

Liver Damage Is Off the Charts

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

STORY AT-A-GLANCE

- › Rates of alcoholic liver disease have soared 30% in the last year at the University of Michigan's health system, a rise doctors blame on higher amounts of alcohol intake during the pandemic
- › Hospitals including Northwestern University and Harvard University reported 50% increases in admissions for alcoholic liver disease since March 2020
- › Over the six-month period from April to September 2020, "hazardous alcohol use and likely dependence increased month by month for those under lockdowns compared to those not under restrictions"
- › Nonalcoholic fatty liver disease (NAFLD) is also on the rise, being driven by excessive intake of processed seed or "vegetable" oils and fructose
- › Alcohol-induced cirrhosis and NAFLD can be reversed in their early stages by quitting drinking and cutting out processed fructose and seed oils

Rates of alcoholic liver disease have soared 30% in the last year at the University of Michigan's health system, a rise doctors blame on higher amounts of alcohol intake during the pandemic.¹ Anecdotal reports suggest some patients increased drinking to a bottle of wine or five to six drinks daily from March 2020 to March 2021, an amount that raises the risk of severe liver disease.

Speaking with NPR, University of Michigan liver specialist Dr. Jessica Mellinger said, "In my conversations with my colleagues at other institutions, everybody is saying the same

thing: 'Yep, it's astronomical. It's just gone off the charts.'"² Mellinger said the pandemic "supercharged" already rising rates of liver disease, which are now also showing up in younger populations.

"We're seeing kids in their late 20s and early 30s with a disease that we previously thought was kind of exclusive to middle age," she said.³ Alcoholic liver disease was also up 30% from 2019 to 2020 at Keck Hospital of the University of Southern California, with other hospitals, including Northwestern University and Harvard University, reporting 50% increases in admissions for alcoholic liver disease since March 2020.⁴

Overall, 4.5 million U.S. adults are diagnosed with liver disease each year, and 44,358 die as a result.⁵ It's likely that increased alcohol consumption is worsening the already growing epidemic of liver damage being triggered by poor diet, including high consumption of fructose and seed oils high in omega-6 polyunsaturated fatty acids (PUFAs).

Lockdowns Increased Hazardous Alcohol Use

Doctors' anecdotal reports of patients' increased alcohol usage during the pandemic were confirmed by multiple studies. University of Arizona College of Medicine researchers found that over the six-month period from April to September 2020, "hazardous alcohol use and likely dependence increased month by month for those under lockdowns compared to those not under restrictions."⁶ They added:⁷

"This increase in harmful alcohol use and related behaviors is likely to have prolonged adverse psychosocial, interpersonal, occupational, and health impacts as the world attempts to recover from the pandemic crisis."

An editorial published in The Lancet Gastroenterology & Hepatology likewise noted that sales in U.K. alcohol stores increased by 31.4% from the previous month in March 2020 – the month the U.K. went into lockdown. It cited a survey conducted by Alcohol Change UK, which found that 1 in 5 of those who drank alcohol daily said they had increased the amount they were drinking during the lockdown.⁸

The liver is at risk from heavy **alcohol consumption**, in part, because it's where ethanol is metabolized. Steatosis, or fatty liver disease, which is diagnosed when at least 5% of the liver weight is fat,⁹ is often the liver's first sign of heavy drinking.

This can progress to steatohepatitis, which is characterized by inflammation and progression to advanced scarring (cirrhosis) and liver failure. About 35% of problem drinkers will develop advanced liver disease. As noted in Alcohol Research:¹⁰

This can progress to steatohepatitis, which is characterized by inflammation and progression to advanced scarring (cirrhosis) and liver failure. About 35% of problem drinkers will develop advanced liver disease. As noted in Alcohol Research:

"This stage of liver disease can lead to the development of fibrosis, during which there is excessive deposition of extracellular matrix proteins. The fibrotic response begins with active pericellular fibrosis, which may progress to cirrhosis, characterized by excessive liver scarring, vascular alterations, and eventual liver failure."

While, historically, alcohol-related liver cirrhosis has been regarded as a condition that develops after two or three decades of heavy drinking, it's increasingly showing up in 20- and 30-year-olds. In the 25 to 34 age group, death from cirrhosis more than tripled between 1999 and 2016.¹¹ The rise in alcohol-related deaths overlapped with a rise in binge drinking in the U.S. that correlates with the 2008 financial crisis.

At the time, researchers suggested the loss of opportunity and psychological burden may have driven some people to abusive drinking — likely foreshadowing what was to come with the COVID-19 pandemic.¹²

Additional Risks of Excessive Alcohol Intake

If you've increased alcohol intake over stress, fear or anxiety related to current events, it's possible that your health could be affected. About 90% of people who drink excessively do not have an alcohol use disorder.¹³ This does not mean that their health isn't being damaged by excessive drinking, however.

Drinking alcohol can lead to a number of health risks in the short- and long-term. Alcohol depresses your central nervous system, which slows down the communication between your brain cells. Your limbic system, which controls emotions, is also affected. This is why alcohol consumption lowers your inhibitions.

Your prefrontal cortex, a brain region associated with reasoning and judgment, also slows in response to alcohol, leading to more impulsive behavior and poor judgment. In the long-term, alcohol consumption promotes not only fatty liver disease but also weight gain and disruption of your **gut microbes**.¹⁴

It's well known that altering the balance of bacteria in your digestive tract can weaken your immune system, making you more prone to inflammation and disease. Chronic alcohol abuse, in particular, is also known to cause neuronal dysfunction and brain damage,¹⁵ and each additional gram of alcohol consumption per day is associated with **aging your brain** an additional 0.02 years.¹⁶

In addition, excessive alcohol use increases your risk of chronic disease and other health problems, such as the following noted by the CDC:¹⁷

High blood pressure

Poor school or work performance

Stroke

Liver disease

Digestive problems

Cancer (breast, mouth, throat, esophagus, liver and colon)

Learning and memory problems, including dementia

Heart disease

Mental health problems, including depression and anxiety

Social problems, including lost productivity, family problems and unemployment

Alcohol dependence, or alcoholism

Nonalcoholic Liver Damage Also on the Rise

Nonalcoholic fatty liver disease (NAFLD) is the most common chronic liver disease in developed countries,¹⁸ characterized by a buildup of excess fat in your liver that is not related to heavy alcohol use. Lifestyle factors such as diet, exercise, weight and **smoking** all play important roles in exacerbating (as well as reducing) your chances of developing some form of liver disease.

While alcohol consumption certainly doesn't help liver health, the rise in NAFLD is likely related more so to increased intake of toxic industrially processed seed oils, often referred to as "**vegetable oils.**"

Examples of seed oils high in omega-6 PUFAs include soybean, cottonseed, sunflower, rapeseed (canola), corn and safflower.¹⁹ Omega-6 is considered to be proinflammatory because of the most common variety, linoleic acid, which will radically increase oxidative free radicals and cause mitochondrial dysfunction.²⁰

As researchers noted in the journal *Nutrients*,²¹ "In addition, a few studies suggested that omega-6 PUFA is related to chronic inflammatory diseases such as obesity, nonalcoholic fatty liver disease and **cardiovascular disease.**" As mentioned, at the root of the harmful biochemical reactions triggered by seed oils is linoleic acid, which is an 18-carbon omega-6 fat.

It's the primary fatty acid found in PUFAs and accounts for about 80% of the fatty acid composition of vegetable oils. Omega-6 fats must be balanced with omega-3 fats in order not to be harmful, but this isn't the case for most Americans' diets. To make

matters even worse, most of the omega-6 that people eat has been damaged and oxidized through processing.

Fructose Also Driving Liver Damage

When fatty liver occurs in the absence of significant alcohol consumption, it is often driven instead by excess sugar, which is why this condition is now found even in young children.

This is one reason why **eliminating processed fructose** and other added sugars from your diet is so important. Fructose affects your liver in ways that are very similar to alcohol. Unlike glucose, which can be used by virtually every cell in your body, fructose can only be metabolized by your liver, as your liver is the only organ that has the transporter for it.

Since all fructose gets shuttled to your liver, if you consume high amounts of it, fructose ends up taxing and damaging your liver in the same way alcohol and other toxins do. The way your liver metabolizes fructose is also very similar to that of alcohol,²² as both serve as substrates for converting carbohydrates into fat, which promotes **insulin resistance, dyslipidemia** (abnormal fat levels in the bloodstream) and fatty liver.

Fructose also undergoes the Maillard reaction with proteins, leading to the formation of superoxide free radicals that can result in liver inflammation similar to acetaldehyde, an intermediary metabolite of ethanol. Reducing your intake of fructose and seed oils while increasing your intake of healthy fats is a powerful way to support your liver health.

It's also important to avoid nearly all processed foods and fast foods, as virtually all of them contain these toxic oils and/or fructose. The easiest way to do this is to prepare the majority of your food at home so you know what you are eating.

How to Support Your Liver Health

The best way to avoid alcohol-induced damage to your liver is to abstain from drinking it, especially heavily. Alcohol-induced cirrhosis and NAFLD can be reversed in their early

stages by quitting drinking and cutting out processed fructose and seed oils.

Nicotinamide adenine dinucleotide (NAD) – the dietary precursor of which is niacin, vitamin B3 – is also important if you have alcoholism.

People with chronic alcoholism are at risk for niacin deficiency, both due to a reduction in dietary intake of niacin and interfering with the conversion of tryptophan to NAD.²³ Small doses of NAD (not time released) can be incredibly helpful when provided while weaning off alcohol.

The treatment helps to curb cravings for alcohol, detox the body, flush alcohol (or other drugs) out of the system and relieve withdrawal symptoms. As a potent antioxidant, NAD also helps to create energy in cells' mitochondria.

Choline, an essential nutrient, also supports normal liver function and liver health, helping it to maintain membrane integrity and manage cholesterol metabolism, including low density lipoproteins (LDL) and very low density lipoproteins (VLDL), helping to move fat out of your liver.^{24,25}

By enhancing secretion of VLDL in your liver, required to safely transport fat out, choline may protect your liver health.²⁶ An estimated 90% of the U.S. population is deficient in choline.²⁷ You can increase your intake by consuming more choline-rich foods, such as organic pastured egg yolks, grass fed beef liver, wild-caught Alaskan salmon and krill oil. **Arugula** is also an excellent source.

Further, avoid exposure to **glyphosate**, the active ingredient in Roundup herbicide, as much as possible, as it's been linked to fatty liver disease as well. **Magnesium**, **vitamin C** and **milk thistle** are also important for ongoing liver health.

Milk thistle contains silymarin and silybin, antioxidants that are known to help protect your liver from toxins and even help regenerate liver cells.²⁸ If you believe you have an alcohol use disorder or are drinking excessively due to pandemic-related stress and anxiety, seek professional help.

Sources and Reference

- ^{1, 2, 3} NPR March 16, 2021
- ⁴ MinnPost February 11, 2021
- ⁵ U.S. CDC, Chronic Liver Disease and Cirrhosis
- ^{6, 7} Psychiatry Res. 2021 Feb;296:113676. doi: 10.1016/j.psychres.2020.113676. Epub 2020 Dec 25
- ⁸ The Lancet Gastroenterology & Hepatology July 2020
- ⁹ Gastroenterology and Hepatology, 2015;11(3)
- ¹⁰ Alcohol Res. 2017; 38(2): 147–161
- ¹¹ BMJ 2018;362:k2817
- ¹² NPR July 18, 2018
- ¹³ U.S. CDC, Alcohol, FAQs
- ¹⁴ American Journal of Physiology: Gastrointestinal and Liver Physiology May 1, 2012; 302(9): G966-G978
- ¹⁵ Front Biosci (Elite Ed). 2012 Jan 1;4:1505-12
- ¹⁶ Scientific Reports volume 10, Article number: 10 (2020)
- ¹⁷ U.S. CDC, Alcohol Use and Your Health
- ¹⁸ Clin Gastroenterol Hepatol. 2019 Apr 4
- ¹⁹ Int J Mol Sci. 2020 Feb; 21(3): 741
- ²⁰ BMJ Open Heart 2018;5:e000946. doi: 10.1136/openhrt-2018-000946
- ²¹ Nutrients 2020, 12(11), 3365; doi: 10.3390/nu12113365
- ²² Journal of the Academy of Nutrition and Dietetics, September 2010; 110(9): 1307-1321
- ²³ Biochem Genet. 1983 Apr;21(3-4):365-74
- ²⁴ The Choline Council, Facts About Choline and NAFLD
- ²⁵ Fatty Liver Diet Guide 2012-2015
- ²⁶ Veterinary Journal, 2008;176(1):10
- ²⁷ Nutr Rev. 2009 Nov; 67(11):615-23
- ²⁸ Indian J Biochem Biophys. 2006 Oct;43(5):306-11