

Cannabis 101: A Q&A with UC San Diego Health's cannabis experts

By Gabrielle Johnston, MPH | October 30, 2018

It seems like everywhere you turn cannabis or cannabis derivatives can be found. From ingredients in coffee and smoothies to being marketed as medicine, a cannabis craze seems to be sweeping the country. Since 2000, UC San Diego School of Medicine's Center for Medicinal Cannabis Research and its affiliated researchers have been studying marijuana and its derivatives, their effects on mind and body and their therapeutic potential.

We asked experts to cut through the hyperbole and haze to answer some burning questions.

What is the difference between CBD and THC?

Answered by Igor Grant, MD, chair of the Department of Psychiatry at UC San Diego

Cannabis is the botanical name for marijuana and contains many chemical compounds



. It is believed by researchers that there are more than one hundred different cannabinoids or chemicals present in cannabis. One of the most important ones is tetrahydrocannabinol, or THC.

This is the psychoactive ingredient, meaning it's the ingredient that causes people to feel the euphoria or "high" that is generally associated with cannabis. Cannabidiol, or CBD, is another major chemical compound found in the plant. It does not produce the effects of feeling "high" like THC, but is rather associated with reducing anxiety symptoms and being studied to treat seizure disorders and reducing disordered thinking.

Both THC and CBD interact with the body's endocannabinoid system, a network of neurotransmitters that regulate diverse physiological and cognitive processes and response to stress.

How long does each stay in your system?

Answered by [Richard Clark, MD](#), emergency physician at UC San Diego Health

Urine can test positive for the carboxy metabolite of THC (the one usually tested for in urine screening) for weeks after the last exposure. The more one smokes, the longer one will test positive in the urine. Blood testing is not usually done in the state of California since the active form of THC that is measured in the blood can either last much longer than the clinical effects in chronic smokers, or leave the bloodstream rapidly in occasional smokers who may still have some neurologic impairment, even with negative blood tests. This is why the state has declined to list a "per se" limit of blood THC for driving, electing to judge cannabis driving impairment at this time only on failing a field sobriety test.

Would CBD be shown as a positive result in a THC drug test?

Answered by Clark

Pure CBD oil is not supposed to contain THC, or much THC. However, there may be production process differences that may allow a small amount of THC in some CBD products. If there is enough THC in the product, it may cause urine to test positive. It would depend on the purity of the sample.

Has cannabis been shown to have an effect on pain?

Answered by [Mark Wallace, MD](#), pain management specialist at UC San Diego Health

Scientifically, the answer is yes, and we have clinical trial evidence that suggest cannabis can help alleviate neuropathic pain — a type of pain that is usually chronic and feels like a shooting or burning sensation in the body. Outside of this evidence, we are also discovering that cannabis can be used in place of or in combination with opioids. This is because cannabis, which interacts with the endocannabinoid system, is very similar to the body's opioid system. This makes it an effective tool to help patients who would like to lower or completely remove opioids from their pain management regimen.

Are there any long term health effects from cannabis use?

Answered by Grant

Looking at adults and cannabis, which has traditionally had low levels of THC, it appears that the health effects are fairly minimal. Some other popular questions we are asked include:

- → Does smoking cannabis cause lung cancer? The short answer is no, unless cannabis is used in combination with tobacco, and the culprit for cancer would be lung cancer.
- → Does cannabis cause birth defects? There's no evidence to support this in humans.
- → Does cannabis cause your immune system to somehow malfunction? Again, there is no data to support this.
- → Does cannabis cause brain damage? The answer to this is very unlikely.

To learn more about the featured medical specialties, please visit:

- → [Psychiatry and Behavioral Health](#)
 - → [Pain Management](#)
-