

# [Alcohol Cessation and Effect on AFib](#)

Atrial fibrillation affects 33 million people worldwide and can lead to heart failure and stroke. Treatments include medications and procedures to reduce the risk of stroke, control heart rate and restore normal heart rhythm. However, all of [these treatments](#) are associated with potential side effects and there can be significant costs associated with treatment. Treatment places a significant burden on the individual and the health care system. The risk of atrial fibrillation increases with advancing age and with our aging population attention has increasingly turned to modifiable risk factors for atrial fibrillation.

There is a well-established relationship between excessive alcohol consumption and [atrial fibrillation](#) and atrial flutter. Alcohol consumption is common in the United States with 57% of Americans reporting drinking alcohol on a regular basis and 44% of drinkers reporting binge drinking in the previous month. A common question is how much alcohol is too much.

Studies have demonstrated an increased risk of atrial fibrillation with binge drinking. Binge drinking is defined as drinking 5 or more drinks for men or 4 or more drinks for women in one occasion. An estimated 30-60% of episodes of atrial fibrillation evaluated in the emergency room are related to binge drinking. This is a broad range but it clearly demonstrates there is a significantly increased risk of atrial fibrillation associated with binge drinking. This risk is independent of the number of drinks consumed per week. For example, many people who drink on the weekends may drink very little or not at all during the week. A person may drink 10 drinks per week, but if they are consumed over the course of 2 nights there will be a higher risk of atrial fibrillation compared to the person who drinks 2 drinks per night.

Actually, many alcohol-related episodes of atrial fibrillation occur during or after binge drinking on the weekend or holidays. This phenomenon is referred to as holiday heart syndrome. It is more common in people who are regular drinkers or who have a history of heart disease but it can also occur after an episode of binge drinking in people without heart disease and those who are infrequent or non-drinkers.

Aside from binge drinking, researchers are still trying to define the lower limits of safe alcohol intake in relation to Afib risk. The 2020 to 2025 Dietary Guidelines for Americans define moderate drinking as one drink per day for women and up to two drinks per day for men. This definition refers to the amount of alcohol consumed on any single day and is not intended as an average over several days.

There is broad agreement that more than 2 drinks per night increase the risk of atrial fibrillation. However, there is growing evidence that even moderate drinking (7-14 drinks per week) is associated with an increased incidence of atrial fibrillation. The risk of developing atrial fibrillation goes up with increasing amounts of alcohol consumption. Data suggests that for every additional alcoholic drink per day, there is an 8% increased risk of atrial fibrillation.

People often cite the reported heart health benefits of low to moderate alcohol consumption. There has been a lot of press about the heart benefits of a glass of wine a day. Epidemiologic studies have shown that low to moderate alcohol intake may decrease the risk of heart attack, heart failure, and death due to heart disease. However, these studies refer to healthy adults and there has been debate recently as to whether or not this should be applied to people with atrial fibrillation.

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## How does alcohol affect atrial fibrillation?

People with atrial fibrillation who drink alcohol have higher rates of progression from paroxysmal to persistent AFib. They also have higher rates of atrial fibrillation recurrence after ablation and possibly higher rates of adverse outcomes, like blood clots.

Alcohol's effect on atrial fibrillation is both direct and indirect. The direct effects on the heart include electrical conduction changes, cellular/structural changes, and autonomic nervous system activation. The indirect effects of alcohol are seen in the increased incidence of risk factors which are known, in and of themselves, to increase the risk of atrial fibrillation.

Changes in the heart's electrical system can be seen quickly after alcohol intake. Alcohol increases the electrical excitability of the upper chambers of the heart (atria) making atrial fibrillation more likely. It can also cause low potassium and magnesium and change the way that calcium is used by heart muscle cells. All of these electrolytes are important in helping stabilize the heart's conduction system and imbalances can lead to abnormal heart rhythms.

Alcohol can cause acute structural changes in the atria by increasing stretch which stresses the conduction system. Over time, alcohol can make the heart larger and stiffer which has a negative impact on its overall function. Chronic heavy drinking can lead to heart failure (alcoholic cardiomyopathy). The severity of heart failure is often related to the average daily alcohol intake and duration of drinking. For example, someone with a longstanding history of alcohol abuse has a higher probability of severe heart failure than someone who has been a heavy drinker for the past 6 months. Alcohol also affects the nervous system and causes increases in stress hormones and abnormal activation of the vagal response. These changes increase the risk of atrial fibrillation.

Apart from the direct effects of alcohol on the heart, alcohol can also lead to atrial fibrillation by increasing the rate of known atrial fibrillation risk factors such as high blood pressure, sleep apnea, and obesity. This is particularly true for people who drink alcohol on a regular basis.

Alcohol is a common cause of high blood pressure. The risk of high blood pressure increases by 40% for people who drink more than 2 drinks per day. At least two-thirds of people with atrial fibrillation have high blood pressure. Over time, elevated blood pressure causes structural changes to the heart which increase the risk of atrial fibrillation.

Sleep apnea is another atrial fibrillation risk factor that is negatively impacted by alcohol. Drinking alcohol before bedtime worsens sleep quality by decreasing protective arousal mechanisms and causing fragmented sleep. It also leads to over-relaxation of the tongue and upper airway muscles which worsens airway obstruction. All of these things worsen sleep apnea.

Excessive alcohol intake contributes to obesity. Alcohol has a lot of empty calories. Low to moderate drinking has not been shown to contribute to obesity. However, drinking 3 or more drinks per day or binge drinking can lead to weight gain, particularly in the abdomen. Obesity worsens high blood pressure and sleep apnea and can lead to diabetes. Each of these are known risk factors for atrial fibrillation.

## Can AFib go away if you stop drinking alcohol?

The good news is that many of the negative effects of alcohol on the heart are reversible, especially if they are caught early and drinking is stopped. A recent study of moderate drinkers with atrial fibrillation found that

they had significantly less atrial fibrillation if they abstained from alcohol. Even people who have developed alcoholic cardiomyopathy can have significant improvement and sometimes resolution of heart failure if they stop drinking.

However, once a person has had atrial fibrillation there is always a risk of recurrence. There are often underlying factors that predisposed a person to developing atrial fibrillation in the first place. The strongest risk factor for having atrial fibrillation in the future is having had atrial fibrillation previously. Therefore, if someone has no other risk factors for an episode of atrial fibrillation other than alcohol, the best thing to prevent future episodes could be to either abstain or consume low amounts of alcohol. Data has shown that amongst former drinkers the longer someone abstains from alcohol, the lower the risk of atrial fibrillation.

## **How long does AFib last after binge drinking?**

According to the National Institute on Alcohol Abuse and Alcoholism, in 2019, 25% of Americans over age 18 reported binge drinking in the past month. During the coronavirus pandemic in 2020, the rates of heavy alcohol use and binge drinking are thought to have increased significantly.

Binge drinking increases the risk of atrial fibrillation both during and after the binge drinking episode. Many people develop atrial fibrillation at the time of intoxication, while others develop AFib 12 to 36 hours later. It is thought that this is due in part to mild alcohol withdrawal (hangover) which causes significant activation of the sympathetic nervous system and can trigger atrial fibrillation.

Alcohol-related electrolyte imbalances can cause atrial fibrillation. Alcohol is a diuretic which can cause excessive loss of electrolytes. Electrolyte loss can be further exacerbated if there is alcohol-induced vomiting. In addition, the metabolism of alcohol itself creates cardiac toxins that continue to have effects during the hangover period and can contribute to atrial fibrillation.

Atrial fibrillation usually terminates in 24 hours for most people who develop atrial fibrillation after binge drinking. Adequate hydration and electrolyte replacement can assist [the recovery process](#). About one quarter of people who have experienced binge-drinking related atrial fibrillation will have drinking related recurrences of atrial fibrillation in the future.

## **Can cutting back on alcohol cause heart palpitations?**

Palpitations are a common symptom associated with alcohol withdrawal. One reason for this is that alcohol withdrawal can cause increased activation of the sympathetic nervous system. This flight or fight response increases the release of stress hormones, increases cardiac contractility, and causes elevated heart rate. Together these can increase risk of atrial fibrillation and lead to palpitations.

In addition, chronic heavy alcohol use can lead to a build-up of alcohol metabolites in the heart. These cardiotoxic byproducts increase oxidative stress which increases inflammation and causes structural changes in the heart. The effects of oxidative stress can lead to palpitations.

## **Why do I get heart palpitations after I drink alcohol?**

Most people have felt their heart skip a beat at one time or another. The sensation that this creates is called a palpitation. If there are frequent skipped, early, or irregular beats a person may describe it as a fluttering sensation. Most people have at least some irregular or early heart beats throughout the day which they may or may not feel. Palpitations are a very common symptom of an irregular heart rhythm. The irregular rhythm is caused by short or sustained electrical conduction abnormalities in the heart.

Alcohol can cause or increase the frequency of palpitations. Drinking alcohol acutely influences the electrical conduction system. It does this by changing the way the cells use certain electrolytes, like calcium, sodium and potassium. The result is that electrical signals may travel faster or more frequently than normal. The acute effects of alcohol on the heart's electrical conduction system were demonstrated in an interesting study in which moderate-heavy drinkers underwent an electrophysiology study before and after drinking 6 whiskey drinks. An electrophysiology study allows a [cardiologist](#) to create an electrical map of the heart. With this map they are able to see how long it takes for electrical signals to travel from one part of the heart to another. They can also see if there are any areas that are misfiring. The researchers found that after acute alcohol ingestion the electrical conduction in the heart was altered and was significantly more irritable. In fact, they were able to induce abnormal heart rhythms (both atrial and ventricular) in 71% of participants. It would be very common for someone who was having these abnormal heart rhythms to experience palpitations.

As discussed above, alcohol affects the way cells use electrolytes. In addition, alcohol can cause people to have abnormally low levels of electrolytes. This is because alcohol acts as a diuretic and increases urine output which leads to increased loss of electrolytes. Any alcohol induced vomiting would further exacerbate electrolyte abnormalities. As the electrolyte levels fall, the already irritated heart will have less of what it needs to maintain a normal rhythm. The abnormal beats and rhythms which ensue can cause palpitations.

Another factor which can contribute to alcohol related palpitations is alcohol's effect on the autonomic nervous system. Even low doses of alcohol can increase the release of adrenaline and activate the body's stress response system which can lead to palpitations.

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## **If I have AFib do I need to stop drinking alcohol?**

Alcohol consumption is very common in the United States. There are possible heart health benefits to modest alcohol intake. However, binge drinking and moderate to heavy daily alcohol use can both increase the risk of atrial fibrillation/flutter. Alcohol has direct cardiotoxic effects which can lead to atrial fibrillation. It also increases the risk of developing high blood pressure, sleep apnea, and obesity which are each independent risk factor for atrial fibrillation. People who have atrial fibrillation should minimize their alcohol intake and eliminate binge drinking to decrease their risk of atrial fibrillation and its long-term complications.