All alcohol you consume is absorbed into your blood stream.

You feel the effects of alcohol quickly because it is rapidly absorbed from the stomach, small intestine and large intestine into your blood stream.

The rate of absorption of alcohol from the stomach can vary, depending on a number of factors. For example, whether you have food in your stomach is a factor (especially food high in protein or fat), as food slows down the emptying of alcohol from your stomach into the small intestine and its subsequent absorption.

So when you drink alcohol on an empty stomach your blood alcohol concentration (BAC) – which is the amount of alcohol in your blood stream – increases more rapidly and you feel the effects more rapidly.

Useful facts

Alcohol is rapidly absorbed from the stomach, small intestine and large intestine into the bloodstream. Vaporised alcohol can also be absorbed through the lungs into the bloodstream.

- Your BAC is measured in mg of alcohol per 100mL of blood.
- Your blood alcohol will continue to rise after you have consumed your last drink. You generally won’t reach your maximum BAC until 45-90 minutes after consuming it.
- Alcohol is broken down (or metabolised) in the body more slowly than it is absorbed. Consequently, the more alcohol is drunk, and the faster it is drunk, the higher the BAC will become.
- In an adult, the average rate of metabolism of alcohol is about one standard drink per hour. However, there is significant variation in this rate between individuals.
- About 10% of the alcohol you absorb is not metabolised. Most of this unchanged alcohol is excreted in your urine, but a proportion is excreted via your lungs in breath and via your skin as sweat.
- Alcohol is detected in your bloodstream, including the brain, within about five minutes of taking a drink.
- Alcohol penetrates your brain and central nervous system.
- Alcohol belongs to the class of drugs called depressants. These do not necessarily make you feel depressed, but slow down the central nervous system including the transmission of messages to and from the brain.
- In pregnant women alcohol also penetrates the placenta and it will readily cross the placental barrier into the fetal blood.
- Alcohol will enter the breast milk of women who are breastfeeding. The alcohol concentration in breast milk is about 10% higher than the BAC in the mother.
Removal of alcohol from the body

Oxidation pathways break down (metabolise) about 90% of the alcohol that is absorbed into the blood. The metabolism of alcohol is different to that of most foods because a constant amount is broken down at all times.

Most of the remaining 10% of the alcohol that is absorbed is excreted via the kidneys in urine, but a proportion is excreted via the lungs in breath and via the skin as sweat.

The graph above shows blood alcohol levels in the body over time after consuming one standard drink of alcohol. The combined effects of different factors affecting absorption, metabolism and excretion result in a characteristic blood alcohol curve. The alcohol concentration rises steeply with the peak concentration reached 45-90 minutes after ingestion, the majority after 60 minutes. The BAC then falls progressively in a linear fashion.