

# Misconceptions about the Health Procuring Properties of Alcohol

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## Abstract

*The health procuring properties of alcohol have been claimed since antiquity. The pre-Islamic Arabs of Jāhiliyyah were among the staunch believers of the medical powers of liquor. When Islam proscribed alcohol, many of the Arabs newly converted to Islam tried to convince the Prophet Muḥammad (PBUH) that they used liquor only for its medicinal powers and health procuring properties. The Prophet told them that it is no medicine, it is a cause of disease and ailment. Nevertheless, the misconceptions continued long after Islam was established. Many renowned physicians, such as 'Abū Bakr al-Rāzī and Ibn Sīnā, believed in the benefits of moderate drinking and considered it an asset for health. Laymen still believe in these properties. These misconceptions are discussed and shown to be lingering myths from bygone days.*

Alcohol beverages have been used since antiquity, not only as a social lubricant, aperitif and a source of pleasure, but as a remedy for many different ailments and diseases, ranging from insomnia and indigestion to angina pectoris and heart attacks. The list of diseases for which alcoholic beverages were used as a remedy was indeed very long.

Alcohol is a generic term used by scientists to denote a particular family of chemical compounds with similar structures and properties. Among these are methyl alcohol, also known as methanol or wood spirit because it was originally made by destructive distillation of wood. It is the simplest in structural formula ( $\text{CH}_3\text{OH}$ ) and is used as antifreeze. Unfortunately, it is also used by some chronic degenerative alcoholics in instances where other alcoholic beverages are not available. It causes blindness (optic atrophy) and death due to its toxicity to the heart muscle. It was used secretly during the ban on alcohol in the U.S.A from 1919 to 1933, and it caused many deaths due to its cardiac toxicity, and many suffered from blindness. It is still occasionally used when ethanol is not available, in places such as Saudi Arabia.

The next alcohol in the chemical structure is ethyl alcohol, or ethanol ( $\text{C}_2\text{H}_5\text{OH}$ ). It is found in all alcoholic beverages with variable concentration. In

brewed beverages, e.g. beer, ale, and cider, the concentration of alcohol is usually less than 8%. In wines, e.g. champagne, muscatel and sherry, the concentration varies from 10-25%, depending on whether or not the wine is fortified by the addition of distilled spirits.

Distilled spirits contain the highest concentration of alcohol as they are prepared by distillation. Whisky, brandy, rum and gin represent this group and contain 40-50% alcohol. One hundred proof means an alcoholic beverage contains 50% alcohol by volume.

The first man to distill alcohol was Jābir ibn Ḥayyān in Baghdad, in the year 185 Hijrah (800 A.D.).<sup>1</sup> The word "alcohol" derived from the Arabic word "al-Ghul," meaning something that intoxicates or destroys the brain. Whenever the word alcohol is used in everyday language, it usually refers to ethyl alcohol or ethanol.

## Pre-Islamic misconceptions of alcoholic beverages

The Arabs in Jāhiliyyah (pre-Islam) used alcohol to boost courage and benevolence. The poet of Prophet Muḥammad (PBUH), Ḥasan ibn Thābit al-'Anṣārī, before Islam said, "When we drink liquor we become like kings (in our benevolence) and during fight we become lions who never waver or falter from confrontation."

The following traditional sayings and deeds of the Prophet (PBUH) illustrate the deeply-rooted beliefs in the medicinal powers of liquor held at the time of the Prophet (PBUH):

1. Wā'il al-Ḥaḍramī narrated that Tāriq ibn Suwīd said to the Prophet: "O Messenger of Allāh! In

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my land there are vineyards and we make wine and drink it." The Prophet (PBUH) said, "Do not drink from it." Ṭāriq then said, "We use it as a cure for the sick." The Prophet answered, "It is no cure. It is itself a disease."<sup>2</sup>

2. The people of Yemen came to the Prophet (PBUH) and asked him to allow them to drink liquor made from wheat (ale) in order to fight the cold weather of their mountainous area and help them in their hard jobs. The Prophet asked if that liquor was intoxicating. The man who spoke for the Yemeni delegation (Daylam al-Ḥimiri) said it was. The Prophet answered: "Then you have to stop drinking."<sup>3</sup>
3. The Prophet (PBUH) said, "Allāh has sent down both the disease and the cure and He has appointed a cure for each so treat yourself medically but use nothing unlawful."<sup>4</sup>

It is clear from these Aḥādith that the Prophet Muḥammad (PBUH) had emphatically denied any medicinal properties of liquor.

### Misconceptions continue after Islam

Based on the above, it is quite astonishing to find that misconceptions continue among staunch Muslims about the health procuring properties of liquor.

The renowned and highly-esteemed Ibn Kathīr al-Dimishqī, in his "Tafsīr al-Qur'ān al-'Azīm" (Explanation of the Holy Qur'ān) said, "The evil of liquor is in "religion" (from the religious point of view). The benefits of liquor are: it helps a) the health of the body, (b) the digestion of food, (c) excretion of obnoxious material from the body and (d) sharpens the thinking of some brains. Besides, it gives the sense of pleasure which Hasan ibn Thābit has proclaimed in his poetry before Islam."<sup>5</sup>

Great medieval Muslim physicians and philosophers, such as 'Abū Bakr al-Rāzī and Ibn Sīnā, were commending liquor in moderation to maintain good health, 'Abū Bakr al-Rāzī in his book "The Benefits of Food" said, "The intoxicating liquor has the advantage of heating the body, helping digestion of food in the stomach, its delivery to the liver where it is well digested. Henceforth, it helps its distribution to the rest of the body via the various blood vessels. Liquor quenches thirst, especially if it is mixed with water. It makes the body fertile, especially if it is taken with good, nutritious meals. It also gives the body a good healthy color and helps to push the harmful excreta out of the body. Therefore, it is a great asset and a big assistance in keeping good health."<sup>6</sup>

'Imām Ja'far al-Ṣādiq, a descendant of Prophet Muḥammad (PBUH), was asked by one of his disciples to drink the intoxicating liquor prescribed by a physician for his bleeding piles. The 'Imām refused and said, "God has never made your

remedies in things that He has prohibited,"<sup>8</sup> He also refused emphatically the idea of dissolving the ingredients of medicine in alcohol ('Imām Ja'far lived in the second Hijri century, the 8th century A.D.).<sup>4</sup> The majority of the Islamic jurists took the same stance held by 'Imām Ja'far al-Ṣādiq. Ibn al-Qayyim, one of the renowned jurists of the eighth Hijri century (died 751 A.H.) wrote many a chapter in his books to deny the medicinal uses of alcohol by the physicians of his era. In his book "Al-Tibb al-Nabawī," (The Medicine of the Prophet), he stated the following argument against health procuring properties of liquor. "Liquor drinking is a cause of disease, as has been stated by Prophet Muḥammad, and therefore it can not be allowed to be used as a remedy. It causes the nature of man and his soul ill effects. The nature of man is greatly affected by the nature of the drug used. If the drug is bad, like liquor, then the nature will be badly affected. That is why God has prohibited the use of bad food (e.g. pork, carcasses, blood), bad liquor and even bad clothing, because the psyche is affected deeply by the nature of bad food, drink or clothing."<sup>5</sup>

There is a sound saying claiming that "we are what we eat." It illustrates the deeply integrated effects of the food and drink we consume. The food and drink is transformed within the human body into energy we need by the process of catabolism, the rebuilding of lost and degenerated tissues and cells; and by the process of growth, well-manifested in children, which is the process of anabolism. It is no wonder, therefore, to find good or deleterious effects on our bodies and souls ensuing from the food and drink we consume.

That was the same explanation given by Ibn al-Qayyim to his contemporaries, including the physicians of his era. He was denying emphatically the benefits of alcohol claimed by al-Rāzī and Ibn Sīnā and the whole of the medical profession of his day. In his time, there was little proof for what he said except that it was clearly stated by the Prophet (PBUH). As a firm believer, he argued very well against liquor, using all his intellectual and superb semantic power.

It is therefore astonishing to find a contemporary and well-esteemed "Faḳīh" (Jurist) claiming that drinking liquor is permissible for a man who gets ill in very cold weather, or who suffers from angina pectoris or a heart attack, provided it was advised by his doctor.<sup>9</sup> The majority of the Muslim jurists have agreed that liquor should never be used as a drug to treat disease nor to give warmth in cold climates; neither should it be allowed to quench thirst.

'Imām al-Nawawī (7th century A.H., 13th A.D.) in his reference textbook, "al-Majmūh," stated the different opinions of the Muslim jurists regarding the drinking of alcohol as a remedy. The majority of jurists, "al-Jumhūr," never allowed the use of liquor for any reason, including its use as a remedy or to



quench thirst, even if there was no fluid permissible to drink. A few jurists allowed the use of alcohol as a remedy and to quench thirst if no other permissible fluid was available. Some allowed its use as a remedy, but not to quench thirst, and others allowed its use to quench thirst only provided there was no other permissible fluid available.

However, the jurists did allow the use of alcohol as a solvent for drugs that will not dissolve in water. Al-Khaṭīb al-Shirbīnī stated in his reference textbook, "Mughni al-Muḥtāj," the following: "The use of liquor as a remedy is prohibited by our religion. However, the use of drugs which have been mixed with liquor as a solvent is another matter. It is permissible to use that drug provided the liquor (alcohol) used is very small in quantity and provided that a competent good Muslim physician has prescribed it."<sup>11</sup>

The use of alcohol as a remedy in today's medicine has been abandoned except for its use as a topical disinfectant. It is also occasionally used as a local injection to destroy a nerve ganglion causing great pain. However, the use of alcohol as a solvent for many drugs is not uncommon even up to this moment.

The medical and pharmacological professions in the Muslim world are strongly called upon to replace the drugs containing alcohol with others which are alcohol free. It is not a very difficult feat to accomplish, if cooperation and meticulous work is started. Most of the drugs containing alcohol are not essential and can be easily replaced by others. The use of alcohol as a disinfectant is not really necessary; there are many alternatives available. However, the external use of alcohol is not prohibited by many Muslim jurists.<sup>12</sup>

#### **Aphrodisiac effect of alcohol**

Alcoholic beverages are still used by laymen because they are believed to have an aphrodisiac effect. The talented English poet, Shakespeare, denied this claim saying, "It provokes the desire,"<sup>13</sup> This misconception continues because of the many sexual crimes which are committed under the effect of alcohol. Fifty percent of all rapes are committed under the effect of alcohol.<sup>14</sup> Crimes of incest are reported to occur mainly under the effects of the intoxicating liquor.<sup>15</sup> The force of advertising, which connects liquor with manliness and sexual prowess, is so strong that it promotes the mistaken concept, especially among teenagers, that alcohol enhances libido and sexuality. Quite the opposite, the cumulative effect of alcohol on sex is deleterious. Alcohol acts as a direct toxin to the testicles where the male sex hormones and semen are produced.<sup>16</sup> The autonomic nervous system, which controls erection and ejaculation, is also affected by chronic consumption of alcohol. In addition, the affected liver

**Table 1.** The Fetal-Alcohol Syndrome

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Microcephaly
Micrognathia
Microphthalmia
Cardiac defects
Growth retardation
Mental impairment
Increased incidence of abortion

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of the alcoholic is incapable of destroying the estrogenic hormones normally produced by the male supra-renal gland. This results in decreased decreased libido, impotence and gynecomastia.<sup>17,18</sup>

In the female, the deleterious effects of alcohol are well-manifested in irregularities of menses, decreased libido and fetal-alcohol syndrome.<sup>19</sup> The fetus of the alcoholic mother suffers great risks which are summarized in table 1.<sup>20,21</sup> A review of alcohol effects on reproduction function has recently been published.<sup>22</sup>

#### **Alcohol as an aperitif**

Alcohol beverages were, and still are, used as an aperitif. Even al-Razi, the great medieval Muslim physician, believed in the digestive and aperitif function of alcohol. Alcohol, in concentrations less than 8%, do increase the secretion of saliva and gastric hydrochloric acid. However, if ingestion of alcohol is repeated, this effect is lost.

#### **Alcohol and the esophagus**

Many studies have shown that both acute and chronic administration of alcohol results in esophageal motor dysfunction causing mild dysphagia and gastroesophageal reflux.<sup>23</sup> This results in chronic esophatitis<sup>24</sup> and Barrett's esophagus.<sup>25</sup>

The treatment for esophagitis in the alcoholic is, obviously, abstention from alcohol, plus any antireflux regimen. The most important complication that may arise from chronic alcohol intake is the development of cancer of the esophagus.<sup>26,27</sup> Whiskey drinkers are at greatest risk, but wine and beer drinkers are at much greater risk than non-drinkers. Alcohol combined with tobacco increases the risk of developing cancer considerably.<sup>23</sup>

#### **Alcohol and the stomach**

Since the classic observation of Beaumont in 1833, who noted acute mucosal changes following alcohol consumption by a patient who had had a gastrostomy following a gun-shot wound, the deleterious effects of alcohol on gastric mucosa are well recognized by the medical profession.

Small concentrations of alcohol (less than 8%) stimulate the acid secretion from the gastric mucosa

of dogs. However, this stimulation is transient and weak. In man there is as yet no evidence of a clinically significant nature that alcohol affects gastric acid secretion.<sup>28</sup> The gastric mucosal barrier which protects it from many harmful substances ingested with food, is liable to destruction under the effect of alcohol.<sup>29</sup> It is generally accepted that ethanol is disruptive to the gastric mucosal barrier.<sup>23</sup>

Alcohol induces acute gastritis and chronic gastritis.<sup>31</sup> It also critically affects the pancreas, the intestines, and the liver.<sup>32,33,34</sup> Therefore, the ingestion of alcohol does not in fact help digestion. On the contrary, it destroys the digestive system from the salivary glands, down to the esophagus, stomach, intestines, pancreas and the liver. The incidence of cancer of the digestive tract, especially the esophagus, intestines and the liver are markedly increased in alcoholics, compared with the general population.<sup>35</sup>

#### **Alcohol and the cardiovascular system**

Alcohol was considered a stimulant to cardiac muscle and a dilator of its vessels. However, in fact, alcohol is a directly toxic substance to the myocardium, causing cardiomyopathy. The heart becomes flabby and fails in its functions, resulting in heart failure and death.<sup>36</sup> Beriberi, a disease due to thiamine (Vitamin B<sub>1</sub>) deficiency is not uncommon in alcoholics.<sup>37</sup> Beriberi also causes heart failure.<sup>38</sup> However, unlike alcoholic myopathy, it does respond rapidly to treatment with thiamine, diuretics and cardiac glycosides. Alcohol causes hypertension which, in turn, is detrimental to the heart and its circulation.<sup>39,40</sup> Alcoholics also suffer an increased incidence of strokes.<sup>41-43</sup> The alcoholic is also liable to have increased fats in his blood (hypertriglyceridemia) which, with other factors, results in atherosclerosis.<sup>44</sup>

Although alcohol is a vasodilator for many blood vessels, especially those in the skin, it does not have this effect on the coronary blood vessels which supply the heart with nourishment and oxygen.<sup>45</sup> It is clear, therefore, that alcohol is not a good remedy for the heart or its narrowed vessels. On the contrary, its deleterious effects on the cardiac muscle indicate that it is dangerous to treat patients having heart disease with alcohol. In fact, it is considered a major cause of heart disease in countries with high consumption of alcohol.<sup>46,47</sup>

#### **Alcohol and cold climate**

Since the time of the Prophet (PBUH) many people have drunk alcohol on the misconception that it protects from effects of cold weather.

Alcohol dilates the cutaneous blood vessels, which provides a sense of warmth. It also abolishes the shivering reflex, which is a protective mechanism of the body against cold. Therefore, if a person drinks alcohol and is exposed to cold weather, as often oc-

curs at Christmas and New Year festivals, such a person will be endangering his health greatly. He is liable to lose body heat and suffer hypothermia.<sup>48-50</sup> Alcohol abuse is by far the most common cause of accidental hypothermia.<sup>51</sup> The level of consciousness declines progressively with decreasing body temperature. Pupils contract and tendon reflexes are lost. Alcoholism predisposes to hypothermia by its direct vasodilating effect, coupled with its depressant effect on the central nervous system and the attendant increased risk produced by environmental exposure. Mortality resulting from accidental hypothermia ranges from 30-80%.<sup>52</sup>

#### **Alcohol and the brain**

The misconception of "sharpening some brains" by alcohol is not only an old myth, it is one that continues. Many people feel that they become sharp and witty when drinking alcohol.

Alcohol is never a stimulant of the nervous system; it is a depressant, with higher functions being affected first.<sup>20,52</sup> The earliest symptoms of intoxication are those of altered behaviour. In larger doses, it produces irregularities in conduct: a person becomes depressed or excited depending on his personality. The higher cortical functions are inhibited, thus normal restraints are relaxed.<sup>20,52,53</sup>

The ability to carry out coordinated and complex motor activity also is progressively impaired. It is at this stage that crimes and traffic accidents occur. The risk of traffic accidents rises exponentially at blood alcohol levels above 50mg%. When the blood alcohol level reaches 200mg% (equivalent to consuming six pints of beer), the risk of accident is 100-fold greater than that for the non-drinker.<sup>20</sup>

WHO statistics suggest that alcohol is involved in at least 50% of all traffic accidents, worldwide. WHO also reports that 86% of all murders are committed under the effects of alcohol, as are 50% of all rapes.<sup>14,20</sup> It also is reported that 74% of wife beaters are heavy drinkers, and that at least 50% of those imprisoned in the U.K. have significant alcohol problems.<sup>14,20</sup>

The effect of alcohol on speech is manifested first by loss of restraints and talkativeness. Later speech becomes slurred. Alcohol causes the conjunctiva to become congested and the pupils to become dilated, but still reactive to light. Nystagmus and ataxia invariably are manifested. If the dose of the intoxicant is great enough, unconsciousness follows. This condition is also usually associated with vomiting, which, in a comatose patient whose cough reflexes are paralysed, may result in lung abscess, pneumonia or even death from suffocation.<sup>20,51,54</sup> An American girl Karen Ann Quinlan lost consciousness following an alcohol binge in 1971, remained in a coma for 10 years and died June 12, 1985. Her story testifies dramatically to the horrifying depressant and in-



hibitory effect of alcohol on the central nervous system.

The chronic consumption of alcohol causes irreversible damage to the brain and the rest of the nervous system. Cerebral atrophy and dementia are not uncommon in chronic alcoholics.<sup>20,51,52</sup>

In conclusion, alcohol has strong depressant and inhibitory effect on the brain and the whole nervous system. The mistaken belief that it stimulates the brain has no scientific basis. It is a myth that lingers and refuses to die.

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