

**An enquiry into the effects of spirituous liquors upon the human body, and their influence upon the happiness of society / by Benjamin Rush, M.D. Professor of the theory and practice of medicine in the College of Philadelphia.**

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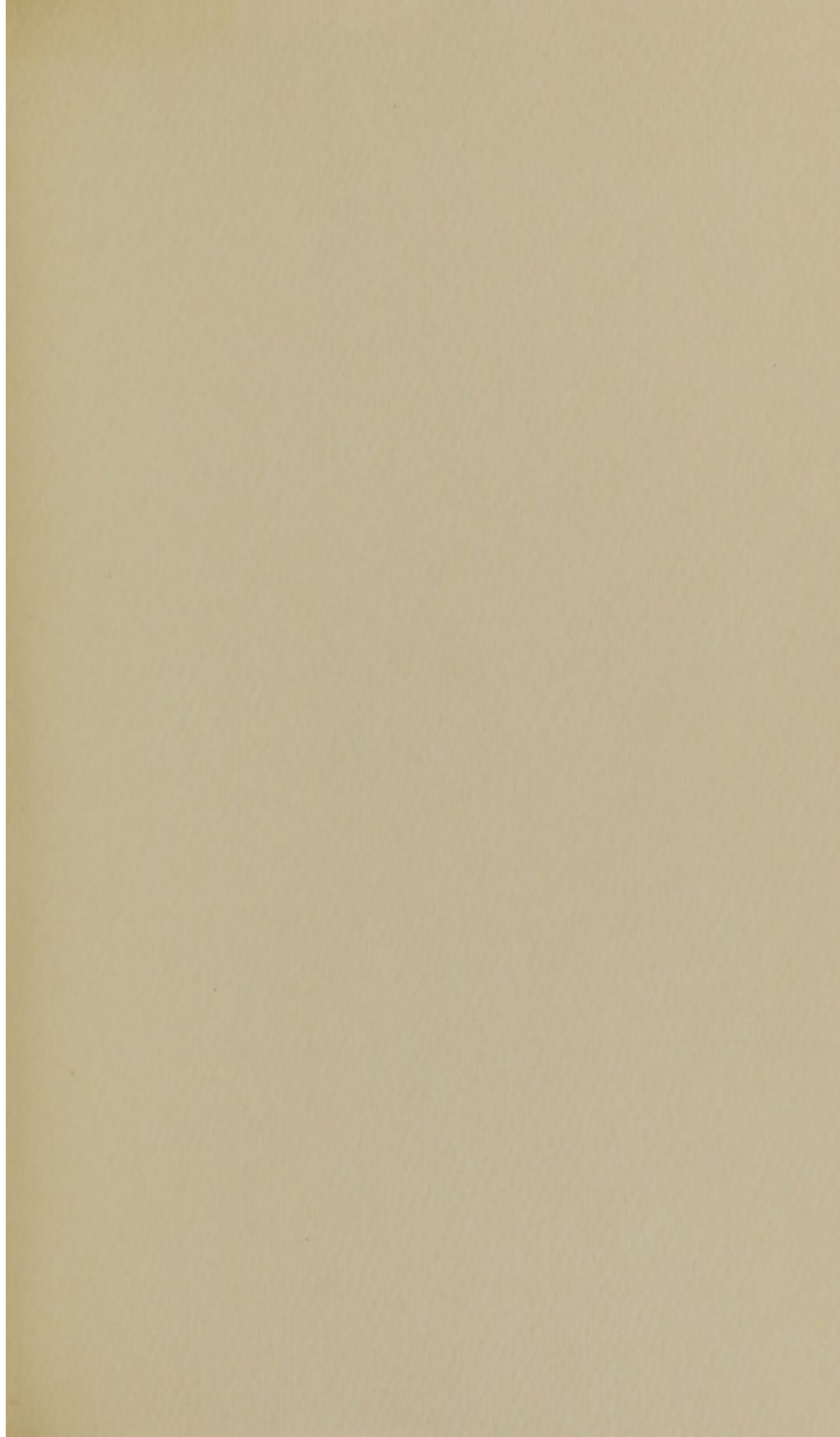
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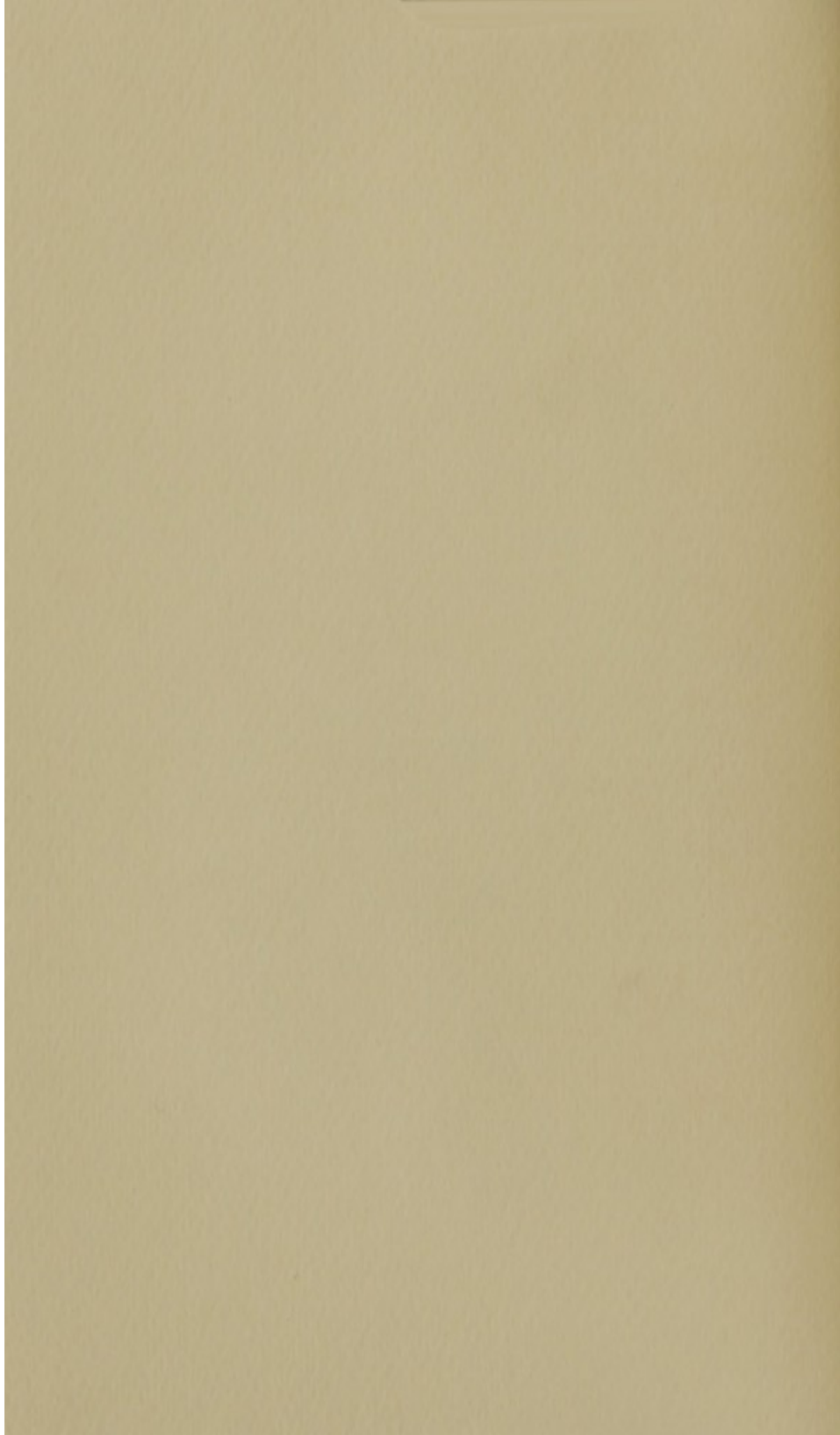


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A N  
E N Q U I R Y

INTO THE  
Effects of Spirituous Liquors

UPON THE  
H U M A N B O D Y,

And their INFLUENCE upon the  
H A P P I N E S S O F S O C I E T Y.

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By BENJAMIN RUSH, M. D.  
PROFESSOR of the Theory and Practice of MEDICINE  
in the College of *Philadelphia*.

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THE THIRD EDITION, with ADDITIONS.

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P H I L A D E L P H I A:

Printed by JOHN M'CULLOCH, in *Third-street*, No. 1,  
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A N  
E N Q U I R Y, &c.

**B**Y Spirits I mean all those liquors which are obtained by distillation from fermented juices or substances of any kind. These liquors were formerly used only in medicine. — They now constitute a principal part of the drinks of many countries.

Since the introduction of spirituous liquors into such general use, physicians have remarked that a number of new diseases have appeared among us, and have described many new symptoms as common to old diseases. Spirits in their first operation are stimulating upon the system. They quicken the circulation of the blood, and produce some heat in the body. Soon afterwards, they become what is called sedative; that is, they diminish the action of the vital powers, and thereby produce languor and weakness.

The effects of spirituous liquors upon the human body, are sometimes slow in their appearance. A strong constitution, especially if it be assisted with constant and hard labour, will counteract the destructive effects of spirits for many years, but in general they produce the following diseases:

1. *A sickness at the stomach, and vomiting in the morning.* This disorder is generally accompanied with a want of appetite for breakfast. It is known by tremors in the hands, insomuch that persons who labour under it, are hardly able to lift a tea cup to their heads, 'till they have taken a dose of some cordial liquor. In this disorder, a peculiar paleness, with small red streaks, appear in the cheeks. The flesh of the face, at the same time, has a peculiar ful-



ness and flabbiness, which are very different from sound and healthy fat.

2. *An universal dropsy.* This disorder begins first in the lower limbs, and gradually extends itself throughout the whole body. I have been told that the merchants in Charleston, in South-Carolina, never trust the planters when spirits have produced the first symptom of this disorder upon them. It is very natural to suppose that industry and virtue have become extinct in that man, whose legs and feet are swelled, from the use of spirituous liquors.

3. *Obstruction of the liver.* This disorder produces other diseases, such as an inflammation, which sometimes proves suddenly fatal—the jaundice—and a dropsy in the belly.

4. *Pains in the limbs,* accompanied with a sense of burning in the palms of the hands and soles of the feet. This disease has been sometimes called the Jamaica Rheumatism.

5. The *epilepsy*, 6. *madness*, 7. the *palsy*, and 8. the *apoplexy*, complete the group of diseases produced by spirituous liquors. I do not assert that these disorders are never produced by any other causes, but I maintain that spirituous liquors are the most frequent causes of them, and that when a predisposition to them is produced by other causes, they are rendered more certain and more dangerous by the intemperate use of spirits.

I have only named a few of the principal disorders which are produced by spirituous liquors. It would take up a volume to describe how much other disorders natural to the human body, are increased and complicated by them. Every species of inflammatory and putrid fever, is rendered more frequent and more obstinate by the use of spirituous liquors.

The danger to life from the diseases which have been mentioned is well known. I do not think it extravagant therefore to repeat here, what has been often said, that spirituous liquors destroy more lives than the sword. War has its intervals of destruction—but spirits operate at all times and seasons upon human life. The ravages of war are confined to but one part of the human species, *viz.* to men, but spirits act too often upon persons who are exempted from the dangers of war by age or sex; and lastly, war destroys only those persons who allow the use of arms to be lawful, whereas spirits insinuate their fatal effects among people, whose principles are opposed to the effusion of human blood.



If we advance a step further and examine the effects of spirituous liquors upon the *mind*, the prospect will be still more distressing and terrible. Their first effects here, shew themselves in the *temper*. I have constantly observed men who are intoxicated in any degree with spirits, to be peevish and quarrellsome; after a while they lose by degrees the *moral* sense. They violate promises and engagements without shame or remorse. From these deficiencies in veracity and integrity, they pass on to crimes of a more heinous nature. It would dishonour human nature only to name them.

The next operation of ardent spirits is upon the *understanding*. This sublime power of the mind is first *debilitated* in hard drinkers.—They discover a torpor in every mental exertion, even when they are not under the immediate influence of spirits. To this debility in the understanding succeed the loss of *memory*, and the *perversion* of all the intellectual powers in *melancholy* and *madness*, and in some cases the total *extinction* of them in *idiotism*.—

Let us next turn our eyes from the effects of spirits upon the body and mind, to their effects upon *property*; and here fresh scenes of misery open to our view. Among the inhabitants of cities, they produce debts, disgrace, and bankruptcy. Among farmers, they produce idleness with its usual consequences, such as houses without windows—barns without roofs—gardens without inclosures—fields without fences—hogs without yokes—sheep without wool—meagre cattle—feeble horses—and half clad dirty children, without principles, morals, or manners.—This picture is not exaggerated. I appeal to the observations of my countrymen, whether such scenes of wretchedness do not follow the tracks of spirituous liquors, in every part of the United States.

Thus have I in a few words pointed out the effects of spirituous liquors upon the bodies, minds, and estates of my fellow-citizens.—Their mischiefs may be summed up in a few words. They fill our church-yards with premature graves—they deface the image of God in the soul—they derange or destroy the intellectual powers—they fill the sheriff's docket with executions—they crowd our hospitals with patients, and our jails with criminals—they lead to places of public ignominy and punishment—and lastly, they people the regions—but it belongs to another profession to shew their terrible consequences in the future world.



I shall now proceed to combat some prejudices in favour of the use of spirituous liquors.

There are *three* occasions in which spirits have been thought necessary and useful.

1. In very cold weather.
2. In very warm weather. And
3. In times of hard labour.

1. There cannot be a greater error than to suppose that spirituous liquors lessen the effects of cold upon the body. On the contrary, I maintain that they always render the body more liable to be affected and injured by cold. The temporary warmth they produce, is always succeeded by chilliness. If any thing, besides warm cloathing and exercise, is necessary to warm the body in cold weather, a plentiful meal of wholesome food is at all times sufficient for that purpose. This, by stimulating the stomach, invigorates the whole system, and thus renders it less sensible of the cold.

2. It is equally absurd to suppose that spirituous liquors lessen the effects of heat upon the body. So far from it, they rather encrease them. They add an internal heat to the external heat of the sun; they dispose to fevers and inflammations of the most dangerous kind; they produce preternatural sweats which weaken, instead of an uniform and gentle perspiration, which exhilarates the body. Half the diseases which are said to be produced by warm weather, I am persuaded are produced by the spirits which are swallowed to lessen its effects upon the system.

3. I maintain with equal confidence, that spirituous liquors do not lessen the effects of hard labour upon the body. Look at the horse, with every muscle of the body swelled from morning till night in the plough, or the team, does he make signs for spirits to enable him to cleave the earth, or to climb a hill?—No. He requires nothing but cool water and substantial food. There is neither strength nor nourishment in spirituous liquors. If they produce vigour in labour, it is of a transient nature, and is always succeeded by a sense of weakness and fatigue. These facts are founded in observation; for I have repeatedly seen those men perform the greatest exploits in work both as to their degrees and duration, who never tasted spirituous liquors.



But are there no conditions of the human body in which spirituous liquors are required?—Yes, there are; 1st. In those cases where the body has been exhausted by any causes, and faintness, or a stoppage in the circulation of the blood has been produced, the sudden stimulus of spirits may be necessary. In this case we comply strictly with the advice of Solomon, who confines the use of “strong drink” only to him “that is ready to perish!” And 2dly. When the body has been long exposed to wet weather, and more especially if cold be joined with it, a moderate quantity of spirits is not only proper but highly useful to obviate debility, and thus to prevent a fever. I take these to be the only two cases that can occur, in which spirituous liquors are innocent or necessary.

But if we reject spirits from being part of our drinks, what liquors shall we substitute in the room of them? For custom, the experience of all ages and countries, and even nature herself, all seem to demand drinks more grateful and more cordial than simple water.

To this I shall reply, by recommending in the room of spirits, in the first place,

1. CYDER. This excellent liquor contains a small quantity of spirit, but so diluted and blunted, by being combined with an acid and a large quantity of saccharine matter and water, as to be perfectly inoffensive and wholesome. It disagrees only with persons subject to the rheumatism, but it may be rendered inoffensive to such people by extinguishing a red hot iron in it, or by diluting it with water. It is to be lamented that the late frosts in the spring often deprive us of the fruit which affords this liquor. But the effects of these frosts have been in some measure obviated, by giving an orchard a north-west exposure, so as to check too early vegetation, and by kindling two or three large fires of brush and straw to the windward of the orchard, the evening before we expect a night of frost. This last expedient, has in many instances within the compass of my knowledge, preserved the fruit of an orchard, to the great joy and emolument of the ingenious husbandman.

2. BEER is a wholesome liquor compared with spirits. The grain from which it is obtained is not liable, like the apple, to be affected by frost, and therefore it can always be procured at a moderate expence. It abounds with nourishment—hence we find many of the common people in



Great Britain, endure hard labour with no other food than a quart or three pints of this liquor, with a few pounds of bread a-day. I have heard with great pleasure of breweries being set up in several of the principal county towns of Pennsylvania, and I esteem it a sign of the progress of our state in wealth and happiness, that a single brewer in Chester county sold above a 1000 barrels of beer in one year. While I wish to see a law imposing the heaviest taxes on whisky distilleries, I should be glad to see breweries (at least for some years) wholly exempted from taxation.

3. WINE is likewise a wholesome liquor, compared with spirits. The low wines of France, I believe, could be drank at a less expence than spirits, in this country. The peasants in France, who drink these liquors in large quantities, are a healthy and sober body of people. Wines of all kinds yield, by chemical analysis, the same principles as cyder, but in different proportions; hence they are both cordial and nourishing. It has been remarked, that few men ever become *habitual* drunkards upon wine. It derives its relish principally from company, and is seldom, like spirituous liquors, drank in a chimney corner, or in a closet. The effects of wine upon the *temper* are likewise, in most cases, directly opposite to those that were mentioned of spirituous liquors. It must be a bad heart, indeed, that is not rendered more chearful and more generous, by a few glasses of wine \*.

4. MELASSES and WATER compose another excellent substitute for spirits. It is both cordial and nourishing.

5. The SUGAR MAPLE tree affords a thin JUICE in summer, which is cooling and refreshing. It has long been used in Connecticut, for this purpose, in the time of harvest. The settlers in the western counties of Pennsylvania and New-York, will do well to suffer a few of the trees which

\* If two barrels of cyder fresh from the press, are boiled into one, and afterwards fermented, and kept for two or three years in a dry cellar, it affords a liquor which (according to the quality of the apple from which the cyder is made,) has the taste of Malaga or Rhenish wine. This liquor, when mixed with water, affords a very agreeable drink in summer. I have taken the liberty of calling it *Pomona wine*. Another method of obtaining a pleasant wine from the apple, is to add to four and twenty gallons of new cyder, three gallons of a syrup made from the expressed juice of sweet apples. When thoroughly fermented, and kept for some time, it becomes fit for use.



yield this pleasant juice, to remain in all their fields. They may prove the means, not only of saving their children and grand-children many hundred pounds, but of saving their bodies from disease and death, and their souls from misery beyond the grave.

6. VINEGAR and WATER sweetened with sugar or melasses, is an agreeable drink in warm weather. I beg leave to recommend this wholesome mixture to reapers in a particular manner. It is pleasant and cooling. It promotes perspiration, and resists putrefaction. Vinegar and water constituted the only drink of the soldiers of the Roman republic; and it is well known that they marched and fought in a warm climate, and beneath a load of arms that weighed 60lbs. Boaz, a wealthy farmer in Palestine, we find treated his reapers with nothing but bread dipped in vinegar. Under this head, I should not neglect to recommend BUTTER MILK and WATER, or SOUR MILK (commonly called *bonneclabber*) and WATER. It will be rendered more grateful by the addition of a little sugar. PUNCH is likewise calculated to lessen the effects of heat, and hard labour upon the body. The spirit in this liquor is blunted by its union with the vegetable acid. Hence it possesses, not only the constituent parts, but most of the qualities of cyder and wine. To render this liquor perfectly innocent and wholesome, it must be drunk *weak*—in *moderate* quantities—and *only* in warm weather. Say not, that spirits have become necessary in harvest, from habit and the custom of the country. The custom of swallowing this liquid fire, is a bad one, and the habit of it may be broken. Let half a dozen farmers in a neighbourhood, combine to allow higher wages to their reapers than are common, and a sufficient quantity of *any* of the liquors I have recommended, and they may soon abolish the practice of giving them spirits. They will in a little while be delighted with the good effects of their association. Their grain will be sooner and more carefully gathered into their barns, and an hundred disagreeable scenes of sickness and contention will be avoided, which always follow in a greater or less degree the use of spirituous liquors.

To enable the body to support the waste of its strength by labour, the stomach should be *constantly*, but *moderately*, stimulated by aliment of a particular kind. Labourers bear with great difficulty long intervals between their meals.



They should always eat four or five times a-day in time of harvest, or at other seasons of great bodily exertion.—The food at these times should be *solid*, consisting chiefly of salted meat.—The vegetables used with it should possess some activity. Onions and garlic are of a most cordial nature. These vegetables composed part of the diet which enabled the Israelites to endure, in a warm climate, the heavy tasks imposed upon them by their Egyptian masters. They were likewise eaten by the Roman farmers to repair the waste of their strength by the toils of harvest — But further ; There are certain SWEET SUBSTANCES which support the body in labour. The negroes in the West Indies grow fat and strong by drinking the juice of the sugar cane in the season of grinding it. The Jewish soldiers were invigorated by occasionally eating raisins and figs. A bread composed of wheat flour, melasses, and ginger, (composing what is called ginger-bread,) and taken in small quantities, during the day, is happily calculated to obviate the debility which is so apt to be brought on by labour. All these substances, whether of an animal or vegetable nature, which have been mentioned, should be used by labouring people. They lessen the necessity for cordial drinks,—and they impart *equal* and *durable* strength to every part of the system.

There are certain classes of people to whom I beg leave to suggest a caution or two upon the use of spirituous liquors.

1. Valetudinarians, especially those who labour under disorders of the stomach and bowels, are very apt to fly to spirits for relief. Let such people be cautious how they repeat this dangerous remedy. I have known many men and women, of excellent characters and principles, who have been betrayed, by occasional doses of gin or brandy to ease the cholic, into a love of spirituous liquors, insomuch that they have afterwards fallen sacrifices to their fatal effects. The different preparations of opium are a thousand times more safe and innocent than spirituous liquors, in all spasmodic affections of the stomach and bowels. So apprehensive am I of the danger of contracting a love for spirituous liquors, by accustoming the stomach to their stimulus, that I think the fewer medicines we exhibit in spirituous vehicles the better.

2. Some people, from living in countries subject to the intermitting fever, endeavour to fortify themselves against it by two or three glasses of bitters made with spirits every day.—There is great danger of men becoming lots from



this practice. Besides, this mode of preventing intermittents is by no means a certain one. A much better security against them is to be found in the Jesuits bark. A tea-spoon-full of this excellent medicine taken every morning during the sickly season, has in many instances preserved whole families, in the neighbourhood of rivers and mill-ponds, from fevers of all kinds. If Jesuits bark cannot be had, a gill or half a pint of a strong infusion of centaury, camomile, wormwood or rue, in *water*, with a little calamus mixed with it, may be taken with nearly the same advantage as the bark, every morning. Those who live in a sickly part of the country and cannot procure the bark, or any of the bitters which have been mentioned, I would advise to avoid the morning and evening air in the sickly months—to kindle fires in their houses on damp days, and in cool evenings throughout the whole summer, and to put on woollen cloathing about the first week in September. The last part of these directions applies only to the inhabitants of the middle states. These cautions I am persuaded, will be more effectual in preventing autumnal fevers than the best preparations that can be made from bitters in spirits.

3. Men who follow professions that require a constant exercise of the mind or body, or perhaps both, are very apt to seek relief from fatigue in spirituous liquors. To such persons I would beg leave to recommend the use of TEA instead of spirits. This gentle stimulus, by restoring excitement, removes fatigue, and invigorates the whole system. I am no advocate for the general or excessive use of tea.—When drank too strong, it is hurtful, especially to the female constitution; but when drank of a moderate degree of strength, and in moderate quantities, with sugar and cream, or milk, I believe it is in general innocent, and at all times to be preferred to spirituous liquors. Anthony Benezet, one of the most industrious school-masters I ever knew, told me that he had been preserved from the love of spirituous liquors by contracting a love for tea in early life. Three or four dishes drank in an afternoon, carried off the fatigue of a whole day's labour in his school. This worthy gentleman lived to be 71 years of age, and afterwards died of an acute disease in the full exercise of all the faculties of his mind.

To every class of my readers, I beg leave to suggest a caution against the use of TONNY. I acknowledge that I have



known some men, who, by limiting its strength constantly, by measuring the spirit and water, and who by drinking it *only* with their *meals*, have drank toddy for many years without suffering in any degree from it; but I have known many more who have been insensibly led from drinking toddy for their constant drink, to take drams in the morning, and have afterwards paid their lives as the price of their folly. I shall select one case from among many that have come within the compass of my knowledge, to shew the ordinary progress of intemperance in the use of spirituous liquors.—A gentleman, once of a fair and sober character, in the city of Philadelphia, for many years drank toddy as his constant drink. From this he proceeded to drink grog. After a while nothing would satisfy him but slings made of equal parts of rum and water, with a little sugar. From slings he advanced to raw rum—and from common rum to Jamaica spirits. Here he rested for a few months; but at last he found even Jamaica spirits were not strong enough to warm his stomach, and he made it a constant practice to throw a table-spoonful of ground pepper into each glass of his spirits, in order (to use his own expression) “to take off their coldness.”—It is hardly necessary to add, that he soon afterwards died a martyr to his own intemperance.

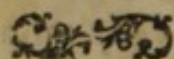
I shall conclude what has been said of the effects of spirituous liquors with two observations.—1. A people corrupted with strong drink cannot long be a *free* people. The rulers of such a community will soon partake of the vices of that mass from which they were secreted, and all our laws and governments will sooner or later bear the same marks of the effects of spirituous liquors which were described formerly upon individuals. I submit it therefore to the consideration of our rulers, whether more laws should not be made to increase the expence and lessen the consumption of spirituous liquors, and whether some mark of public infamy should not be inflicted by law upon every man, convicted before a common magistrate of drunkenness.

The second and last observation I shall offer, is of a serious nature. It has been remarked that the Indians have diminished every where in America since their connections with the Europeans. This has been justly ascribed to the Europeans having introduced spirituous liquors among them. Let those men who are every day turning their backs upon all the benefits of cultivated society, to seek habitations in



the neighbourhood of Indians, consider how far this wandering mode of life is produced by the same cause which has scattered and annihilated so many Indian tribes.—Long life, and the secure possession of property, in the land of their ancestors, was looked upon as a blessing among the ancient Jews.—For a son to mingle his dust with the dust of his father, was to act worthy of his inheritance; and the prospect of this honour often afforded a consolation even in death. However exalted my countrymen, your ideas of liberty may be, while you expose yourselves by the use of spirituous liquors to this consequence of them, you are nothing more than the pioneers, or in more slavish terms, the “hewers of wood” of your more industrious neighbours.

If the facts that have been stated, have produced in any of my readers who have suffered from the use of spirituous liquors, a resolution to abstain from them hereafter, I must beg leave to inform them that they must leave them off *suddenly* and *entirely*. No man was ever *gradually* reformed from drinking spirits. He must not only avoid tasting, but even smelling them, until long habits of abstinence have subdued his affection for them. To prevent his feeling any inconveniences from the sudden loss of their stimulus upon his stomach, he should drink plentifully of camomile or of any other bitter tea, or a few glasses of sound old wine every day. I have great pleasure in adding, that I have seen a number of people who have been *effectually* restored to health—to character—and to usefulness to their families and to society, by following this advice





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