



Huge New Review Shows What Medical Marijuana May (and May Not) Help

By: Amy Rushlow

Medical marijuana is currently legal in 23 U.S. states and the District of Columbia. From state to state, marijuana is approved for a variety of conditions, including but not limited to epilepsy, arthritis, nausea, amyotrophic lateral sclerosis (ALS), multiple sclerosis, cancer, glaucoma, Crohn's disease, chronic pain, and post traumatic stress disorder (PTSD).

“States recommend use for 20 to 30 conditions when many of those conditions have little or no evidence,” says [Kevin P. Hill](#), MD, MHS, assistant professor of psychiatry at Harvard Medical School and director of the Substance Abuse Consultation Service at McLean Hospital in Belmont, Massachusetts. “There’s a tremendous need for evidence-based guidance on medical marijuana, and I can tell you from speaking both nationally and internationally that physicians and patients alike are clamoring for practical advice,” Hill, the author of *Marijuana: The Unbiased Truth about the World’s Most Popular Weed*, tells Yahoo Health.

A series of studies and articles published today in JAMA offer some answers to questions that have been on the minds of doctors, legislators, and the public: What conditions or symptoms can medical marijuana help relieve, and to what extent? What are the side effects, and how common and serious are they? And what does this mean for patients suffering from chronic conditions, and for the doctors treating them?

One of the studies released today is the most comprehensive analysis of research on medical uses for cannabinoids (the active chemical compounds in marijuana) to date. It included 79 different trials, collectively involving more than 6,400 participants. In addition, all of the studies included in the analysis were randomized controlled trials (the gold standard of research quality) that compared cannabinoids with a placebo (sugar pill), usual care, or no treatment.

It’s important to note that most of the studies in the analysis did not ask patients to inhale marijuana, which contains more than 60 different cannabinoids. Instead, participants took cannabinoid medications, which deliver one or two of the chemicals. Dronabinol, for example, is a synthetic form of THC (tetrahydrocannabinol) that has been approved by the U.S. Food and Drug Administration for chemotherapy-related nausea and vomiting and to help underweight AIDS patients gain weight.

“We only identified two studies on inhaled marijuana which might be a reflection of the legal status,” says study author Penny F. Whiting, PhD, senior research fellow at the University of Bristol in the UK. “In addition, it is easier to control the dose when studying synthetic drugs than to herbal plants that are administered by inhalation.”

Most of the research has been conducted on only a few conditions, with mixed results:

Nausea and vomiting from chemotherapy: Twenty-eight studies in total assessed the effects of cannabinoids on nausea and vomiting. Researchers were able to pool the data from three of them, and found that a significantly greater proportion of patients using cannabinoids experienced complete relief from their symptoms. Overall, 47 percent of participants taking cannabinoids said their nausea and vomiting went away, versus 20 percent of the placebo group.

“Although for some indications we had a relatively large number of studies, it was only possible to combine results for a small proportion of these for a small number of reported outcomes,” Whiting tells Yahoo Health. “This was because studies reported a wide variety of different outcomes, measured in different ways, and did not report the appropriate statistical results to allow us to include them in our meta-analysis.”

Chronic pain: Twenty-eight studies assessed cannabinoids for chronic pain due to conditions such as cancer, diabetes-related nerve damage, and fibromyalgia. Researchers were able to combine the data from eight of the trials, and found that cannabinoids significantly improved pain in a greater proportion of patients compared to a placebo. Participants also reported less subjective pain, on average, with the cannabinoids. The analysis concluded that there is “moderate-quality evidence” to support the use of cannabinoids for chronic pain.

Spasticity from multiple sclerosis or paraplegia: Fourteen studies examined the effects of cannabinoids on spasticity, a symptom of multiple sclerosis characterized by tightness and involuntary muscle movement. The analysis found that compared to a placebo, cannabinoids were associated with greater improvement in spasticity symptoms. However, the results were not statistically significant, meaning they could be due to chance.

Appetite stimulation in HIV/AIDS: Four studies looked at how cannabinoids affect weight gain in people with HIV/AIDS; all of them used the FDA-approved drug dronabinol (synthetic THC). The review concluded that there was some evidence that dronabinol is associated with increase in weight versus a placebo.

Limitations Highlight the Need for More Research

The review found little to no evidence for the use of cannabinoids in glaucoma, sleep disorders, Tourette syndrome, and social anxiety disorder. The studies on these conditions have all been small, Whiting explains. “This means that the studies may not have had enough power to detect differences between groups,” she says. “Further large, robust randomized studies should be conducted, especially in areas for which our comprehensive systematic review found no or very little evidence.”

Hill also makes the point that there are more than 60 different cannabinoids in marijuana, and research has studied only a handful of them. (Only two cannabinoid medications are approved by the FDA.) “There could be medical conditions for which a plant itself, with a combination of 60-plus cannabinoids, will outperform those two cannabinoids that we have,” he says.

“It’s very likely that we’re going to have new cannabinoids approved by the FDA within the next few years” for chronic pain, spasticity, and neuropathic pain, Hill says. “But right now because there are only two cannabinoids available, there is a place for medical marijuana.”

Side Effects Widespread, Some Serious

More than 80 percent of participants taking cannabinoids experienced one or more side effects, Whiting says. That's compared to 62 percent in the control group. "Most of the side effects were mild," such as dry mouth and drowsiness, Whiting says. About 6 percent of those in the cannabinoids group, however, reported serious side effects, such as vomiting or hallucination. (So did 4 percent of the people in the control group.)

"If you're someone who is using marijuana daily over a long period of time, then we worry about addiction, cognitive difficulties, or worsening anxiety or depression. Those are the main concerns," Hill says. "The reality is, if you're going to take it regularly — as most people would if they were going to use it medicinally — then there is a significant side effect profile, and it becomes a risk-benefit discussion."

Advice for Doctors and Patients

In a separate review released today in [JAMA](#), Hill outlines some general guidelines for doctors and patients to follow regarding medical marijuana.

First, Hill says, patients considering using marijuana for a medical purpose should research reliable information and see their primary care doctor. "There's a difference between talking with your doctor — somebody who knows you and has a history with you — as opposed to going to a specialty medical marijuana clinic," he says. "I think unfortunately, in some of those clinics, the doctor-patient relationship doesn't meet the same standard that it would in regular practice."

Namely, he says, clinics tend not to offer the same level of follow-up care, which is important with any medication that has significant side effects.

The bottom line, Hill says, is that, "We need to do more of these trials. We need to make it easier to do these trials, and we need to do them so we can see whether or not there is evidence to support the use of medical marijuana for the conditions under which people have voted for it."