Marijuana: Is it safe? Is it addictive? Answering common pot questions

By Brooke Edwards Staggs

Is marijuana an addictive gateway drug that lowers IQs, triggers psychotic episodes and makes roads less safe? Or is it a miracle plant that can ease pain or provide a pleasant buzz with health risks on par with forgetting to floss? Clashing portrayals of cannabis have endured through decades of research and a gradual easing of public resistance to the drug’s use.

Twenty years after California legalized medical marijuana – and as the state appears poised to vote on allowing recreational consumption of weed – sorting fact from fiction, anecdotal evidence from rigorous research and “Reefer Madness”-type scare tactics from legitimate health concerns still isn’t easy.

Scientists have been limited in their ability to assess long-term effects of marijuana. That’s largely because the federal government classifies cannabis alongside heroin as a top-tier illegal substance, which among other things means researchers must comply with an ultra-strict set of requirements that they say can prove insurmountable.

Also, as with most drug studies, researchers are forced to rely heavily on self-reported data that are often muddied and can skew results, such as gauging health effects among cannabis consumers who also smoke cigarettes.

“We do need more research,” said Madeline Meier, a psychologist at Arizona State University who’s authored several widely cited studies on marijuana. “Really, in the big scheme of things, this is a new area, an emerging area where we don’t have strong conclusions yet.”

California voters may not have years to wait for science to catch up with public policy choices.

In just four months, voters likely will decide whether to legalize recreational pot use in the state. Thursday is the deadline for election officials to finish validating signatures on an initiative aimed at the Nov. 8 ballot. And if the measure reaches the ballot and is approved in November, all residents 21 and over will be free to legally partake.

Big players in the medical community are split on the issue.

The California Medical Association, which represents more than 41,000 physicians, was an early supporter of the legalization initiative. The group stresses it isn’t encouraging marijuana use. But, it adds, “the most effective way to protect the public health is to tightly control, track and regulate marijuana and to comprehensively research and educate the public on its health impacts, not through ineffective prohibition.”

However, the California Hospital Association, which represents hundreds of hospitals and health care systems, has joined
law enforcement groups in opposing legalization. In May testimony before a legislative committee, the hospital group’s Connie Delgado expressed concern that emergency room visits and infant exposure to marijuana might increase as they reportedly did in Colorado following legalization.

So how do adults make an informed decision with the science largely unsettled?

“There’s a cost-benefit analysis that voters have to make,” said Dr. Igor Grant, a psychiatrist who oversees the Center for Medical Cannabis Research at UC San Diego.

One the one hand, Grant said, there are costs tied to prohibition. They include lost opportunities to collect tax revenue and spending on law enforcement. He also pointed to studies showing criminal enforcement efforts have disproportionately penalized minority populations.

On the other hand, research suggests marijuana use poses some potential risks – particularly for vulnerable populations, such as teens and those prone to mental illness.

“There’s no ‘safe’ about it,” Meier said.

At the same time, there’s growing evidence that the health effects aren’t as severe as many people have believed. And, if precautions are taken – such as limiting access for minors – advocates say many remaining risks are modest and manageable.

In research released this month, Meier used data from a New Zealand study that tracked more than 1,000 people for 20 years to compare the health of cannabis users and nonusers.

“In general,” she said, “people who use marijuana did not show poor physical health by midlife with one exception: They are more likely to have gum disease.”

With the November campaign already gearing up, surveys and studies on marijuana that might otherwise only draw attention from the scientific community are being endorsed and critiqued, lauded and torn apart by the population at large.

Against that backdrop, the Register is beginning an occasional series that will survey current research and interview experts on common questions about marijuana use: the potential health risks, issues of government regulation and the experience of states where recreational use of cannabis is legal.

**Q. Is marijuana addictive?**

**A. For some consumers, yes – but less so than with alcohol.**

About 9 percent of people who use marijuana become dependent on it, according to research from the National Institute on Drug Abuse. The study found the dependence rate is about 15 percent for people who drink alcohol, 17 percent for cocaine users and 32 percent for tobacco users.

“Some people can drink normally. Some people can smoke weed normally. But some people can’t,” said Corey Richman, an admissions coordinator at Hope by the Sea drug addiction treatment center in San Juan Capistrano.

Roughly 2 percent of patients at Hope by the Sea are there for marijuana abuse, said Richman, a former addict himself. They’re almost always teenagers brought in by concerned parents, he said.
The earlier young people start using marijuana, the more likely they are to get hooked, with the National Institute on Drug Abuse reporting dependence jumps to 17 percent for teen users.

Stopping heavy marijuana use is often more of a mental struggle than a physical one, said Kevin Alexander, clinical manager at Hoag Hospital’s ASPIRE program in Newport Beach. It can trigger mild withdrawal symptoms similar to quitting tobacco, including irritability and sleep issues. In rare cases, he said, patients experience psychosis.

At the same time, doctors are tapping marijuana’s painkilling benefits to help patients avoid riskier substances such as opioids. A study published in 2014 by the American Medical Association found lower rates of opioid overdoses in states where medical marijuana is legal.

Waiting until at least 18 to start using marijuana lessens the chances of becoming dependent, as does avoiding heavy use of potent pot products, experts say. And people with a family or personal history of addiction might consider avoiding marijuana altogether.

Q. Does marijuana cause brain damage?

A. More studies are needed to answer this complex question. But while a growing body of research indicates even heavy marijuana use seems to have few long-term health effects for adults, it may negatively affect developing teen brains.

People who started using cannabis as teenagers lost about eight IQ points by the time they were 38, according to a 2012 study by Meier.

Overwhelmingly, studies by Staci Gruber, a psychiatry professor at Harvard Medical School and director of the Marijuana Investigations for Neuroscientific Discovery team at Boston’s McLean Hospital, show that chronic marijuana smokers who start using before age 16 perform more poorly on cognitive tests. They show reduced impulse control and issues with staying focused on a task, she said.

Even the brain structure itself can be altered in young smokers, she said, decreasing the amount of white matter, which affects how we learn.

“It’s not as if these people appear to have brain injuries,” she said. “In all actuality, these people are able to function the same as people who don’t smoke.”

Other studies contradict such results, and some researchers question whether family environment and other factors account for some of the cognitive decline. And even if IQ declines are correlated to marijuana use, it’s tough to know whether the drug changed the brain or subjects simply weren’t paying attention in school because they were high.

“I think it’s fair to say, as far as heavy adolescent use, we have an open question here,” said UC San Diego’s Grant.

Most researchers agree such unanswered questions justify regulations – akin to those in the proposed California legalization measure – that are aimed at keeping marijuana away from young people. So, where should the age line on legal use be drawn?

In her study, Meier said negative impacts on IQ disappeared for people who started using at age 18, which is the age limit for California medical marijuana patients.

However, four states that have legalized recreational use set 21 as the age limit – the same being proposed for California.
Gruber said brain development continues until around age 25, making it tough to say that marijuana users are “out of the woods” at 21.

**Q. Can you overdose on marijuana?**

**A.** Unlike with alcohol and most other drugs, researchers say there’s been no recorded death attributed to using too much cannabis. But experts say overdoing it can cause highly unpleasant and, rarely, dangerous experiences.

Consuming large amounts of potent pot can temporarily trigger rapid heartbeats, nausea and hallucinations.

“It’s not that you’ll die from it,” Gruber said. “But you might be so sick that you’ll wish you could die.”

“Bad trips” typically happen when inexperienced consumers try a cannabis-infused food, don’t feel anything after 30 minutes and eat more. Since the effects of cannabis edibles can take up to two hours to be felt, it’s easy to overindulge.

Most adverse symptoms wear off within a couple of hours, so medical experts suggest users relax and have a sober friend watch over them. They stress driving while impaired can be dangerous, as can the actions of someone who slips into a severe state of psychosis.

A lawsuit pending in Denver against an edibles company claims a man ate large quantities of cannabis-infused candy, started hallucinating, then killed his wife. And in the last two years, officials or family members have attributed two Colorado suicides to high doses of cannabis edibles.

Colorado now requires edibles to be sold in serving sizes of 10 milligrams, which it considers one dose. There’s also a push for stricter packaging and labeling requirements to help consumers dose more wisely.