

# Commentary

## Alcoholism & Related Problems

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### ALCOHOLISM

#### What is it ?

It is an illness characterized by significant physiological, psychological and/or social dysfunctions associated with persistent and excessive use of alcohol. It is a chronic and progressive disease featured by loss of control over the use of alcohol with subsequent social, legal, psychological & physical consequences. Alcohol consumption has risen greatly during the last 4 decades and has been accompanied by increase in the social, psychological and physical problems. The term 'alcoholism' is now used in a broad sense to describe a pattern of drinking which is harmful to the individual or to his or her family. The more restricted term 'alcohol dependence' has the following criteria:-

- Narrowing of the drinking repertoire
- Priority of drinking over other activities
- Tolerance of effects of alcohol
- Repeated withdrawal syndromes
- Relief of withdrawal syndromes by further drinking
- Subjective compulsion to drink
- Reinstatement of drinking behaviour after abstinence

- The morbidity related to alcohol closely correlates with mean per capita consumption. *Men are more likely to have alcohol related problems than women.* Consumption should be quantified in terms of units of alcohol. *1 unit contains approximately 9gm. of alcohol & is equivalent to half a pint of beer.* Current opinion suggests that drinking becomes hazardous at levels above 21 units weekly for men and 14 units weekly for women.



- Conversely, there is some evidence which suggests that regular, modest consumption of alcohol may have a protective effect against the development of coronary heart disease.

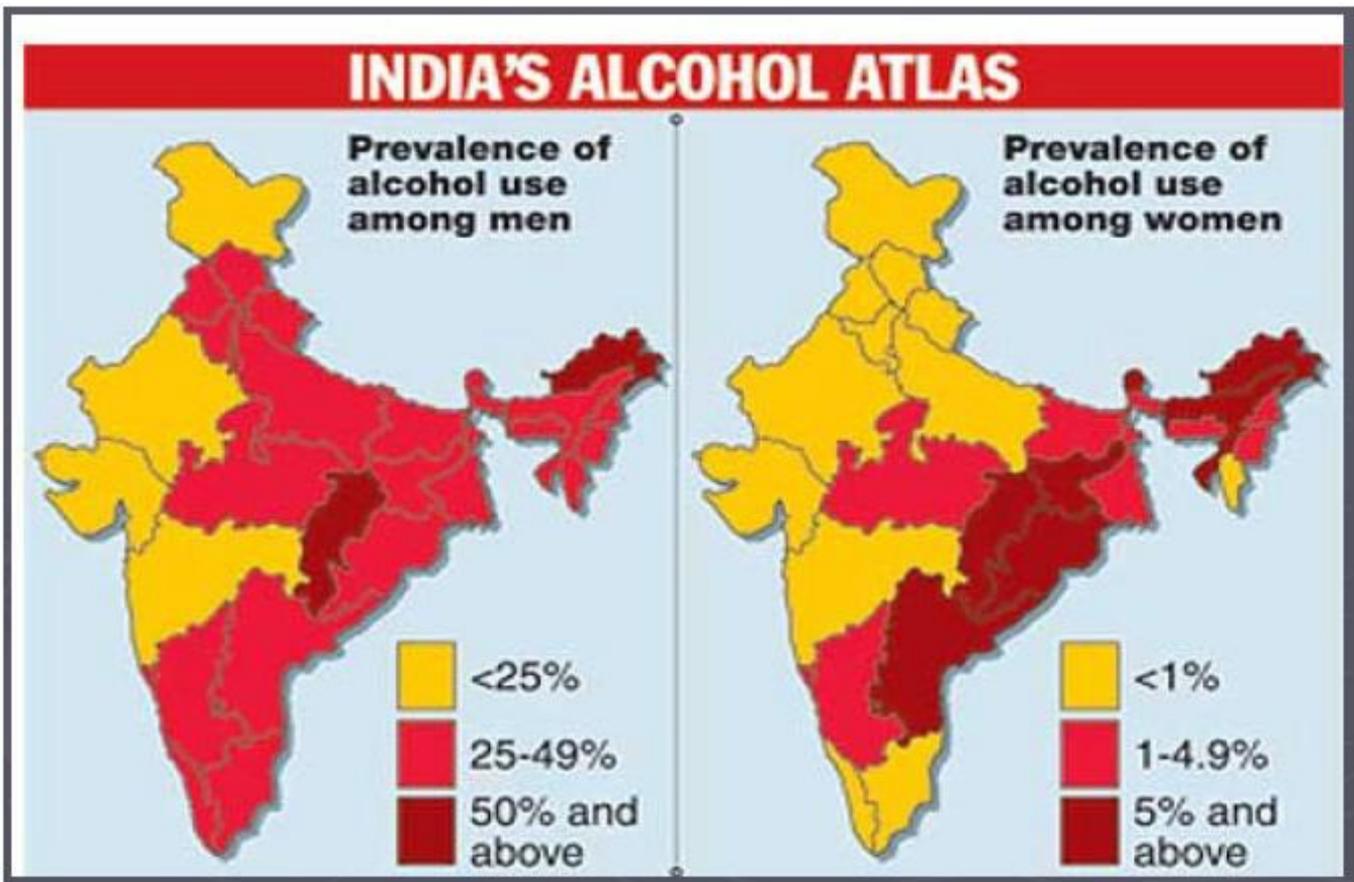
**Blood-ethanol concentration**

Ethanol is toxic to the human body and it’s concentration level in blood is of vital importance since it is not normally detectable.

- 65-87mmol/ltr – Marked intoxication
- 87-109mmol/ltr – Stupor
- More than 109mmol/ltr – Coma

**India’s Current Scenario :**

Alcohol dependence is a major health problem in India. An estimated 32-42% of adult Indian population reports high usage of alcohol in their lifetime. 5-7% is abuser of alcohol and 10- 20 million persons have been estimated to be in need of treatment for alcohol dependence. The reports also indicated that there is a steady rise in per capita alcohol consumption every year.



**Causes**

1. **Genetic factors** – Make a small contribution to the development of alcohol use. The genetic factors are believed to impart an explanation to the differing rates of alcohol dependence among racial groups, viz. there are differences between African, East-Asian and Indo racial groups in how they metabolize alcohol. The alcohol dehydrogenase allele ADH1 B\*3 causes rapid metabolism of

alcohol. This allele is only found in those of African descent and certain native American tribes. Thus, these people have a reduced risk of developing alcoholism.

2. **Cultural factors** – Rare among Muslims & Jews and common in countries which have large alcohol producing industries, namely France, Italy, Portugal etc.
3. Availability – It is important as shown by high rates among those employed in the drink trade.
4. Economic Barrier – There is a close correlation between consumption & the price of alcohol relative to average earnings. The cheaper the relative price, the higher the consumption.
5. Emotional Pleasure– Drinking has become a substitute in relieving the unpleasant symptoms of an anxiety state, depression or schizophrenia.
6. Physical Dependence – Withdrawal symptoms, such as nausea, sweating, shakiness and anxiety occur when alcohol use is stopped after a period of heavy drinking. Thus it is a natural tendency to revert back to the once ‘given-up’ habit.

### Alcohol Addiction

Addiction is a compulsive phenomenon of high intake of drugs / alcohol. It is said to be the inability to limit one’s drinking on any given occasion. Total loss of control over oneself and a strong craving for the drug are very common.



### Alcohol Abuse

It is a pattern of recurrent alcohol use leading to failure of fulfilling major role obligations and which can be physically dangerous and causes legal, social or interpersonal problems like poor performance leading to expulsion from work, argument with spouse, spouse and child abuse and physical fights.

### Alcohol Dependency

It is a pattern of recurring alcohol use leading to tolerance and on withdrawal causes distressing symptoms. There is persistent desire or unsuccessful efforts to cut down or control alcohol use or a great deal of time spent acquiring, using or recovering from alcohol’s effects.



### Alcohol Intoxication

It is an alcohol induced disorder occurring due to its recent ingestion. The person may have slurring of speech, in co-ordination, unsteady gait, nystagmus, impairment in attention or memory, stupor or coma.



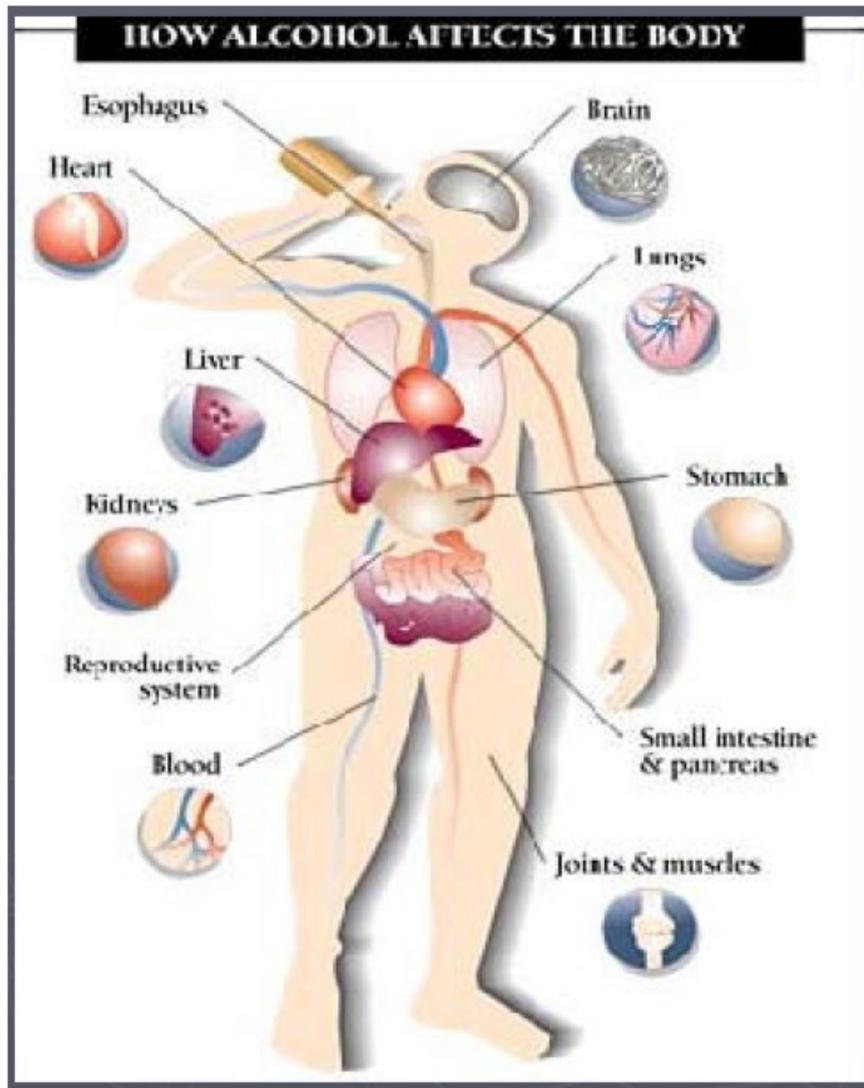
**Effects of alcohol consumption**

Alcohol is rapidly absorbed from stomach, small intestine and colon. The maximum concentration in blood reaches within 30-90 minutes.

**Acute :**

- Central Nervous System (CNS) Dysfunctions
- Depression of inhibitory control
- Vasodilatation, warm, flushed, reddish skin
- Decreased memory & concentration
- Poor judgment
- Decreased reflexes
- Decreased sexual response
- Psychological problems like depression, morbid jealousy, emotional outbursts etc.
- Amnesia (Alcoholic blackouts)

**Chronic effects :**



## I. Liver disease

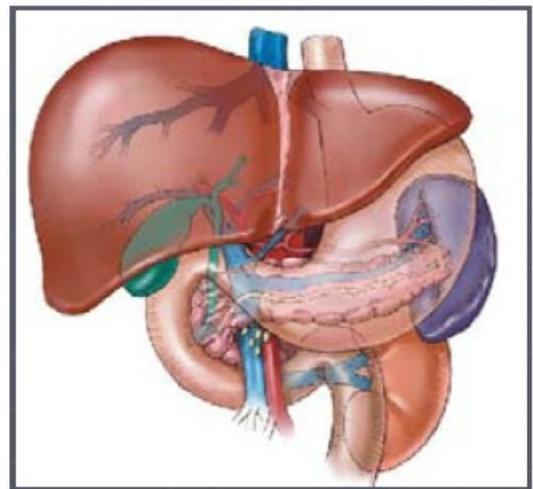
### a) Fatty liver

- Non-specific symptoms
- Hepatomegaly

### b) Hepatitis

- Severe illness
- Malnutrition
- Jaundice
- Hepatomegaly
- Ascites
- Encephalopathy

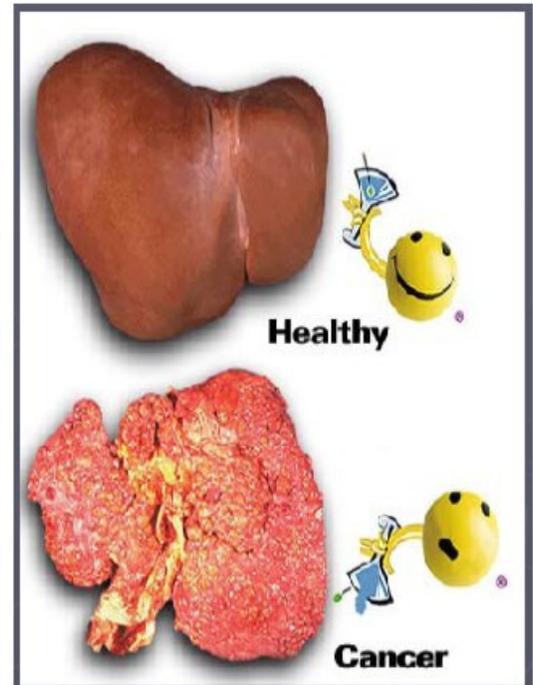
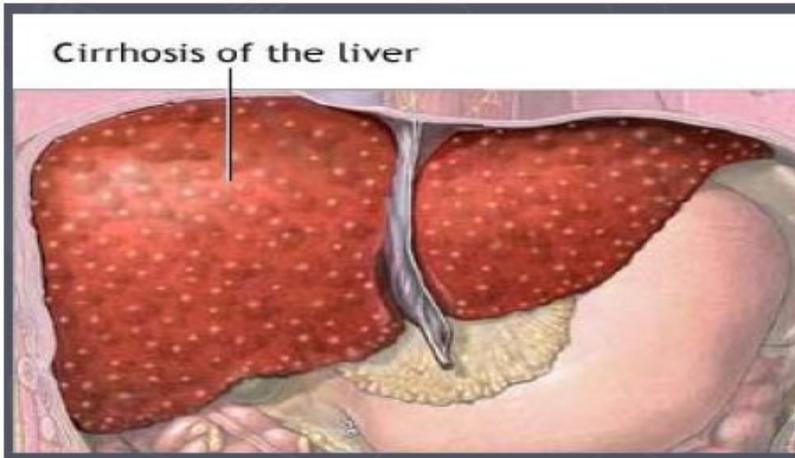
### c) Cholestasis

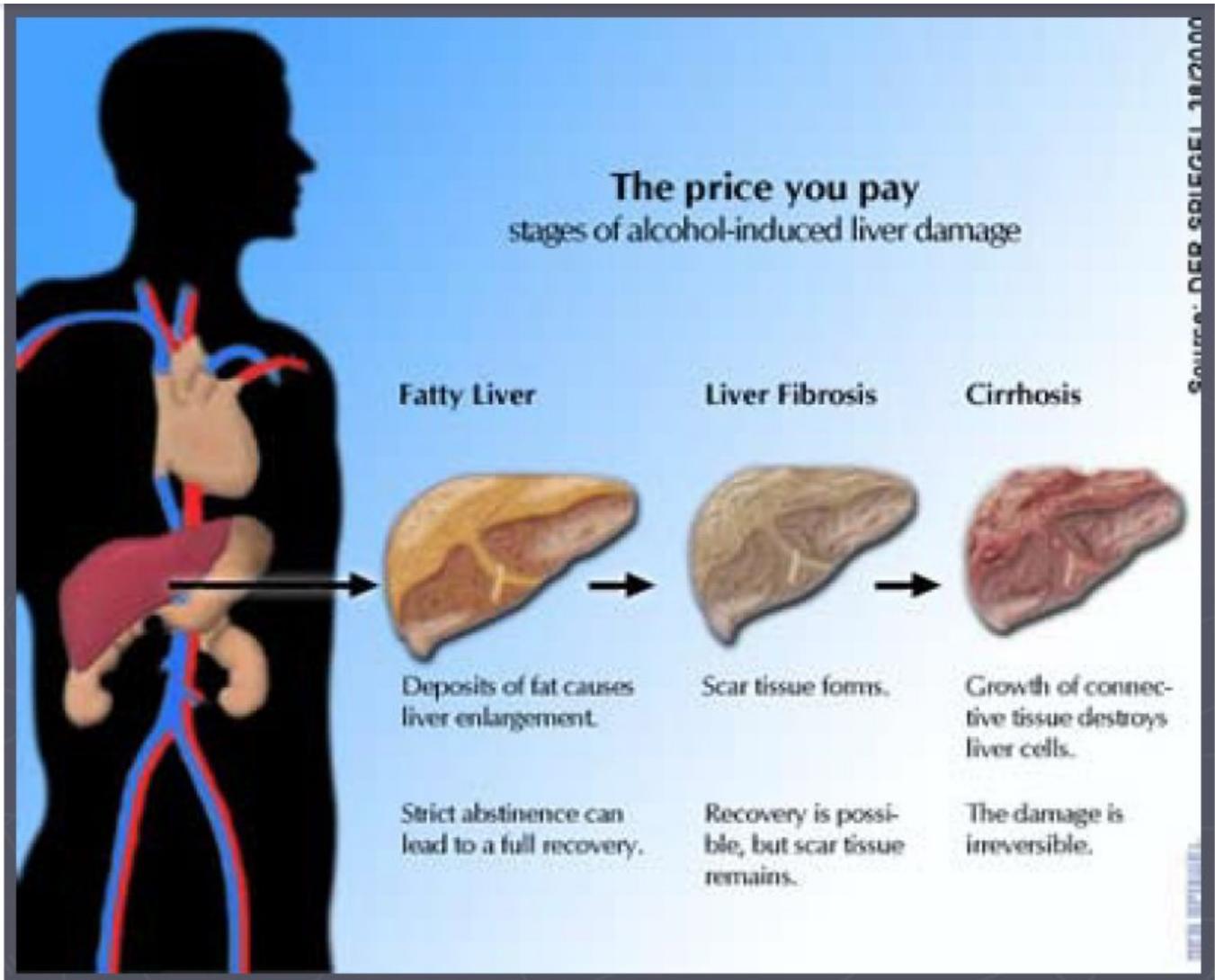


- Jaundice
- Abdominal Pain
- Hepatomegaly (often tender)

d) Cirrhosis

e) Cancer





**Apart from alcohol, intake of other drugs have a direct effect in the liver as well!!!!**

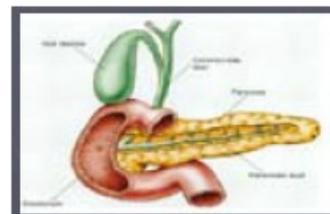
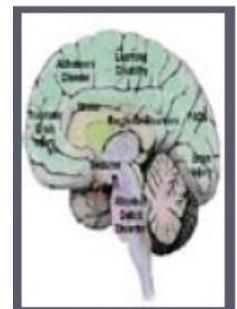
It is to be noted that liver is the main organ in which drugs are metabolized and consequently important in determining the effects of drugs in the body. Liver disease may alter the capacity of the liver to metabolize drugs and unexpected toxicity may occur when patient with liver disease are given drugs in normal doses.

## Manifestations of drug hepatotoxicity

- Acute Hepatic Damage
  - Acute Hepatitis
  - Cholestatic Hepatitis
  - Cholestasis
- Abnormal liver function test
- Hepatic Fibrosis
- Chronic Hepatitis
- Cirrhosis
- Hepatic Vascular Damage
  - Budd-Chiari Syndrome
  - Veno-occlusive disease
  - Hepatoportal sclerosis
- Neoplasia
  - Adenoma
  - Hepatocellular carcinoma
  - Haemangioma/haemangiosarcoma

## II. Brain

- Cerebral Haemorrhage
- Dementia (due to cortical atrophy)
- Cerebellar degeneration

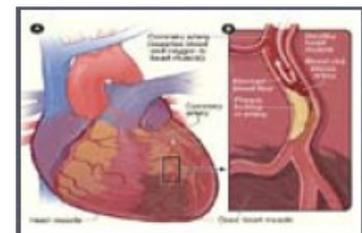


## III. Pancreas

- Pancreatitis
- Hypoglycaemia

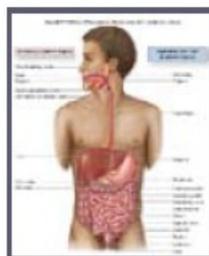
## IV. Heart

- Hyper-tension
- Cardiomyopathy



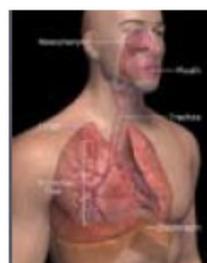
## V. Alimentary System

Oropharyngeal cancer  
Oesophageal cancer  
Oesophageal varices  
Gastritis  
Malabsorption



## VI. Respiratory System

Pneumonia  
Tuberculosis  
Laryngeal Cancer





## VII. Others

- Hypogonadism
- Infertility
- Fetal Alcohol syndrome
- Palmar erythema
- Myopathy
- Peripheral neuropathy
- Gout
- Pseudo – Cushing’s Syndrome



## Social Effects ( Cost to society) :

- Absenteeism from work
- Unemployment
- Marital Tensions
- Child Abuse
- Financial difficulties
- Problems in abiding by the law including violence and traffic offences



## Withdrawal Effects :

- Tremor
- Nausea
- Irritability
- Agitation
- Tachycardia
- Hypertension
- Convulsions
- Hallucinations

## **Management**

- Straight forward advice about the harmful effects of alcohol and safe levels of consumption is all that is needed. In more severe cases, patients may have to be advised to alter leisure activities or change jobs if these are contributing to the problem.
- Supportive psychotherapy is often crucial in helping the patient to make the necessary changes in lifestyle.
- Interpretive psychotherapy, either individual or groups can help patients with recurrent relapses.

## **Medications in use**

- Antabuse (Disulfiram) – resulted in over 50% abstinence (according to a study)
- Temposil (Calcium carbimide) – safer than disulfiram.
- Naltrexone – Competitive antagonist for opioid receptors.
- Campral (Acamprosate) – Stabilizes the brain chemistry.

## **Preventive measures**

World Health Organisation, European Union and other regional bodies have implemented certain alcohol policies. The adolescents & young adults are one of the primary targets.

- Increasing the age at which illicit drugs/alcohol can be purchased.
- Banning/Restricting of advertisement of alcohol.
- Credible, evidence based educational campaigns in the mass media about the illeffects.
- Guidelines for parents to prevent alcohol abuse amongst youngsters.

## **CONCLUSION**

This brings us to the end of discussion. Throughout the topic, the malicious effects of alcohol has been enlightened upon. Thus, being optimistic, it can be said that the general literate population should take precautions regarding alcohol intake. A normal, healthy, hassle-free life is always desirable and that can only be achieved through a modest, and not generous consumption of alcohol.