

Four reasons why your tolerance for alcohol can change

April 28 2021, by Sally Adams



Credit: AI-generated image ([disclaimer](#))

As pubs and bars reopen across England, many are excited about the opportunity to enjoy a drink with friends and family. While some evidence suggests alcohol consumption [increased during lockdown](#), other reports suggest that over [one in three adults](#) drank less—or stopped altogether.

But though we may be excited to get back to the pub, our tolerance may be lower than it was pre-lockdown.

Regularly [drinking](#) a certain amount of alcohol (for example, having four pints every Friday evening after work) can lead to [increased tolerance](#). This is where the brain adapts to the [effects of alcohol](#) (such as relaxation and improved mood), and over time more alcohol is needed to achieve the same effects.

In this scenario you may need to drink five pints to get the same initial "buzz" you got from four pints. Tolerance is a [hallmark feature of addiction](#). But it can also develop with regular and continued [alcohol use](#) in social drinkers.

Following a period of reduced alcohol use or abstinence, [alcohol tolerance](#) can decrease to levels before regular use. This means that your brain and body are "out of practice" in terms of processing and responding to alcohol. Alcohol tolerance can be explained via [several mechanisms](#)—but here are four ways that tolerance may develop and change.

1. Functional tolerance

As we drink over the course of an evening the amount of [alcohol in our bloodstream](#) increases, leading to slower reaction times, lowered inhibitions and impaired judgment. Large amounts of alcohol cause slurred speech, lack of coordination and blurred vision.

People who regularly drink any amount of alcohol can become tolerant to these impairments and show few signs of intoxication—even when there are large amounts of alcohol in their bloodstream. If these drinkers stop or reduce their [alcohol consumption](#), this tolerance could be lost.

But if they start drinking at their previous levels again, alcohol-related impairments in cognition and behavior could return—but after having smaller amounts of alcohol. These changes in tolerance reflect the brain's desensitization (increased tolerance) and resensitisation (reduced tolerance) to alcohol at the [cellular level](#).

2. Environmental-dependent tolerance

Tolerance can develop much more quickly if alcohol is always consumed in the same environment—for example, if you only drank at home during lockdown. This is a sub-type of functional tolerance.

This is because familiar "cues"—such as your home setting—are repeatedly paired with alcohol's effects. This leads to a [conditioned compensatory response](#). This response counters alcohol's impairing effects, and we may not feel as "intoxicated" as a result.

But when we drink in a new environment—such as going to the pub for the first time in six months—the compensatory response is not activated, making us more prone to experiencing alcohol's effects. So even if you've still been consuming large amounts of alcohol at home during lockdown, you may find you feel alcohol's effects to a greater degree when drinking the same amount as normal in a pub or bar.

3. Learned tolerance

Developing tolerance can be sped up if we repeatedly perform the same task or activity under the influence of alcohol.

[Studies of rats](#) have shown that animals trained to navigate a maze while intoxicated actually performed better and were more [tolerant to the effects of the alcohol] than those who didn't receive alcohol during

training.

In humans, this type of tolerance can be shown in the performance of [well-practiced games](#) played under the influence of alcohol. For example, an person who typically plays darts sober would likely experience impairment in performance if intoxicated. But if a person regularly drinks while playing darts, they may experience no alcohol-related impairment because of their [learned tolerance](#).

If you regularly played darts or pool at the pub prior to lockdown, a loss of learned tolerance could mean that you don't play as well as you used to when you have a game after a few drinks.

4. Metabolic tolerance

While the other three types of tolerance focus on alcohol's effects on the brain, metabolic tolerance refers instead to the rapid elimination of alcohol from the body following prolonged or heavy alcohol consumption.

Repeated alcohol use causes the liver to become [more "efficient" at eliminating alcohol](#) from the body. This results in a reduction of alcohol in the bloodstream, alongside its intoxicating effects. Similar to functional tolerance, as metabolic tolerance develops, a greater amount of alcohol is needed to experience the same effects as you experienced initially.

So drinking lower amounts of alcohol during lockdown could mean that your liver is less effective at "clearing" alcohol from the body. As a result, you'll feel the intoxicating effects even from lower amounts of alcohol. Equally, increased alcohol consumption during lockdown could lead to increased metabolic [tolerance](#), where a greater amount of [alcohol](#) is needed to feel intoxicated.

Tolerance is an important factor in understanding our drinking habits. It's also important to remember that drinking as much as you used to after a period of drinking less (or not at all) could lead to greater intoxication, blackout and accidents. So if you plan to head back to the pub with friends now that lockdown is over, be mindful of how your drinking has changed so you can stay safe and enjoy that first tipple.

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