁵ state that heart stimulants (digitalis, caffeine, strychnine) are often necessary to combat cardiac failure, and hypnotics to induce sleep and give rest. The latter should be carefully selected with reference to the patient's condition, depressing agents, such as chloral, giving place to safer ones.

In view of the fact that sudden death is not uncommon in the present-day type of acute alcoholism, cautious physicians have discarded all other sedatives and hypnotics for Neurosine, the safe soporific, which has never yet caused a death. Neurosine is a superior form of bromide medication, free from the disadvantages of bromism and cumulative effect. It is a balanced formula of the bromides of potassium, sodium, ammonium and zinc, with the therapeutic synergists, belladonna, cannabis indica, henbane and lupulus. Sollmann¹⁶ suggests that, since the long continued administration of large doses of a single bromide would be expected to disturb the cation balance of the body, a mixture of bromides might have advantages. Neurosine is such a mixture, with therapeutic adjuvants, designed to overcome the disadvantages of the single bromide.

The bromide salts and other ingredients of Neurosine are of the highest quality and purity obtainable. This is very important, because a cheap and contaminated form of bromide may be supplied on prescription if the manufacturer is not specified. There is no uncertainty as to the quality or purity of the drugs when the prescription calls for Neurosine.

After an effective dosage of Neurosine the excited, agitated alcoholic becomes quiet and docile. Soon he lapses into a restful slumber, during which he sleeps off the effects of his “jag.”

NEUROSINE CONTRIBUTES TO EARLY RECOVERY

Indirectly, Neurosine saves life in acute alcoholism by quieting the patient without recourse to dangerous drugs.

Neurosine is absolutely safe, yet it produces tranquillity in the most excited mental states. Hence it has completely superseded chloral hydrate, that death dealing drug which has suddenly snuffed out the lives of countless scores of alcoholic patients. Says Webster¹⁷, “Chloral hydrate has been somewhat widely used as an hypnotic, but of recent years it has fallen into disrepute, owing to its dangerous action upon the heart.”

Neurosine should also be prescribed in place of that insidious drug, barbital, concerning which Dr. Webster¹⁸ writes, “Many reports of chronic poisoning are finding their way into the literature, owing to the fact that elimination of the drug is slow and cumulative effects are prone to arise.”

THE SAFE SEDATIVE AND SOPORIFIC

Even when taken with suicidal intent, Neurosine has never caused a death. In the case reported by Dr. Paul C. Smith¹⁹ a tremendous overdose had no effect other than to

produce profound and prolonged sleep, from which the patient finally awoke thoroughly refreshed.

The patient was a discouraged woman, 36 years old, who took 6 ounces of Neurosine at once with the deliberate purpose of killing herself. Three hours later she was found in a deep sleep, from which she could not be aroused. Pulse, respiration, pupils, skin, muscular tone and all other physiological reactions were perfectly normal.

The patient woke up forty-three hours after taking the Neurosine, "at which time she was in her usual normal condition and appeared none the worse for her long nap."

"The recovery, or rather, the return to consciousness in this case, was absolutely without any untoward symptoms and the only departure from normal condition was the deep sleep, or stupor," writes Dr. Smith, "showing very clearly that Neurosine does not disturb the functions, does produce quiet and sleep, and will not leave the patient in any disturbed condition following even large doses. There was at no time, while under the influence of the drug, any departure from the normal state."

It is this absolute safety in large dosage that makes Neurosine the sedative and soporific of choice for the patient who is already poisoned with one drug — alcohol. Considering the fact that Neurosine does not depress the heart, its choice in preference to chloral hydrate, barbital or other depressants proves a life-saving measure.

DOSAGE IN ACUTE ALCOHOLISM

While the ordinary dose of Neurosine (1 dessert-spoonful or 2 fluidrams) is effective as a sedative or soporific for most conditions, the violence of the symptoms of acute alcohol-

ism as the physician sees the condition today frequently requires a larger dosage. Therein lies the great advantage of Neurosine, in that many times the therapeutic dose can be given without the slightest untoward effect.

To procure needed rest, it is advisable to administer 1



Section through kidney in case of nephrosis due to excessive consumption of "moonshine" liquor.

tablespoonful ($\frac{1}{2}$ fluidounce) of Neurosine, to be repeated in two hours, again in three hours, and still again in four hours. This dose is to be continued at intervals of four hours until restful sleep supervenes.*

* This schedule of dosage was suggested by Dr. S. F. Priestley, of Stockton, California, after many years' experience with Neurosine and observation of many cases of acute alcoholism.

With this treatment there may be complete recovery in forty-eight hours. The patient, in many cases, reports that he is thoroughly refreshed after his long sleep and experiences no headache or ill effect whatever.

In addition to Neurosine as a sedative, the patient with acute alcoholism should be given cardiac stimulants if the heart is embarrassed. If he is comatose, external heat and hypodermic injections of atropine, strychnine or camphor are indicated.

AN EFFECTIVE TREATMENT FOR "HANG-OVER"

Following alcoholic debauches, the victim invariably suffers on one or more succeeding days from disagreeable symptoms popularly known as "a hang-over" or "the morning after the night before." The principal disturbances are violent headache, giddiness, nervous irritability and upset stomach.

Formerly the physician was not often consulted for "hang-over," because the public more or less regarded it as a normal episode in a man's life. Nowadays, however, the danger of moonshine and poisoned hooch is so widely recognized, that the indiscreet debaucher frequently hurries to his doctor for relief and reassurance.

Neurosine affords effective relief for the alcoholic "hang-over." It calms the tense nervous system and alleviates headache, leading to tranquil sleep, from which the patient will awake feeling fit and thoroughly refreshed. Generally 1 dessert-spoonful (2 fluidrams) every three hours is sufficient. It may be administered in conjunction with carbonated beverages, which are usually well tolerated by the finicky stomach.



Dermatitis resembling that of pellagra, due to consumption of raw distilled corn.

FURTHER INDICATIONS FOR NEUROSINE

Neurosine is a sedative and soporific of wide application. The following are among its principal indications in addition to acute alcoholism.

INSOMNIA. Sleep induced with Neurosine closely approaches natural sleep. There are no disagreeable after-effects, no drowsiness, headache or other handicaps on the following day. Nor is there any danger of habit formation, because the patient can generally dispense with medication after enjoying a few nights' sound rest. Above all, sleep induced by Neurosine is *absolutely safe*.

EPILEPSY. With effective dosage of Neurosine, graduated to the individual case, 90 per cent of epileptics remain free from seizures or suffer only mild and infrequent paroxysms. To avoid the cumulative effects of phenobarbital, some physicians who use this drug give it and Neurosine on alternate weeks.

NEUROSES. Neurosine is specific treatment for the neuroses — hysteria, neurasthenia, psychasthenia and anxiety neurosis. In practically all cases it can be depended upon to provide rest, mental poise and freedom from emotional instability.

SEXUAL EXCITEMENT. Being an efficient anaphrodisiac, Neurosine can be relied upon to relieve all states of excessive or abnormal sexual craving, including satyriasis, nymphomania, priapism and chordee.

MENOPAUSE SYMPTOMS. The hot flushes, head throbbing, vasomotor relaxation and nervous instability of this trying period of life yield quickly to medication with Neurosine.

VOMITING OF PREGNANCY. In the average case, or when hyperemesis gravidarum is of neurotic origin, Neurosine alleviates the distress.

SYDENHAM'S CHOREA. By virtue of its antispasmodic action, Neurosine diminishes nervous twitching and inco-

ordination. It does not interfere in any way with administration of Fowler's solution or other medication for chorea.

OTHER INDICATIONS. Neurosine affords effective treatment for gastric, cardiovascular and visceral neuroses; acts as a safe and efficient sedative in exophthalmic goiter and other forms of hyperthyroidism; prevents seasickness, when taken for two or three days before sailing; and allays the distressing spasms of whooping-cough.

DOSAGE AND ADMINISTRATION

The average dose of Neurosine is 1 dessertspoonful (2 fluidrams) with water three or four times daily. Children in proportion.

In *acute alcoholism* a larger dose at more frequent intervals is generally required and can be given with complete safety. This application is discussed more fully on page 17.

In *epilepsy*, the dose should be adjusted to the individual patient. The ideal dose is the smallest amount that will keep the patient free from seizures.

To *induce sleep*, a dessertspoonful of Neurosine should be taken an hour before bedtime and repeated just before retiring, if drowsiness has not already supervened.

A PRESCRIPTION PRODUCT

Neurosine is an ethical prescription product, advertised only to physicians. It is supplied in bottles containing 2, 4 and 8 fluid ounces, respectively.

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The complete formula and
a clinical test quantity of
Neurosine will be mailed
to physicians on request.

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