

What's Your Brand of Poison?

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Article

[The Sun - 07/11/95](#)

TOBACCO IN ANY FORM IS undoubtedly a poisonous substance (see Healthtrack, May 30, June 6,13,20 and 27). Alcohol is another dangerous poison man is exposed to. However, for many centuries, man has developed a societal norm whereby alcohol is socially and legally acceptable. But alcohol is just as open to abuse as any other drugs of abuse.

As such many countries see fit to have some form of legislation to control the consumption and sale of alcohol. Such legislation seek to control aspects such as where alcohol can be sold, the number that can be sold, location of outlets and shops selling alcohol, age limits on the buyers of alcohol and so on.

The need for such stringent restrictions are indicative of the fact that alcohol is a dangerous substance, no matter how some people perceive it.

However, despite measures seeking to control the use of alcohol, it continues to be a problem in many societies. In some cases, it causes the loss of lives and untold miseries and injuries.

In view of this, the Government has finally decided to enforce further restrictions on the use of alcohol, particularly in relation to drinking and driving. As of July 1, those caught with certain alcohol levels in their blood while driving will be subjected to the wrath of the law. This is to ensure that alcohol does not cause more harm or disruptions to society than it already has.

Indeed, alcohol has been recognised in many parts of the world to be the major cause of not only motor vehicle accidents but also crimes related to homicide, suicides, child abuse, wife battering, etc.

Unlike cigarettes, alcohol has escaped much of the adverse publicity that cigarettes are subjected to today. Any attempt to prohibit it can potentially stir a major row. But alcoholism can indeed be a major problem if care is not taken. Just three years ago, there was a cover story in the May issue of *Asiaweek* entitled "Asia's Growing Alcohol Habit", and Malaysia was no less prominently featured.

What are alcohols? Essentially, they are volatile and colourless liquids with a pungent smell and composed mainly of carbon, hydrogen and oxygen.

Ethanol is the most common form of alcohol and it is normally used in alcoholic beverages. It is produced by the process of fermentation - the breakdown of starches such as maize, barley, rice and grapes by bacterial action. These products are more commonly called beer if malt and barley are used and wine if grapes are used.

The content of ethanol in such drinks is normally low compared with other types of alcohol such as spirits(whiskey, vodka etc). Spirits undergo a process of distillation, leaving behind a higher level of alcohol in the end-product. Distilled alcohol can be added to wines, producing sherry, port, etc (so-called fortified wines) so as to increase the alcoholic content.

Typical alcohol contents of some alcoholic beverages: beer, cider, up to 8%, wines 9% to 15%, fortified wines 20%, aperitifs 25%, spirits, and Liqueurs 40% to 50%. Commercially, the strength of alcohol beverages is expressed as "degree proof". This does not refer to the percentage of alcohol content but the specific gravity of the liquid. In any case it can be used as an indication of the alcoholic content. For example, in the United States, a drink with 100 proof contains 50% alcohol. However, this conversion varies from country to country and product to product.

Generally, about 20% of the alcohol consumed is absorbed into the stomach and the rest in the intestine. It is eventually transported around the body in the blood.

The effects of alcohol on behaviour depends on the blood alcohol level influences brain functions. The same amount of a different class of alcoholic beverages can give rise to different effect on the brain because of different alcohol contents. For example, for the same person, a glass of sherry or fortified wine will give about twice as much blood alcohol level as compared with a glass of ordinary table wine, or perhaps two bottles of US beer (about three-quarter pint of UK beer).

What is important to understand is that as the level of alcohol in the blood increases, so does the level in the brain increase. This leads to varying degrees of functional impairment.

It is estimated that alcoholics in the United States have seven times the normal accident rate. When driving under the influence of alcohol, tests have indicated that error in judgement and loss of control increases as soon as alcohol is present in the blood stream.

At blood level of 0.04% (about one pint of UK beer), driving ability at speed has been reported to be impaired, making accidents more likely.

As the level of blood alcohol increases, there is a concomitant increase in the level of impairment. This is aptly demonstrated by a simple handwriting test.

Other factors that can determine blood alcohol level include:

- The size of the person. The smaller the body size, the lesser the volume of blood it contains; thus the more enhanced

A Toast to Health

"First the man takes a drink. Then the drink takes a drink. Then the drink takes the man" - A Japanese proverb. By *Dzulkifli Abdul Razak*

Alcohol has made significant inroads into our lives. Many people often start off with small quantities, gradually increasing intake, some to alarming levels.

Alcohol often functions as a social lubricant to help us get by. This is because it is an efficient physiological depressant that produces effects like relaxation, increased confidence, reduced inhibition, and in some instances facilitate social acceptance. These are the effects of alcohol that many of us are familiar with. Sometimes, it can even be a source of amusement when we casually get drunk. What we often do not realise is the fact that alcohol does all these at the expense of our health.

Alcohol in fact dampens the functions of the nervous system.

As the consumption gets heavier, the nervous system will be further impaired and may eventually collapse, a high price to pay for a little relief, or even fun.

Foremost to be affected is the brain functions that relate to inhibitions and anxiety. This generally leads to a false sense of relief and well-being, and sometimes euphoria. With continued drinking, other brain functions are affected as well.

This results in a loss of muscular coordination and impairment of vision and speech, amongst others things. Through its effects on the nervous system, it will eventually effect the circulatory system causing the small blood vessels to constrict and diverting the blood flow to the vessels of the skin (which in contrast are dilated or widened). This gives some drinkers the 'flushed' appearance.

In the short term, overindulgence in alcohol typically leads to a hangover, the physical manifestations of excessive alcohol intake. This is characterised by nausea and vomiting. Other symptoms include headache, dizziness, stomach upset, irritability and thirst.

The thirst is because of cell dehydration since the liver is overworked by the large quantities of alcohol in the blood, and is unable to process it within its normal limits. Moreover, alcohol induces diuresis, resulting in water loss through the urine.

On the other hand, stomach upsets are due to the irritation caused by the excessive alcohol. Nausea and vomiting is, in part, due to this too.

Today, with increased social pressures, more and more people are turning to substances like alcohol to seek refuge from the harsh realities of life. Convinced that alcohol can offer instant relief with relative ease, many tend to continue drinking alcohol, so much so it becomes a matter of habit.

Some called this social drinking. Little do we realise that the body can gradually get tolerant to this drug. In the long run, to achieve the same level of relief, greater and greater quantities of the drink is required.

Over time, this can lead to a form of addiction, with disastrous consequences to the mind and body, and even one's family and social life. In short, one can become an alcoholic.

Alcoholism is a form of self-poisoning. It is often viewed as any repeated drinking that exceeds the normal standards for a community. This is a rather capricious definition because the norm for each community tend to vary.

In effect, alcoholism is a process of dependence. Like all drugs of abuse - nicotine included - it also produces psychological (mental) dependence, and in the extreme, physical dependence as well.

Drinking is therefore compulsive and abusive without which one is unable to function, and it causes a lot of discomfort both mentally and physically. For inveterate drinkers, deprivation of the normal intake can cause acute withdrawal symptoms.

Withdrawal symptoms observed when a seasoned drinker is deprived of alcohol include body aches, diarrhoea, vomiting, runny nose and eyes, as well as sweating. Fits and convulsions were also reported, sometimes

hallucinations occurs. Delirium tremens can also be triggered following several days of deprivation. The patient suffers mental confusion, trembling ("shakes"), and a rapid irregular pulse.

This is preceded by restlessness, sleeplessness and irritability. He also experiences mental anguish and some psychological disturbance. It is the fear of all these that many hesitate giving up the drinking habit.

Alcoholism can also happen insidiously by what is called "symptomatic drinking". This happens when someone is said to be genetically predisposed to some underlying personality disorders. It is further compounded by other factors like environment, availability of, alcohol, upbringing and so on.

In general, a number of stages have been identified in the development of alcoholism.

- **Social Drinking**

As mentioned above the frequency and quantity of alcohol consumed eventually can mark the beginnings of alcoholism.

- **Early Alcoholism or Pre-alcoholic Stage**

Increasing and surreptitious use of alcohol become noticeable.

Memory is beginning to fade and one feels guilty about the habit, but refuse to recognise that it is a problem.

- **Basic Alcoholism**

There is a compulsive urge to consume alcohol. Intoxication is frequent, leading to the deterioration of relationships, health and finances. Any attempt to stop using alcohol normally fails. However the patient can still recover if treatment is instituted early.

- **Chronic Alcoholism**

There is a further deterioration of social and family life. Damages to health continue and psychotic behaviour may occur. There is a loss of self-respect and inability to initiate any recovery by himself.

- **Terminal Alcoholism**

This is marked by irreversible mental and physical deteriorations with little prospect of recovery. It usually leads to death. Even if he survives, his existence becomes invalid.

The point that need to be emphasised about alcoholism however, is not so much the quantity drunk but whether the person realises that his drinking habit is compulsive. This is so that treatment can be initiated as soon as possible.

Pregnant women face additional risks. Each time they drink, they are sending a dose of poison to the developing fetus. The retardation and disfigurement that can result is called Fetal Alcohol Syndrome (FAS), defined as a pattern of mental and birth defects that are the direct result of the mother's drinking habit.

FAS babies usually have narrow eyes and short upturned noses. Some have heart defects, which may require surgery. They are abnormally small at birth, especially in the size of their heads. Their mental development may not improve with age.

Thus, while it seems initially rewarding to be associated with the use of alcohol, in the long-term, it can poison your life.

What started off just as a toast to health, can end up as a toast to HELL! as aptly summarised by the Japanese proverb mentioned above.

are the effects of alcohol.

- The speed and manner in which the alcohol is consumed. The shorter the period one takes a given quantity, the stronger the effects.
- The state of the stomach. Empty stomach gives greater and more immediate effects.
- The rate in which the alcohol is metabolised by the liver. A small liver size or a diseased liver can prolong the effects of alcohol.

Therefore, the next time you down your favourite brand of alcohol, it may be wise to remember the words of Smith and Helwie in *Liquor: The Servant of Man*: "Beverage alcohol is fecal matter. Alcohol is not made of grapes or grain or other attractive foods. It is these which are devoured by the ferment germ, and the germ then evacuates alcohol as its waste product. The thought of swallowing the excrement of a living organism is not an aesthetic idea but people will do such things."

So, don't only stop drinking when driving; better yet DON'T DRINK at all.