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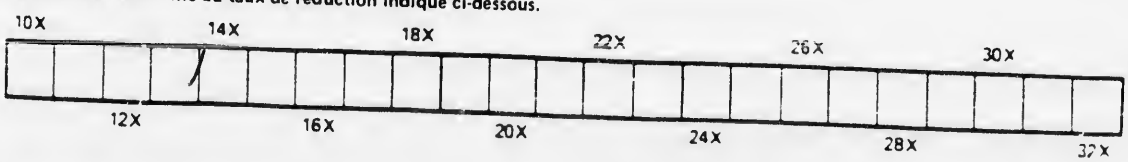

CATECHISM

—ON—

ALCOHOL AND TOBACCO.

BY D. H. MANN, M.D

1893.

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LESSON I.

Q. What is it that makes men drunk, or intoxicated, when they drink liquor?

A. Alcohol.

Q. What name did it have before it was called alcohol?

A. Spirit of wine.

Q. What is alcohol?

A. A clear, liquid poison.

Q. What does it look like?

A. It looks like water.

Q Has it any odor or smell?

A. It has a strong odor.

Q. How does it taste?

A. It has a strong, burning taste.

Q. Where is it found in a natural state?

A Nowhere.

Q. If nowhere to be found in nature, where is it obtained?

A. It is obtained from grains and fruits.

Q. In what way is it thus obtained?

A. By fermentation.

Q. What is fermentation?

A It is the decomposition of vegetable substances which contain sugar.

Q. How does fermentation produce alcohol?

A. By setting free carbonic acid gas and separating the starch and sugar of the grain or fruit that is used.

Q. What happens then?
A. The sugar is converted into alcohol.
Q. Does sugar contain alcohol?
A. It does not in its natural state, but may be changed by fermentation so as to produce it.
Q. Is alcohol necessary to the health of man?
A. It is not.
Q. Is it injurious to man in health?
A. It is.
Q In what way does it injure health?
A. It poisons his blood, his nerves and his brain.
Q. Can you mention some drinks that will produce drunkenness?
A. Whisky, rum, gin and brandy, beer, wine and cider.

LESSON II.

Q. Is the alcohol in all the intoxicating drinks the same?
A. It is the same, but there is more of it in some than in others.
Q. Does alcohol strengthen man in any way?
A. It does not.
Q. Do men, like oarsmen or pedestrians, when preparing for great exertions, use alcohol?
A. They do not touch it at all.
Q Why do they not use it?
A. Because they know it would impair their nerves and weaken their muscles.

Q. Is alcohol nourishing?

A. It is not.

Q. If corn, or other grain from which alcohol is made is nourishing, why is not the alcohol also nourishing?

A. Because the nourishing properties are destroyed by fermentation.

Q. What have we learned that alcohol is?

A. A poison.

Q. Can you tell what a poison is?

A. It is any substance which, taken into the system, produces an injurious or unnatural effect upon one or more of the organs of the body.

Q. How is it known that alcohol acts as a poison?

A. By different organs of the body becoming diseased in persons who drink it.

Q. How do we know that they do become diseased?

A. By the testimony of learned medical men who have made experiments.

Q. When we speak of drinking alcohol, do we mean that people drink pure alcohol?

A. No.

Q. What do we mean, then, when we speak of persons drinking alcohol?

A. We mean that they swallow drinks that contain more or less of alcohol.

Q. Is cider a poison?

A. It is to the extent of the alcohol it contains.

Q. What is cider?

A. It is the expressed juice of apples.

Q. Does cider always contain alcohol?

A. It does, after fermentation has begun.

Q. How soon does fermentation begin?

A. In some cases it begins probably immediately after, or very soon after the juice is expressed.

Q. Will cider then intoxicate?

A. It will.

Q. Then the only safe rule is not to drink cider at all?

A. Yes.

Q. Can you give any other reason why we should abstain from drinking cider?

A. It is written: "It is good neither to eat flesh nor to drink wine, *nor anything* whereby thy brother stumbleth, or is offended, or is made weak."

Q. Mention some other fruits the fermented juice of which is intoxicating?

A. Grapes, pears, peaches and currants.

Q. What is sometimes added to the juice of fruits to hasten fermentation?

A. Sugar.

LESSON III.

Q Who first looked into the human stomach to see the effects of alcohol there?

A. Dr. Beaumont.

Q. Who was Dr. Beaumont?

A. Dr. Beaumont was an American army surgeon on the Canadian frontier about the year 1822.

Q. How did he look into a stomach?

A. He looked into the stomach of Alexis St. Martin through an opening in his side and stomach.

Q. What made this opening?

A. The accidental discharge of a gun.

Q. Was it a permanent opening?

A. It was.

Q How long was it in healing?

A. It took two years to heal and get entirely well.

Q. If it was healed how could it have been permanently open?

A. The edges of the wound healed without coming together, and left an opening so that you could look right into St. Martin's stomach.

Q. How, then, were the contents of the stomach kept in?

A By wearing a pad over the opening.

Q. Then by giving alcohol to St. Martin, and then looking into his stomach through this opening, you could see some of the effects that alcohol produced there?

A. Yes.

Q. Did Dr. Beaumont give St. Martin alcohol?

A. He introduced various kinds of alcoholic drinks into his stomach at different times.

Q. Did he examine its effects through the opening?

A. He made a great many examinations in that way for several years.

Q. What did Dr. Beaumont discover from alcohol in that way?

A. He discovered that it irritated and inflamed the stomach and retarded digestion.

Q. What is irritation?

A. It is an excited condition with increased heat and redness, together with unnatural distension of the blood vessels of the part affected.

Q. Is that an indication of the danger of inflammation?

A. It is.

Q. What is digestion?

A. It is the dissolving of food in the stomach and preparing it to nourish the body.

Q. What is necessary in order that food may be digested?

A. Food cannot digest without pepsine, which is contained in the gastric juice of the stomach.

Q. When alcohol in any form is mingled with the food, what happens?

A. The greater part of the pepsine is separated, the gastric juice is impaired and cannot act as well as in the natural state.

Q. When digestion is retarded in that way, how and when does it resume its natural state?

A Not until the alcohol leaves the stomach.

LESSON IV.

Q. How did Dr. Beaumont discover that alcohol retarded digestion in St. Martin's stomach?

A. He often inserted pieces of meat into St. Martin's stomach through the opening, and after digestion was thoroughly under way he would introduce some alcohol, when the digestion would stop.

Q. Since St. Martin's time, have other persons had openings in their stomach and been experimented upon in the same way?

A. There have, and always with the same results.

Q. Can you mention any other experiments?

A. Young puppies of the same size and age have had pieces of beef forced down their throats, and after time for digestion to be well under way alcohol was introduced into the stomach of one, through a tube, when after five hours both puppies were killed, and the one having no alcohol had entirely digested the meat, while the one with the alcohol had a hard, undigested piece of the beef in his stomach.

Q. What was the effect of the long-continued use of alcohol in St. Martin's stomach?

A. It produced ugly sores and ulcers there.

Q. Were those sores painful?

A. Not at all.

Q. Did they ever heal?

A. They did after the alcohol was no longer used.

Q. While using alcoholic drinks, did St. Martin have any unpleasant or bad feelings?

A. He was weak, and often sick at the stomach.

Q. Can any one use any of the intoxicating drinks for a length of time and keep a healthy stomach?

A. He cannot.

Q. When the stomach has red and purple spots or blotches in it, do they appear in any other place?

A. They almost always appear on the face and nose, looking almost exactly like those in the stomach.

Q. When you see upon a drunkard's face red spots or blotches, what is a fair presumption as to the condition of his stomach?

A. That his stomach is in the same condition.

LESSON V

Q. What common illustration do we have to prove that alcohol retards digestion?

A. Drunkards who drink for two or three days without eating, sometimes become sick at the stomach, when food that was eaten two or three days before is vomited, and is found to be undigested.

Q. Can you mention some other disease in drinkers?

A. Cancer of the stomach is not uncommon.

Q. Do people die of cancer in the stomach from drinking?

A. Such cases have often been seen by physicians.

Q. What can you tell us of the liver?

A. The liver often becomes greatly enlarged in drinkers

Q. How does it become enlarged by drinking?

A By great accumulations of fat in it and on it.

Q. What is it called?

A. It is called "gin liver."

Q How much does it sometimes increase?

A. A healthy liver weighs from three to four pounds, a "gin liver" often weighs eight, and sometimes ten, and even twelve pounds.

Q. Are those cases confined to confirmed drunkards?

A. They are not, but quite as often are found in moderate drinkers.

Q What about the lungs?

A. The lungs of drinkers are often diseased

Q How?

A. Sometimes by fatty deposits in and around them, and sometimes by little hard deposits, called tubercles.

Q. Do people ever die of these diseases from drink?

A. They do; very many of them.

Q. Can you mention any other organs diseased from drinks?

A The kidneys, the spleen, the heart and blood vessels, and even the muscles.

Q Can you mention any others?

A. The brain and the nerves are frequently diseased.

Q. How can any one prevent alcohol from producing those diseases in them?

A By never tasting intoxicating liquors of any kind.

Q. What is best for man to drink?

A Pure water.

Q. Who gives it to us?

A. God.

LESSON VI.

Q. What is the only drink that will quench thirst?

A. Water.

Q. Why is it that other drinks, milk, for instance, quench thirst?

A. Because they contain water.

Q. Does alcohol quench thirst?

A. It does not, but increases it.

Q. How does alcohol increase or produce thirst?

A. By absorbing some of the moisture of the parts of the body with which it comes in contact.

Q. Does alcohol nourish the body?

A. It does not.

Q. Why does it not nourish the body?

A. Because it is not food, and has no nourishing properties.

Q. Does alcohol build up the body, or strengthen it in any way?

A. It does not.

Q. Why does it not strengthen?

A. Because it can never be assimilated or form a part of the body.

Q. What, then, becomes of it?

A. It goes into the blood vessels, and mixes with the blood, and circulates with it to every part of the body.

Q. What is its general effect?

A. It irritates and poisons every point it touches, just as it does the stomach.

Q. Does it have any bad effect upon the blood?

A. It does.

Q. In what way does it injure the blood?

A. It hardens the albumen in it.

Q. What is albumen?

A. It is one of the principal parts of the blood.

Q. What is albumen like?

A. It is like the white of an egg, which *is* albumen.

Q. In what way does alcohol harden the albumen?

A. By absorbing the water from it.

Q. Is there much water in albumen?

A. There is.

Q. Why does alcohol absorb water?

A. Because it has a strong affinity or liking for

water, and always absorbs it when they come together.

LESSON VII.

Q. What other parts of the body are similarly affected?

A. The nerves that run alongside the blood vessels.

Q. How do the nerves look when poisoned by alcohol?

A. They look like threads with knots tied in them.

Q. How do they look in health?

A. They look like threads without knots.

Q. What are those knots?

A. They are little hardened lumps of albumen.

Q. What other organ is injured in the same way?

A. The brain.

Q. How much albumen is there in the blood, the nerves and the brain?

A. Each contains about forty parts in every hundred.

Q. Do other organs of the body contain albumen?

A. Many of them do, but in less quantities.

Q. When alcohol meets albumen in those organs, does it have the same hardening effect?

A. It does.

Q. When a man drinks alcohol, how does any of it get to the brain?

A. It is absorbed by the veins and becomes mingled with the blood, and is circulated with it to the brain and to every part of the body.

Q. In what other way does it get into the blood?

A. By mingling with the food and being taken up with it by the vessels of the body.

Q. Has alcohol ever been found in the brain of a drunkard after death?

A. It has very many times.

Q. How did they know it was alcohol?

A. Sometimes by the odor; and it has been found so strong that when touched with a lighted taper it burned in a little blue flame.

Q. What other appearance of alcoholic poisoning does the brain of a drunkard present?

A. The blood vessels are irritated and congested, and the brain presents a reddish appearance.

Q. What is the result of this irritation?

A. It often produces disease of the brain, headache, loss of sleep, and sometimes *delirium tremens*.

LESSON VIII.

Q. Does the use of alcohol affect the mind?

A. It does.

Q. In what way?

A. It stupifies the brain and produces forgetfulness.

Q. How can we know this?

A. By the difference in the appearance of persons when under the influence of intoxicating drinks, and when they are sober.

Q. Does it require a large amount to produce that effect?

A. Not always. Frequently small quantities will make a man appear almost like an idiot, and sometimes like a wild man.

Q. What is the effect of a larger amount?

A. When it does not stupify it sometimes makes a man crazy.

Q. Can you mention other bad effects of alcohol on the brain and mind?

A. It makes men quarrel, fight, steal and murder.

Q. What proportions of the crimes in this country are commited in consequence of strong drink?

A. About four-fifths.

Q. Why do children sometimes have a strong appetite for intoxicating drinks?

A. Because their fathers or mothers were drunkards.

Q. Do children sometimes inherit the desire to drink from drunken parents?

A They do, in many instances.

Q What is one of the greatest calamities that can befall a person?

A. It is to have an imperfect or diseased mind.

Q. What is the mind?

A. It is the thinking power.

Q. Can you define the mind in any other way?

A. It is the spirit or soul, which elevates man above the brutes.

Q. Is it safe for any one to drink intoxicating drinks occasionally?

A It is not safe to drink them at all.

Q. Why not?

A. Because it creates a desire to drink, and weakens not only the body, but the mind.

Q Then what follows?

A. The person drinks more and more till he becomes a drunkard.

Q How can all these terrible results be avoided?

A. By never using as a beverage a drop of any kind of wine, beer, or cider, or any other kind of alcoholic drinks.

LESSON IX.

Q. Into how many classes are liquors divided?

A. Into two, fermented and distilled.

Q. What are fermented liquors?

A. Those made by the fermentation of anything which contains sugar.

Q. Mention some of them?

A. Wine, beer, cider, ale, and porter,

Q. What are distilled liquors?

A. Those that are obtained from the steam of boiling fermented liquors.

Q. How is the steam caught or confined?

A By a pipe fastened to the cover of the vessel through which the steam must pass.

Q How is that steam converted into a liquid?

A By the pipe passing quite a distance through a vessel of cold water.

Q What effect does the cold water have upon it?

A. It cools the pipe so that the steam passing along it is condensed and becomes a liquid again, and runs out of the pipe

Q What is that liquid called?

A. It is called distilled liquor.

Q. Will you name some of the distilled liquors?

A. Whisky, rum, gin, and brandy.

Q. When was the distillation of alcohol discovered?

A Not until the eleventh century.

Q. By whom was it discovered?

A By the Arabians.

Q How did the habit of drinking, then, become fastened upon the people?

A By the false impression among them that distilled liquors were a cure for all diseases.

Q. How long did that ignorant impression prevail?

A. For hundreds of years

Q. What classes of people were thus deceived?

A. All classes—the high and low, the rich and the poor.

Q. Did the liquor traffic first become established in that way?

A. It did, and has cursed the world ever since.

LESSON X

Q. Under what general name are beer, ale and porter known?

A. Under the name of malt liquors.

Q. What is malt?

A Malt is grain soaked in warm water until it sprouts, then roasted or dried, and from it beer is made.

Q. Is there also a spirit distilled from malt?

A. There is, and it is called malt spirit

Q. What grain is generally used?

A. Barley

Q. What is the process of beer-making called?

A. It is called brewing.

Q. What is the building in which it is made called?

A. It is called a brewery.

Q. Why is barley soaked and sprouted for making beer?

A. For the purpose of separating the starch from the grain, and converting it into a form of sugar.

Q. What is the sugar thus formed called?

A. It is called glucose.

Q Why is that change required?

A. Because the sugar must be set free to produce the alcoholic beer.

Q After the barley is sprouted and dried, what is done?

A. The malted grain is crushed between rollers and soaked in water again to a *mash.*

Q Why is it soaked in water after it is dried?

A. To wash out the sugar.

Q. What is that liquid called?

A "Sweet wort."

Q. How is the sweet wort separated from the mash?

A. By a sort of strainer in the bottom of the mash tub.

Q How is beer obtained from the sweet wort?

A By boiling hops in it, after which it is cooled and put into large vats, and yeast added to make it ferment.

Q. What change does this fermentation produce?

A. A poisonous carbonic acid gas is formed and set free, which leaves all the glucose, or sugar, to form into alcohol, which remains in the beer.

Q. What becomes of the gas?

A. Being heavier than air, it settles down upon the surface of the fermented mass, or runs down into empty vats near by, or to the floor of the room.

Q. Is this carbonic acid gas a deadly poison?

A. It is, and men sometimes die from breathing it

Q. Does it kill rats that may run into the vats, or on the floor where it is settled?

A. It does.

Q. What does the great German chemist, Baron Liebig, tell us about beer?

A. He tells us that if a man should drink eight quarts of best Bavarian beer every day (equal to lager beer), it would take him a year to receive as much nourishment from it as is contained in three pounds of beef.

Q What do we learn of the nourishing quality of beer from Professor Liebig's statement?

A We learn that we should be obliged to drink seven hundred and thirty gallons of beer to obtain as much nourishment as we would by eating three pounds of beef.

Q. How many barrels of beer would have to be drunk to obtain the nourishment equal to three pounds of beef?

A. It would require over twenty-three barrels.

LESSON XI.

Q. What bad habit besides liquor-drinking is very common among the people?

A. Smoking and chewing tobacco.

Q. What is tobacco?

A. It is a poisonous plant.

Q Why is it called poisonous?

A. Because persons when first using it generally become very sick, and sometimes almost die.

Q. Can death be produced by it?

A. It can.

Q. How much would it require to kill a person?

A. Sometimes one chew will kill a person not accustomed to it.

Q Does the system after a time become accustomed to its effects so it will not sicken?

A. Generally it does

Q. Is tobacco an unwholesome article to use?

A It is; it makes many people grow thin in flesh, and makes them nervous, peevish and cross.

Q. How does it affect the mind?

A It has a stupefying effect upon the brain, and makes men forgetful

Q What other effects can you mention?

A. It produces nervous diseases, and sometimes paralysis.

Q What effect does it often have upon the heart?

A. It often makes it beat irregularly and too rapidly.

Q What effect does tobacco have upon digestion?

A. It interferes with and delays it?

Q. Why?

A. Because the stomach is deprived of much of the saliva from the mouth, which should be mixed with the food.

Q. Where, then, does the saliva go, if not swallowed?

A. It is spit out of the mouth by the chewer and smoker.

Q. Where is it spit?

A. On office floors, up and down stairways, in

church pews, on floors of railway cars and steamboats, on sidewalks, and sometimes even in the corners of ladies' parlors

LESSON XII.

Q. Can you mention a common and dangerous disease produced by smoking tobacco?

A Cancer of the lip

Q. Are cancers of the lip common among smokers?

A. They are

Q What is generally done to cure them?

A. They have to be cut out.

Q Does that always cure them?

A. Not always.

Q Do they sometimes appear again?

A. They do, and a second operation is performed.

Q. Does the second operation always cure?

A. It does not, but the disease sometimes goes on till it produces death.

Q Does the use of tobacco create a desire for liquor?

A. It does in a great many instances, and almost every drinker uses tobacco.

Q. Are cigarettes more dangerous even than common cigars?

A. They are, because some of them contain opium

Q What is opium?

A. The poisonous juice of the poppy.

Q What effect does the opium have?

A. It has a soothing effect, and creates a desire to smoke more and more.

Q. Does the practice of using tobacco make a man or a boy appear more gentlemanly?

A. It does not, but gives him a disgusting appearance.

Q. What effect does smoking or chewing have upon the breath?

A. It makes it very offensive.

Q. Would you think a gentleman would ever be seen smoking in the presence of a lady?

A I would not, for it is generally offensive to ladies, and tobacco smoke makes some sick

Q. When smoking in company where do smokers generally puff their smoke?

A. They generally puff it into other people's faces

Q. How does that effect those who do not smoke?

A. They are made very uncomfortable, and to some it is so disgusting that they are made ill by it.

Q Will you ever be a smoker?

A. I will not.

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