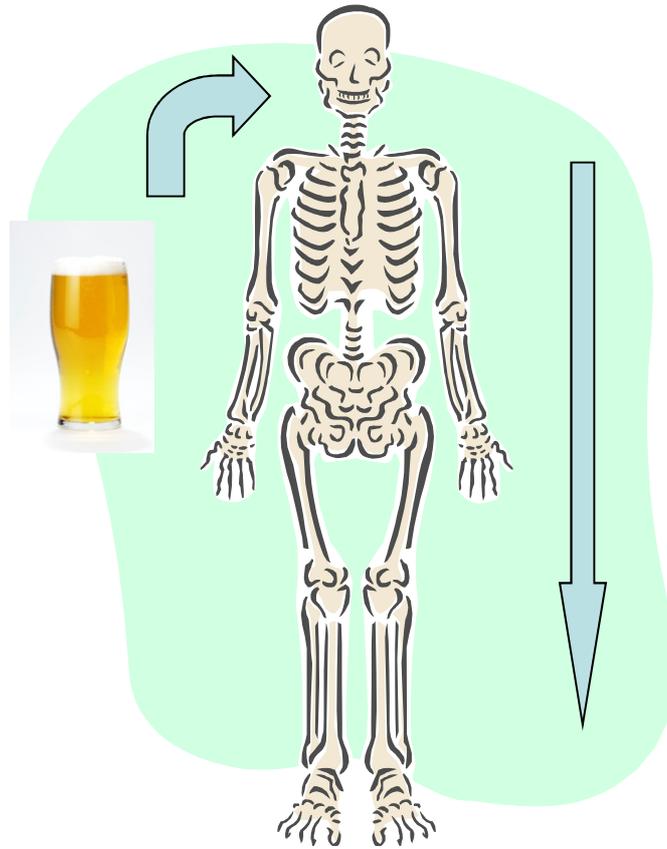


Alcohol in the Body



Nose – when drinking alcohol and the glass/ bottle is raised to the mouth, alcohol vapours go up the nose where it is absorbed through the capillaries into the bloodstream. Sniffing vodka will not get someone drunk, but be aware that before even taking a sip, alcohol is in the system.

Mouth – once alcohol is in the mouth, alcohol is absorbed through the lining in the mouth into the bloodstream.

Stomach – Alcohol is then passed to the stomach. Here a small amount is absorbed through the mucous membranes.

Intestines – the vast amount of alcohol enters the bloodstream through the walls of the small intestine. Alcohol is water soluble and the bloodstream rapidly transports the ethanol through the body where it is absorbed into the body tissue in proportion to their water content.

Alcohol is a poison – our bodies are not designed to ingest it and quickly tries to remove it

Liver: about 90% of alcohol is broken down by the liver

the liver is the main organ in the body which breaks down alcohol. It is the organ that works the hardest.

Kidneys: 2-4% leaves the body in urine made by the kidneys

Alcohol is a diuretic which means that it expels more water than it has taken in. This is what leads to dehydration and hangovers! This is why there are more trips to the toilet than normal when alcohol is consumed.

Lungs: 2-4% is expired in the breath

Breath. A small amount of alcohol is excreted through the breath – this is why police will use breathalyser tests.

We also loose Alcohol in our Saliva or spit (1-2%) and in our sweat (2-6%)

How is Alcohol Metabolised?

Metabolism is a set of chemical reactions in the body which results in enzymes and substances being broken down and removed from the body.

Alcohol is metabolised by a group of 6 enzymes known as acetaldehyde dehydrogenase which converts alcohol into a non-toxic substance.

Alcohol is removed from the bloodstream by a combination of metabolism, excretion and evaporation.

This metabolism of alcohol takes approx 1 hour for 1 unit of alcohol. When someone takes their first drink, after 20 minutes the alcohol will start to get metabolised. After this, it is approx 1 hour per 1 unit. This is an approximation based on a healthy adult. Under the age of 18 there is an uncertainty of how long metabolism would take due to their body being less developed and there is no recommended levels of alcohol for this age group. If a person is aged 60/65 or over, it will take longer for alcohol to be metabolised by the liver due to the changes in an older persons body. They are unable to deal with alcohol as effectively.

Gender :

•Gender – a male has a larger liver than a female and an extra enzyme that breaks down alcohol. A female does not have this enzyme. The male body has a higher water to fat ratio than a female so alcohol is more diluted in a male's system. This can affect the rate in which alcohol is broken down. This is also the reason why recommended levels of drinking are different for men and women.

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Amount & Type – Drinking champagne will affect someone quicker. This is due to the bubbles within champagne. The fizziness enables it to move into the small intestine quicker than other types of alcohol. The small intestine is where most absorption takes place so it is absorbed quicker. Drinking fizzy alcohol such as spirits with a carbonated mixer and sparkling wines will lead to a higher absorption rate.

Speed – How quickly someone drinks alcohol also leads to how quickly it gets into their system. It is true that drinking through a straw leads to someone getting alcohol into their system quicker. There are many different theories as to why this is : The straw creates a vacuum and when the alcohol travels up the straw, the boiling point changes and some of it becomes vapour which means it is absorbed into the bloodstream quicker through the lungs than when it is in liquid form. When people drink through a straw, they tend to drink faster. Also the alcohol doesn't stay for as long in the mouth so it is more likely to travel to the stomach faster.

Stomach contents – if someone has drunk alcohol before eating then it takes longer for alcohol to be absorbed into the bloodstream and therefore the process of metabolism will take longer to start.