

Beer and Cider Significantly Increase Gout Risk, Especially in Men

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STORY AT-A-GLANCE

- › A recent large-scale study reveals even light to moderate alcohol consumption increases gout risk, with beer and spirits showing the strongest link. Men face higher risks than women
- › Alcohol disrupts your gut microbiome, damaging beneficial bacteria that help break down purines, leading to increased uric acid buildup and higher gout risk
- › Carbohydrate types matter for gout risk: naturally occurring sugars, starch and fiber lower risk, while refined sugars increase it. Genetics also play a role in gout susceptibility
- › Alcohol produces damaging reactive aldehydes, impairing mitochondrial function, accelerating aging, depleting nutrients and increasing cancer risk through various mechanisms, including hormonal imbalances
- › I advise against any alcohol consumption. Eliminating alcohol can significantly improve overall health and reduce gout risk

You've probably heard that moderate alcohol consumption isn't likely to harm your health and may even be beneficial. But it's becoming increasingly clear that even small amounts of alcohol can harm your health.

A recent large-scale study involving participants from the UK Biobank has shed new light on the relationship between alcohol consumption and gout risk.¹ Surprisingly, even light to moderate consumption of several alcoholic beverages was associated with an

increased risk of gout. The study, which followed over 401,128 participants for a median of 12.7 years, found that, in this case, the type of alcohol you choose matters.

While beer and spirits showed the strongest link to gout risk, white wine and champagne weren't off the hook either. Even red wine, often touted for its health benefits, showed a modest increase in gout risk among men. This challenges the long-held belief that wine, especially red wine, might be a safer choice for those concerned about gout and other health risks.

The takeaway? Drinking even small amounts of alcohol may have a more significant impact on your gout risk than previously thought, regardless of the type of drink you prefer.

Men and Women: Different Drinks, Different Risks

Your sex plays a role in how alcohol affects your gout risk. The study revealed some intriguing differences between men and women when it comes to alcohol consumption and gout. For men, being a current drinker was associated with a 69% higher risk of gout compared to never drinkers.² Women, on the other hand, didn't show a significant increase in risk simply from being current drinkers.

However, when it came to frequent drinking, defined as five or more times per week, both sexes saw an increased risk — a substantial 105% increase for men and a 34% increase for women.³ One possible explanation for this difference lies in drink preferences.

Men in the study consumed significantly more beer or cider than women — an average of 4.2 pints per week compared to just 0.4 pints for women. Given that beer showed the strongest association with gout risk, this drinking pattern could partly explain why men saw a higher overall risk from alcohol consumption.

The Gout-Triggering Truth About Your Pint

If you're a beer lover, you might want to think twice before reaching for that pint. The study found that beer or cider consumption had the strongest association with gout risk among all alcoholic beverages. For both men and women, each additional pint of beer per day was linked to a 60% to 62% increase in gout risk.

This strong association could be due to the higher levels of purines found in beer compared to other alcoholic drinks. Purines are compounds that, when broken down in your body, produce uric acid – the main culprit behind gout.

Beer's double whammy of alcohol and purines makes it particularly problematic for gout sufferers or those at risk. So, if you're concerned about gout, consider cutting back on your beer consumption or exploring healthy non-alcoholic alternatives.

You might think that switching to wine or spirits could be a safer bet if you're worried about gout. However, the study results suggest it's not that simple. While beer showed the strongest link to gout risk, other alcoholic beverages weren't far behind. Champagne or white wine consumption was associated with an increased gout risk in both men and women.⁴

Spirits also showed a significant association, with the risk appearing to be even stronger for women than for men. Red wine showed a modest increase in gout risk among men but not among women. These findings challenge the notion that some types of alcohol are "safer" than others when it comes to gout risk.

The Carbohydrate Connection: How Your Diet Impacts Gout Risk

While alcohol consumption can increase your risk of developing gout, not all carbohydrates are created equal when it comes to this condition. A large-scale study explored how different types of carbohydrates affect your chances of developing this painful form of arthritis.⁵ While total carbohydrate intake was associated with a decreased risk of gout, the type and source of carbohydrates matter significantly.

For instance, consuming more naturally occurring sugars, starch and fiber was linked to a lower gout risk. However, a higher intake of refined or **free sugars** – like those found in

sweetened beverages and processed foods – was associated with an increased risk.

This mirrors previous findings on alcohol and sugary drinks, both of which can elevate uric acid levels in your blood. The takeaway? Your overall carbohydrate consumption isn't as crucial as the specific types of carbs you're eating when it comes to gout prevention.

While your dietary choices play a significant role in gout risk, your genetic makeup is also a key factor. The study revealed insights into how these two elements interact. Participants with a low genetic risk for gout who consumed higher amounts of total carbohydrates, non-free sugars, starch and fiber had the lowest risk of developing the condition.

On the flip side, those with a high genetic risk who consumed high levels of free sugars faced the highest gout risk.⁶ The researchers also found something surprising about how diet and genetics work together to affect gout risk. For people who are genetically more likely to get gout, eating more total carbohydrates or starch lowered their risk more than expected.

Similarly, having a diet high in certain carbohydrates and having genes that typically increase gout risk worked together in an unexpected way. The diet cancelled out some of the genetic risk. This means that if you have a family history of gout or know you're genetically at higher risk, paying attention to the types of carbohydrates you eat could be especially helpful in lowering your chances of developing gout.

To understand how dietary carbohydrates influence gout risk, the researchers examined various blood and urine biomarkers. They identified 11 biomarkers that mediated the relationship between carbohydrate intake and gout risk. Unsurprisingly, serum uric acid (SUA) levels played the most significant role. This aligns with alcohol's effect on gout, as both alcohol and certain carbohydrates can influence SUA levels.

Two other notable mediators were cystatin C (CYS) and gamma-glutamyl transferase (GGT). Higher carbohydrate intake was associated with increased CYS levels, while

certain carbohydrate-rich foods were linked to lower GGT levels. Both of these biomarkers have been associated with gout risk in previous studies.

These findings provide valuable insights into the biological mechanisms through which your dietary choices, including both carbohydrate and alcohol consumption, influence your likelihood of developing gout.⁷ An increased risk of gout is just one **consequence of a low-carb diet**, but it's important to consume carbs from healthy sources, like fruit, and not those from processed foods or alcohol.

The Gut Microbiome: Your Hidden Ally Against Gout

Your gut bacteria play a crucial role in managing uric acid levels, the primary culprit behind gout. Recent research published in *Cell Host & Microbe* has uncovered that certain gut bacteria can break down purine, lowering your risk of gout.⁸ However, alcohol consumption disrupts this delicate balance. When you drink alcohol, you're not just affecting your liver; you're also impacting the complex ecosystem in your intestines.

Alcohol negatively affects your gut microbiome and gut-liver-brain axis, a bidirectional communication network that links these three crucial systems in your body. Alcohol's antimicrobial properties, which make it effective for sterilization, also indiscriminately kill beneficial gut bacteria.

For instance, alcohol consumption may decrease *Akkermansia muciniphila*, a beneficial bacterial species naturally found in the human gut.⁹ This, in turn, is associated with "dysregulation of microbial metabolite production, impaired intestinal permeability, induction of chronic inflammation, and production of cytokines."¹⁰

When you consume alcoholic beverages, especially beer and spirits, you're introducing more purines into your system. Your body breaks these purines down into uric acid, potentially overwhelming your kidneys' ability to filter and excrete it. Additionally, alcohol dehydrates you, making it harder for your body to flush out excess uric acid. But the story doesn't end there.

The Cell Host & Microbe study revealed that certain gut bacteria break down purines in your intestines before they're absorbed into your bloodstream.¹¹ By damaging these beneficial bacteria, alcohol not only increases your purine intake but also reduces your body's natural defense against uric acid buildup. This double impact significantly increases your risk of developing gout or experiencing more frequent and severe gout attacks if you already have the condition.

Health Risks of Alcohol Beyond Gout

Alcohol produces similar damaging compounds to excessive omega-6 fats, like **linoleic acid** (LA), which is found in vegetable, or seed, oils common in processed foods. When they're metabolized, they turn into OXLAMs, or oxidized linoleic metabolites. What's consistent with all of those molecules is they're reactive aldehydes.

Alcohol turns into a reactive aldehyde, which is called acid aldehyde, and these reactive aldehydes wreak havoc throughout your body, damaging mitochondria and accelerating aging at a cellular level. **Alcohol's negative effects** extend far beyond an increased risk of gout. Consuming alcohol:

Impairs mitochondrial function,¹² accelerating aging

Exacerbates anxiety and depression

Depletes crucial nutrients

Impacts hormones like leptin and ghrelin

Increases cancer risk dramatically¹³

Contributes to insulin resistance and metabolic dysfunction¹⁴

Drinking alcohol also affects your hormones, particularly the balance between testosterone and estrogen. Alcohol increases the conversion of testosterone to estrogen,¹⁵ which can have various negative effects in both men and women. **Estrogens** are one of the primary factors that increase your cancer risk.

Alcohol also increases cancer risk via other mechanisms, including acetaldehyde toxicity, which can cause DNA damage, inflammation, leaky gut and weakened immune function. Drinking alcohol also disrupts sleep, which means you're not getting a restorative night's sleep when you drink.

The Sobering Truth About Alcohol and Your Health

The evidence against alcohol consumption continues to mount. From increasing gout risk to disrupting your gut microbiome and accelerating cellular aging, alcohol's negative impacts on your health are far-reaching and significant. Despite the persistent myth of "healthy moderation," I do not recommend drinking any alcohol.

The scientific evidence is clear: the risks associated with alcohol consumption, even in small amounts, vastly outweigh any supposed benefits. Even occasional drinking can trigger painful gout attacks, disrupt the delicate balance of your gut microbiome, and set the stage for a host of other health issues.

Whether your primary concern is gout prevention or you're simply committed to achieving and maintaining optimal health, eliminating alcohol from your lifestyle is a major step in the right direction.

Remember, your health is your most valuable asset. By making informed choices about what you put into your body, you can take control of your health and reduce your risk of chronic conditions like gout. The choice to abstain from alcohol may seem challenging in our alcohol-centric culture, but your body will thank you for it in the long run.

Sources and References

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