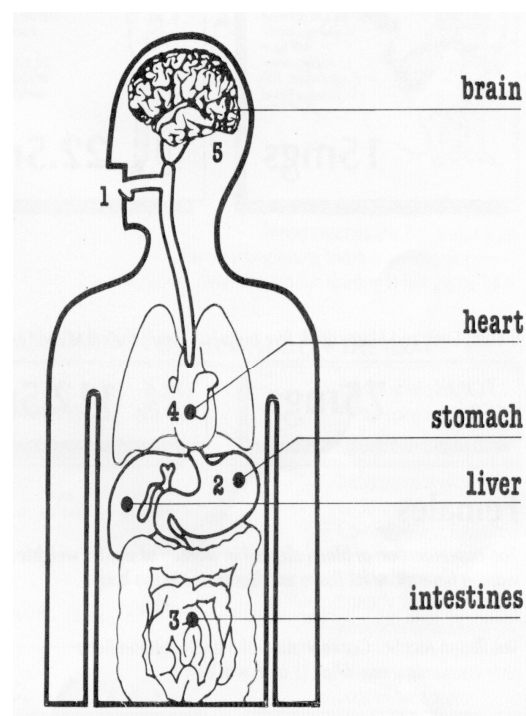


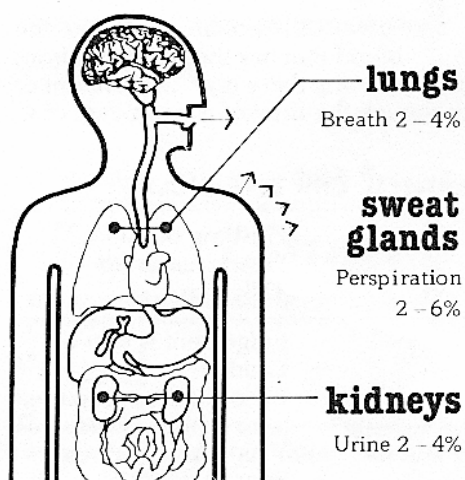
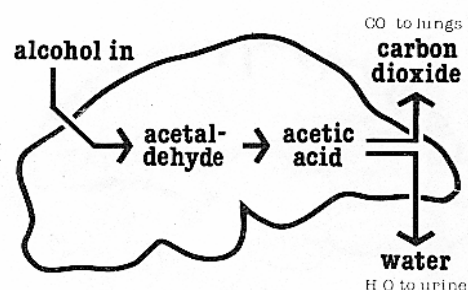
Alcohol and You

ABSORPTION

1. Alcohol is taken into the body through the mouth.
2. The alcohol is absorbed by the stomach wall and enters the blood stream. The amount of food in the stomach and type of drink consumed will significantly affect the rate of absorption.
3. The remaining alcohol passes into the small intestines where it is absorbed into the blood more rapidly than from the stomach. About two-thirds of the alcohol is absorbed in this way.
4. Once in the blood, alcohol travels to all parts of the body.
5. When alcohol enters the body it soon affects the brain, being carried there by the bloodstream. Alcohol enters the nerve cells, slowing down their activity.



The Liver



OXIDATION

Over 90 per cent of alcohol consumed by a drinker is disposed of inside the body by being oxidised or burnt.

Oxidation is the process by which cells combine the dissolved food in the blood with oxygen and thereby release heat and energy. The heat and energy, or calories, resulting from the oxidation of alcohol are used by the body cells.

These alcohol calories cannot be stored in the body for future use as with most foods. Alcohol calories are burnt up immediately. While the alcohol is being used by the body, carbohydrates and fats are being stored for future energy supply.

Alcohol is metabolised chiefly in the cells of the liver and the rate is constant for any individual. The rate varies among individuals according to body weight and an enzyme in the liver - alcohol dehydrogenase.

The average 150 lb man will burn up 15 mgs per 100 millilitres of BAC in 1 hour (1 drink - 1 unit).

Harms done by Alcohol to the Individual Drinker

	Condition	Summary of findings
Social well being	Negative social consequences	For getting into a fight, harming home life, marriage, work, studies, friendships or social life, the risk of harm increases proportional to the amount of alcohol consumed.
	Reduced work performance	Higher alcohol use results in reduced employment and increased unemployment and reduced productivity.
Intentional and unintentional injuries	Violence	There is a relationship between alcohol consumption and the risk of involvement in violence, which is stronger for episodic heavy drinking than for overall consumption. The higher the alcohol consumption, the more severe the violence.
	Drinking and driving	The risk of drinking and driving increases with both the amount of alcohol consumed and the frequency of high volume drinking occasions. There is a 38% increased risk of accidents at a blood alcohol concentration level of 0.5g/L.
	Injuries	There is a relationship between the use of alcohol and the risk of fatal and non-fatal accidents and injuries. People who usually drink alcohol at lower levels, but who engage periodically in drinking large quantities of alcohol, are at particular risk. Alcohol increases the risk of attendance at hospital emergency rooms in a dose dependent manner.
	Suicide	There is a direct relationship between alcohol consumption and the risk of suicide and attempted suicide, which is stronger for episodic heavy drinking than for overall consumption.
Neuropsychiatric conditions	Anxiety and sleep disorders	Over one in eight of individuals with an anxiety disorder also suffer from an alcohol use disorder. Alcohol aggravates sleep disorders.
	Depression	Alcohol use disorders are a risk factor for depressive disorders in a dose dependent manner, often preceding the depressive disorder, and with improvement of the depressive disorder following abstinence from alcohol.
	Alcohol dependence	The risk of alcohol dependence begins at low levels of drinking and increases directly with both the volume of alcohol consumed and a pattern of drinking larger amounts on an occasion. Young adults are particularly at risk.
	Nerve damage	Clinical studies find that between one quarter and one third of alcohol dependent patients have damage to the peripheral nerves of the body, with the risk and severity of damage increasing with lifetime use of alcohol.
	Brain damage	Heavy alcohol consumption accelerates shrinkage of the brain, which in turn leads to cognitive decline. There appears to be a continuum of brain damage in individuals with long-term alcohol dependence.
	Cognitive impairment and dementia	Heavy alcohol consumption increases the risk of cognitive impairment in a dose dependent manner.
Gastrointestinal, metabolic and endocrine conditions	Liver cirrhosis	Alcohol increases the risk of liver cirrhosis in a dose dependent manner. At any given level of alcohol consumption, women have a higher likelihood of developing liver cirrhosis than men.
	Pancreatitis	Alcohol increases the risk of acute and chronic pancreatitis in a dose dependent manner.
	Type II diabetes	Although low doses decrease the risk compared with abstainers (see Box 5.3), higher doses increase the risk.

	Overweight	Alcohol contains 7.1 kcal/g and is a risk factor for weight gain. In very heavy drinkers alcohol can replace calories due to meal skipping and lead to malnutrition.
	Gout	Alcohol increases the risk of high blood levels of uric acid and gout in a dose dependent manner.
Cancers	Gastrointestinal tract	Alcohol increases the risk of cancers of the mouth, oesophagus (gullet) and larynx (upper airway), and to a lesser extent, cancers of the stomach, colon and rectum in a linear relationship.
	Liver	Alcohol increases the risk of cancer of the liver in an exponential relationship.
	Breast	Alcohol increases the risk of female breast cancer in a dose dependent manner.
Cardiovascular diseases	Hypertension	Alcohol raises blood pressure and increases the risk of hypertension, in a dose dependent manner.
	Stroke	Alcohol increases the risk of haemorrhagic stroke with a dose-response relationship. The relationship with ischaemic stroke is J-shaped, with low doses reducing the risk (see Box 5.3) and higher doses increasing the risk. Episodic heavy drinking is an important risk factor for both ischaemic and haemorrhagic stroke, and is particularly important as a cause of stroke in adolescents and young people.
	Irregularities in heart rhythms	Episodic heavy drinking increases the risk of heart arrhythmias and sudden coronary death, even in people without any evidence of pre-existing heart disease
	Coronary heart disease (CHD)	Although light drinking reduces the risk of CHD, beyond 20g a day (the level of alcohol consumption with the lowest risk, see Box 5.3), the risk of heart disease increases, being more than the risk of an abstainer after 80g a day. The reduced risk seems to disappear in very old age, where over-reporting of CHD on death certificates also occurs.
	Cardiomyopathy	Over a sustained period of time, a high level of alcohol consumption, in a dose dependent manner, increases the risk of damage to the heart muscles (cardiomyopathy).
Immune system		Alcohol can interfere with the normal functions of the immune system, causing increased susceptibility to certain infectious diseases, including pneumonia, tuberculosis and possibly HIV.
Lung diseases		People with alcohol dependence have a two- to four- fold increased risk of acute respiratory distress syndrome (ARDS) in the presence of sepsis or trauma.
Post-operative complications		Alcohol increases the risk of post-operative complications and risk of admittance to intensive care in a dose dependent manner.
Skeletal conditions		There appears to be a dose-dependent relationship between alcohol consumption and risk of fracture in both men and women that is stronger for men than for women. (See also Box 5.3). In high doses, although in a dose dependent manner, alcohol is a cause of muscle disease.
Reproductive conditions		Alcohol can impair fertility in both men and women.
Total mortality		It has been estimated, at least in the UK, that in younger people (women under the age of 45 years and men under the age of 35 years), any level of alcohol consumption increases the overall risk of death in a dose dependent manner.