# **Medical marijuana: Know the facts**

[Medical marijuana](https://www.health.harvard.edu/blog/medical-marijuana-2018011513085) has been approved in 28 states and the District of Columbia, but researchers are still trying to connect the dots as to how, and if, it works.

"Unfortunately, there are almost no uses of medical marijuana that have been subjected to the kind of rigorous testing you'd want for a pharmaceutical," says Dr. Kenneth Mukamal, associate professor of medicine at Harvard-affiliated Beth Israel Deaconess Medical Center. "This does not mean that it has no benefits, but only that the lack of human studies prevents us from being sure if medical marijuana can really help."

## **What we know**

Marijuana is derived from the *Cannabis sativa* plant. It contains more than 100 chemical compounds, called cannabinoids. When ingested or inhaled, these compounds bind to specific receptors in brain and nerve cells, which slows pain impulses and eases discomfort. The two most prevalent compounds are tetrahydrocannabinol (THC) — which is what gives people a "high" — and cannabidiol.

From a research perspective, medical marijuana is simply hard to study. Marijuana is still classified as a Schedule I substance, which means that it has a high risk for abuse and lacks any accepted medical use.

Therefore, its use in any clinical trials requires registration by the researchers and their institution and approval by the Drug Enforcement Agency. As you can imagine, the amount of red tape can make research slow going.

Some initial findings have suggested that marijuana may help with certain age-related ailments, such as [chronic pain](https://www.health.harvard.edu/blog/access-to-medical-marijuana-reduces-opioid-prescriptions-2018050914509), nausea and vomiting related to chemotherapy, and glaucoma.

Yet, so far, most of the available data are from animal experiments or observational studies that rely on people's willingness to report their marijuana use. "And since most users are recreational, it's tough to accurately measure dosage and frequency," says Dr. Mukamal.

It's no surprise, then, that the science is so cloudy. For instance, an analysis published in 2015 in *The Journal of the American Medical Association* examining almost 80 trials involving nearly 6,500 people found that most of these studies suggested that marijuana use was associated with relief of some symptoms, but the findings were inconsistent.

## **Different ways to use**

This doesn't mean medical marijuana isn't used. In some states your doctor can prescribe the treatment if he or she feels it's a viable treatment option. Dosages vary, depending on why you need it. For instance, 2 to 3 milligrams of marijuana might be given two to four times per day to prevent nausea and vomiting.

However, one advantage to medical marijuana compared with other drugs is the variety of ways you can take it. Smoking is the fastest way to feel its effects, but has many of the same health risks as regular smoking. The preferred methods are taking capsules, inhaling vapors, and consuming marijuana in food or tea.

## **Safety issues**

Medical marijuana is often considered safe when used as prescribed in the short term. However, some common side effects are dry mouth, impaired mental function, dizziness, and [heart and blood pressure problems.](https://www.health.harvard.edu/heart-health/marijuana-and-heart-health-what-you-need-to-know)

Even though marijuana is a mind-altering drug, it does not appear to have a lasting effect on cognitive function in adults. For example, a small study from Harvard's Marijuana Investigations for Neuroscientific Discovery (MIND) program looked at a group of people who used the drug to treat and manage anxiety, chronic pain, post-traumatic stress disorder, and sleep problems, and found that after three months of use, they did not show signs of declining cognitive function. In fact, their executive function skills — like paying attention and managing time — actually improved.

Be aware that the potential benefits vary from one person to another and can be influenced by factors such as medical history and family predisposition, says Dr. Mukamal.

Also keep in mind that Medicare and other insurance carriers do not cover medical marijuana. Until more is known, it's probably best not to get caught up in the hype from sweeping legalization.