

Can You Overdose On Marijuana?



[Image source](#)

Unlike with many other illicit drugs, marijuana users are not at risk of death from overdose.

Numerous studies have come to this conclusion after investigating the toxicity of marijuana and its active components – chemicals known as cannabinoids.

Studies have mostly focused on the toxicity profile of the cannabinoid tetrahydrocannabinol (THC) because of its potent psychological effects. What they've found is that although THC is a psychoactive substance and is responsible for the "high" that marijuana users experience, it is also remarkably non-toxic.

What The Studies Say

Many studies have set out to investigate the toxicity of cannabis and its various constituents. These studies measure toxicity levels by determining the median lethal dosage (LD-50). The LD-50 measurement is the point at which 50% of the test animals die (a 50% lethal dosage).

[Studies](#) involving small animals such as rats have established an LD-50 point for THC at incredibly high levels (around 1000mg/kg). [Studies](#) involving larger animals such as monkeys and dogs have failed to achieve an LD-50 point, even at enormous doses of over 3000mg/kg.

Although an LD-50 rating has never been established in humans, estimates can be made by extrapolating the results of animal studies.

The non-fatal dosage of 3000mg/kg given in studies of larger animals would be equivalent to an average 70 kg human ingesting 210 grams of pure THC. Given that the average level of THC found in marijuana is [approximately 10%](#), a person would have to smoke 2.1 kg of marijuana all at once in order to reach the same levels of THC as seen in toxicity studies.

With these numbers in mind, it's easy to see why marijuana is far less toxic than everyday substances such as aspirin (LD-50: 200mg/kg) and caffeine (LD-50: 192 mg/kg).

In 2008, The Canadian Medical Association Journal published a [review study](#) spanning 30 years of research, concluding that there are no serious adverse effects of using marijuana. Likewise, the [U.S. Drug Enforcement Agency](#) acknowledges that no death from marijuana overdose has ever been reported.

'Greening out'

Although ingesting too much marijuana cannot cause death or permanent disability, a temporary form of overdose is common, especially in new or inexperienced users of the drug. This phenomenon is casually referred to as ‘greening out’ and usually results in some combination of the following symptoms:

- *Feelings of anxiety, paranoia or fear*
- *Nausea and vomiting*
- *Increased heart rate*
- *Uncontrollable shaking*
- *Hallucination and/or disorientation*

Thankfully, ‘greening out’ is only a temporary phenomenon and will naturally pass within a few hours.

In severe cases, it may be wise to seek medical assistance for someone suffering from a marijuana overdose in order to ensure their safety if anything were to go wrong. There is always the possibility that marijuana obtained from the underground market may be laced (or “cut”) with other drugs, in which case the danger of the situation becomes severely amplified.