

Alcohol withdrawal can be deadly – here's why

June 15 2018, by Adam Taylor



Credit: Engin Akyurt from Pexels

Alcohol damages the brain, heart, liver and pancreas, and it increases the risk of some cancers, such as [mouth and bowel cancer](#). It also weakens the immune system, making people more vulnerable to infectious

diseases, such as [pneumonia](#) and [tuberculosis](#). Taken in excess, it can kill.

Given these significant [health consequences](#), it's not surprising that many people who are addicted to the substance, try to quit. However, if it's not done [properly](#), withdrawal from alcohol can have terrible health consequences of its own, including death.

The body adapts to long-term change in order to survive. An example of this is angina, where the vessels supplying the heart with blood become narrow. Evidence suggests that people with the condition can slowly [improve](#) and adapt to the reduced blood flow by developing new blood vessels.

Similarly, there are physiological changes as a result of long-term alcohol abuse.

Alcohol [suppresses](#) the production of certain neurotransmitters (chemicals that carry messages between [nerve cells](#)). After a while, the body adjust to the continual presence of high amounts of alcohol by producing more of these neurotransmitters and their [receptors](#) – the proteins on the surface of nerve cells that neurotransmitters latch on to.

When people who are dependent on alcohol suddenly quit drinking, there is a surge in neurotransmitters, way above what the body needs. This surge explains many of the symptoms of sudden withdrawal, including sweating, racing heart, restlessness and feelings of anxiety.

The sudden removal of alcohol can cause fatal [arrhythmias](#), where the heartbeat becomes so irregular the heart fails. This complicated biological process is due to the fact that alcohol interferes with the balance of GABA (an inhibitory [neurotransmitter](#)) and glutamate (an excitatory neurotransmitter).

The excitatory and inhibitory pathways in the brain control the central nervous system and heart. Once alcohol is removed, the huge levels of neurotransmitters that are present can overstimulate organs, including the heart.

This is often made worse by the fact that the [heart](#)'s structure changes with long-term alcohol use. Muscle strength and thickness, for example, are significantly reduced in people who consume more than 90g of alcohol per day (one unit of alcohol is equal to 8g of pure alcohol) over a period of five years or [more](#).

The sudden removal of alcohol can also cause [kidney failure](#). Alcohol has to be broken down and cleared from the body as urine. This needs water, as the products of the breakdown have to be in solution.

Alcohol also inhibits the production of an anti-diuretic hormone, so large quantities of alcohol make you urinate a lot and become dehydrated. Electrolytes in the body, such as sodium, magnesium, calcium and potassium, are usually in solution (water) and excessive amounts of alcohol can cause an [imbalance](#) in these electrolytes as well as an acid-base imbalance. These imbalances can eventually lead to acute [kidney failure](#).

Dangerous drug

The risk of dying from sudden alcohol withdrawal are very real and very high, with estimates ranging from [6%](#) to [25%](#), depending on their symptoms. Sadly, the unpleasant experience of withdrawal – both physical and mental – causes many addicts to relapse to heavy drinking.

If you drink alcohol, it is advisable that you stick to the [government guidelines](#) of not drinking more than 14 units of [alcohol](#) a week, which equates to about six pints of lager or six glasses of wine (175ml).

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