

The cost of alcohol on your liver



What is a standard drink?

Many people are surprised to learn what counts as a drink. The amount of liquid in your glass, bottle or can does not necessarily match up to how much alcohol is actually in your drink. Different types of beer, wine or malt liquor can have very different amounts of alcohol content. For example, many light beers have almost as much alcohol as regular beer (about 85% as much).

One 'standard' drink contains about 10 - 15 grams of pure alcohol, which is found in:



Drinking levels defined

Three categories define drinking levels:

- Moderate alcohol consumption:** Up to 1 drink per day (7 drinks per week) for women and up to 2 drinks per day (14 drinks per week) for men.
- Binge Drinking:** A pattern of drinking that brings blood alcohol concentration levels to 0.08 g/dL. This usually occurs after 4 drinks for women and 5 drinks for men - in about 2 hours. Binge drinking can also be defined as drinking 5 or more alcoholic drinks on the same occasion at least 1 day in the past 30 days.
- Heavy Drinking:** Drinking 5 or more drinks on the same occasion on 5 or more days in the past 30 days.

Alcohol's effects on the body

Drinking too much, on a single occasion or over time, can take a serious toll on your health. Here's how alcohol can affect your body:



Brain: Alcohol interferes with the brain's communication pathways, and can affect the way the brain works. These disruptions can change mood and behaviour, and make it harder to think clearly and move with coordination.



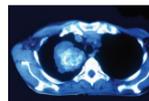
Heart: Drinking a lot over a long time or too much on a single occasion can damage the heart, causing problems including cardiomyopathy (stretching and drooping of heart muscle), arrhythmias (irregular heart beat), stroke or high blood pressure.



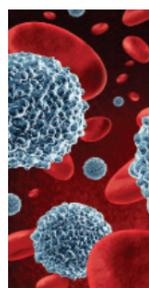
Liver: Heavy drinking takes a toll on the liver and can lead to a variety of problems and liver inflammations, such as steatosis (fatty liver), alcoholic hepatitis, fibrosis or cirrhosis.



Pancreas: Alcohol causes the pancreas to produce toxic substances that can eventually lead to pancreatitis.



Cancer: Drinking too much can increase your risk of developing certain cancers, including cancers of the mouth, throat, esophagus, liver and breast.



Immune System: Drinking too much can weaken your immune system, making your body a much easier target for disease. Chronic drinkers are more likely to contract diseases like pneumonia and tuberculosis than people who do not drink too much. Drinking a lot on a single occasion slows your body's ability to ward off infections - even up to 24 hours after getting drunk.

How does alcohol damage the liver?

The liver can be damaged by alcohol. Just how alcohol damages the liver, and why it does only in a minority of heavy drinkers, isn't clear. What is known is that the process of breaking down ethanol, the alcohol in beer, wine and liquor, produces highly toxic chemicals, such as acetaldehyde. These chemicals trigger inflammation that destroys liver cells.

Hepatitis C, alcohol and liver damage

Hepatitis C causes inflammation of the liver. Liver inflammation is caused by the attack of the virus on the liver cells and by the body's defence mechanisms that are triggered by that attack. For people who have hepatitis C, there are three independent factors that are associated with an increased rate of liver damage. These factors have a greater influence on the development of fibrosis than the hepatitis C virus itself. These three factors are:

Daily alcohol intake of 50 grams or more (i.e. three or more standard drinks).

Over 40 years old at the time of infection.

Male gender.

Alcohol appears to increase the rate of liver damage, as people with hepatitis C who consume alcohol have greater damage than those who do not consume alcohol.

Studies on the effect of alcohol on fibrosis

Several studies have shown that the rate of fibrosis (scarring of the liver) is significantly connected to alcohol consumption. The findings are listed below:

- Even moderate alcohol intake of approximately one to two standard drinks per day increased not only the virus levels in the blood but also the extent of fibrosis (Pessione et al., 1998).
- An increase in fibrosis was found with heavy alcohol consumption only (i.e. 3.5 standard drinks or 50 grams of alcohol per day) (Poynard et al., 1997).
- Alcohol intake was an independent risk factor for the progression of hepatitis C infection. Heavy drinkers had a 300% greater risk of cirrhosis and decompensated liver disease than those who were not heavy drinkers (Wiley et al., 1998).
- A history of heavy alcohol abuse (i.e. 6 drinks per day) was associated with a 400% increased risk of cirrhosis (Harris et al., 2001).

Studies on the effect of alcohol on treatment

Furthermore, several studies have shown that alcohol consumption can have a negative impact on hepatitis C

treatment. The findings of these studies are listed below:

- Continued alcohol intake is considered a major contraindication to therapy with interferon alone or in combination with ribavirin (McHutchison, 2000). For example, interferon is known to exacerbate mental disorders (e.g. depression) that frequently occur in alcoholics.
- Alcohol reduces the effectiveness of interferon treatment (Ince and Wands, 1999).
- Even in hepatitis C-infected alcoholics who stop drinking, the response to interferon is less than that in non-alcoholics, with the extent of the response depending on the level of alcohol consumption before the initiation of therapy (Okazaki et al., 1994).

How does this affect my hepatitis C?

Alcohol increases the rate of liver damage in people with hepatitis C and can reduce the effectiveness of interferon-based hepatitis C treatment. Therefore, the National Institute of Health Consensus Conference (1997) stated that:

More than one drink per day is strongly discouraged in patients with hepatitis C. Abstinence from alcohol is recommended.

There is such a wide range of opinions of what is 'allowable' and what is 'desirable'. If you were to translate that to a drive to Auckland in your car in the rain with worn tyres and no seatbelt, we would all advocate for you to stop and think before you go ahead! Do the same with alcohol - don't drink when you know there is a real risk you could end up with liver failure or liver cancer. Get your hepatitis C treated but while you wait, start by focusing on reducing your risk.



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