

How alcohol can damage your body.

Alcohol and the digestive system.

How alcohol can damage the digestive system

Alcohol can damage the organs it comes in contact with in the digestive system, including the mouth, throat, oesophagus and stomach. Once alcohol has entered the blood stream it can damage the liver and large intestines.

Alcohol is not treated like other nutrients in food. In fact, the digestive system works extra hard to eliminate it from the body, prioritising the elimination of alcohol ahead of other nutrients including lipids (fats), carbohydrates and proteins.

Alcohol is absorbed throughout the digestive tract. Unlike other nutrients, alcohol is absorbed directly into the blood stream through the stomach lining and it is also rapidly absorbed in the small intestine. Alcohol metabolism mostly occurs in the liver, but other cells in the body can also metabolise alcohol.

Alcohol is converted into a toxic chemical called acetaldehyde. Alcohol can cause cancer because acetaldehyde can damage DNA and stop the cells from repairing this damage.

How does alcohol damage the mouth and throat?

The mouth and throat are exposed to alcohol as soon as it is ingested. Alcohol passes quickly into the mouth's saliva, and for approximately 30 minutes after drinking, saliva contains more alcohol than the bloodstream. From saliva, acetaldehyde and alcohol easily reach and damage the tissues in the mouth.

A large Cancer Research UK study looking at lifestyle factors that cause cancer found that around a third of cancers of the mouth and throat (30%) were caused by drinking alcohol.

Drinking alcohol increases the risk of oropharyngeal cancer and may increase mouth cancer risk when combined with smoking.

How does alcohol damage the oesophagus?

Alcohol comes into contact with the oesophagus once it has been swallowed. The oesophagus is the long tube running from the mouth to the stomach that propels food and drink down to the stomach. High alcohol consumption is a risk factor for squamous cell carcinoma (cancer of the oesophagus). Alcohol can directly damage the cells lining the oesophagus (squamous cells). It can also cause acid reflux (the stomach contents to come

back up into the oesophagus), which can damage cells and increase cancer risk.

How does alcohol affect the stomach?

The stomach is the first organ to have long contact with alcohol. The stomach's primary job is to store and mix food and drink that has been consumed. One-off and regular drinking can interfere with the functions of the stomach in a number of ways.

- Alcohol can affect the stomach's gastric acid production. This can reduce the stomach's ability to destroy bacteria that enter the stomach, which can allow potentially harmful bacteria to enter the upper small intestine.
- A single heavy episode of drinking can damage the mucous cells in the stomach, and induce inflammation and lesions.
- High alcohol content beverages (more than 15% alcohol volume) can delay stomach emptying, which can result in bacterial degradation of the food, and cause abdominal discomfort.

How does alcohol damage the liver?

Alcohol metabolism mainly takes place in the liver. The liver filters the blood from the digestive tract and its principal role is to remove toxins from the body. The liver breaks down alcohol in three different ways, and all three ways lead to the conversion of alcohol into acetaldehyde which is a toxic chemical and causes inflammatory changes in the liver. These processes can contribute to the following damaging effects in the liver.

- Increased fat production in the liver that can lead to fatty liver.
- The toxic by-products produced when alcohol is metabolised can lead to cell and tissue damage, including DNA damage.

How does alcohol damage the large intestine (bowel)?

Undigested food passes from the small intestine to the large intestine where water and salts are absorbed into the body. This process can take up to 24 hours. The remains are then passed from the body through the anus. Alcohol can come into contact with the large intestine via the bloodstream. This increases the risk of bowel cancer.

Evidence suggests that, compared to non-drinkers or occasional alcohol drinkers, people who drink moderately (up to 4 standard drinks a day) and heavily (more than 4 standard drinks a day), are at an increased risk of colorectal cancer. Moderate drinkers had a 21% increased risk, and heavy drinkers had a 52% increased risk,