

SPECIAL

TIME

EDITION

# Cannabis

**The New Reality • The Legal Journey  
Its Place in Healthcare**

WHAT IT  
MEANS TO  
AMERICA







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# Cannabis









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# How the Conversation Has Changed

MARIJUANA'S TRANSFORMATION FROM TABOO DRUG TO VALID RECREATIONAL OPTION—AT LEAST IN SOME STATES—CAN BE TRACED THROUGH FIVE COVER STORIES IN TIME MAGAZINE.

**BY BILL SYKEN**

**I**N THE FIRST-EVER TIME MAGAZINE COVER story specifically about marijuana, in 1996, writer Lance Morrow deployed the term “pot hawk.” The pot hawk was not, sadly, a cousin of the California condor, but rather another kind of endangered species—a human being who vehemently opposed the legalization of marijuana in any form. The pot hawks had their feathers ruffled because voters in California and Arizona had approved the use of marijuana for medicinal purposes. This was a historic first in America, and one that the pot hawks correctly saw as big trouble. They had a “fear that high-minded tolerance (pot as pain reliever, glaucoma salve, general angel of mercy) may become infectious and spread to the other states,” wrote Morrow.

If anything, the pot hawks may not have been worried enough. Because here we are, not quite three decades later, and not only is medical marijuana legal in 38 states but recreational marijuana has been approved in 24, including in Ohio, a red state that no one will mistake for a progressive



vanguard. How quickly we have moved from a world where marijuana users might be described as dope fiends to one where a bride and groom can legally employ a weed bartender at their wedding if they live in the right state.

And you can trace how completely the national conversation has changed by looking at the five times marijuana has appeared on the cover of TIME.

That first cover story, by Morrow, came with a cheeky cover illustration. It featured Mike Doonesbury, the title character from the Garry Trudeau comic strip that came to life in the Yale student newspaper in the late 1960s. Mike was now middle-aged and attempting to talk to his child about marijuana while a cartoon joint loomed in the background, ready to judge him on his honesty. Would Mike let on that he and the joint had some good times together, or would he tell his kid, in the parlance of the drug warriors of the age, to “just say no”?

The story, in addition to being about that conversation, recognized a looming generational change in the perception of marijuana. Morrow opened his story with a scene inside a drug rehab center, where the younger patients and the “geezers” were disagreeing over whether pot was really all that bad. Wrote Morrow, “All the idiots who drank Canadian Club and Heineken for breakfast, or wrecked themselves on smack or meth—they know they done wrong. But ‘merely’ smoking pot? Well...”

TIME also addressed the generational shift with two opposing columns: one by esteemed political writer Margaret Carlson (headline: “Why I Said No”) and another by her daughter Courtney, a recent college graduate (“Why I Said Yes”). Margaret, while acknowledging her own indulgences when she was younger, said she felt perfectly comfortable hiding those from her daughter when warning her about the dangers of drugs. Carlson reasoned that she could

also tell her daughter not to stick her fingers in sockets without saying that she had done so as a kid. Courtney, meanwhile, credited her mother’s hypocrisy for helping ensure that when she did smoke pot, she did not overindulge. Courtney said some of her college classmates were raised by parents who spoke freely of their pot adventures, and those were the kids “who took bong hits instead of seminars.” But Courtney, who couched her openness about her pot use by saying she didn’t expect to have to face confirmation hearings anytime soon, also scoffed at the idea that weed could be a career-killer. “As a California voter, I cast a ballot to legalize marijuana for medical use,” Courtney wrote. “So perhaps by the time I’m ready for Senate confirmation, the nonsense about who did and who didn’t will have ended.”

By the second time pot appeared on the cover of TIME, in 2002, the drug was still a contentious



The Dec. 9, 1996, issue featured a cover illustration by Garry Trudeau, creator of the Doonesbury comic strip, and also dueling columns from political writer Margaret Carlson and her daughter.



issue, but resistance was weakening. The cover asked “Is America Going to Pot?” and the coverage was built around two stories—one on the ramping up of the political war for legalization and a second about the drug’s medical potential. The political piece is a good measuring point of how much has changed between then and now. A central figure in the story was the drug czar for President George W. Bush, John Walters, who was perhaps one of the last truly powerful pot hawks. “The czar, who told *TIME* he has never smoked pot, believes marijuana to be not only a gateway drug but also incredibly detrimental in its own right—causing driving accidents, domestic violence, health risks, and crippling addiction,” wrote Joel Stein. “He thinks the legalization argument is absurd.” But the headline of the medical story, written by John Cloud, heralded the winds of change by asking, “Is Pot Good for You?” At that point the question was very much unanswered, in large part because marijuana was a political third rail and classified as a Schedule I drug, a category for drugs with a high potential for abuse and no proven medical value. “To be sure, many scientists—especially in the government—still squirm at the very idea of medical-marijuana research,” Cloud wrote. “Despite encouraging anecdotal reports, the National Institutes of Health hasn’t initiated a study of cannabis therapeutics in two decades....Marijuana remains the only drug that researchers must acquire directly from the feds. If the FDA and DEA approve, scientists can get even ecstasy from outside labs, but NIDA [the National Institute on Drug Abuse] is the sole source for cannabis, requiring a third bureaucratic layer.”

In Stein’s story, he also gave voice to the argument for legalization that would only gain momentum in the coming years: that change was needed because of how unevenly laws were enforced. Said former San Jose police chief Joseph D. McNamara, “Ninety million Americans have tried marijuana. When you look at who’s going to jail, it is overwhelmingly disproportionate—it’s Latinos and Blacks.”

*TIME*’s next cover story, in 2010, was headlined “The United States of Amerijuana,” and it shows a new reality starting

to take form. The story, by Andrew Ferguson, focused on Colorado, where the medical marijuana industry was not only thriving but also starting to look a lot like a recreational market, because in practice anyone who wanted a prescription could get one. The story’s opener featured Jenelise Robinson, who not only ran an edibles shop but was also a customer, claiming that pot helped with her ADD and shoulder pain. Neither she nor her customers talked about getting high but rather about “medicating”—which, observed Ferguson, was a pretty canny trick. “This did not take place by accident,” he wrote. “In fact, medical marijuana’s emergence has many of the attributes of a product rollout. As with any hot commodity, dope is now accorded the same awed regard in some Colorado retail establishments as fine wine, dark chocolate, and artisanal cheese. Only now it takes place under the cover of medical care, wellness, and pain



Nov. 4, 2002



Nov. 22, 2010



April 21, 2014



May 25, 2015



management.” The only remaining step, he wrote, was to stop the charade and legalize marijuana completely. “It seems silly, doesn’t it?” Robinson told Ferguson. “If there’s someone who’s been smoking for a long time, medicating, and this is what they like to do and this is what works for them, then why can’t they just do it?”

While Robinson’s question was increasingly in step with the culture, TIME’s 2014 cover story addressed the scarier side of the cannabis universe. The culprit in this cover story was not pot itself but rather synthetic forms of marijuana that were suddenly flooding the markets and finding audiences, especially among the young and pot-curious. “It’s sold openly in stores, popular with kids, and unpredictably dangerous,” warned the cover, and with good reason: The opening anecdote of the story, by Eliza Gray, was about an 18-year-old whose death had been attributed to synthetic marijuana.

Synthetics, typically made in laboratories in Asia, were proving difficult to keep off store shelves despite their danger because if a specific compound was banned, manufacturers could get around it by simply altering their chemical formula. While all kinds of drugs were being synthesized, “Cannabinoids are now the most popular kind of synthetic, and the increasing legalization of pot may further burnish the myth that these chemicals are mostly harmless,” reported Gray. “But their effects, which are only beginning to be understood, can be unpredictable and dangerous. Emergency rooms and poison-control centers have reported synthetic-related kidney failure, seizures, and psychoses.” A legalization advocate could read this story and argue that it proved the need for a well-regulated pot market, but a pot hawk might look at the damage being done by synthetics and argue that when you open up Pandora’s box, you can’t control what comes flying out.

The fifth and most recent cover story, in 2015, reiterated a complaint first aired in the 2002 cover package about the pace of scientific research into marijuana being slowed by politics, with the drug remaining illegal at the federal level. The cover, through the magic of photo illustration, showed a rat smoking a joint, as the story took us inside “The Highly Divisive, Curiously Underfunded and Strangely Promising World of Pot Science.” The story talked about the potential health benefits that pot might deliver while also raising concerns about its harmful effects, especially on the developing minds of adolescents. The story’s strongest message,



though, was frustration with the U.S. government. Authors Bruce Marcott and Michael Scherer talked about a pivotal moment in the late 1990s when the British and American governments separately commissioned preliminary studies about marijuana’s health effects. “Both studies reached a similar conclusion: Medical pot wasn’t a hippie’s delusion,” said the story. But while the British responded by funding further research, the Americans didn’t for political reasons, and that was why the country was so far behind on research and scientists were still exploring potential benefits.

“That word—potential—still qualifies much of what is known about pot, but it won’t be that way for





*Pro-pot advocates in New York City joined in the 2018 edition of the annual Global Marijuana March, three years before New York state legalized recreational pot use.*

long,” wrote Marcott and Scherer nine years ago. “The science of pot is likely to expand in the coming years, and it could boom if federal restrictions are lifted.”

But here we are in 2024, and federal restrictions are still in place, and marijuana is still a Schedule 1 drug—this despite medical marijuana having been approved in more than two-thirds of American states. That could be about to change, though. In January 2024, FDA scientists officially recommended to the Justice Department that it reclassify marijuana as a Schedule III drug, reflecting a lower danger level and higher potential for beneficial use.

Even if all the federal barriers and state barriers fall and all major legal matters are resolved, it doesn’t

mean the conversation about pot will be over, any more than it will ever be over with alcohol. Booze is legal but not simple: Many people still struggle to figure out how to make drinking a healthy part of their lives. We regularly see articles about how a glass of red wine a day might be good for you, and America also has about 2 million people who are active members of Alcoholics Anonymous. Champagne on New Year’s Eve gives way to dry January. Getting it right is tough, especially when a tool for enjoyment or relaxation in one person’s hands might be a life-wrecker for another.

That’s why the pot hawk, while endangered, will never be extinct. □



✦ | CHAPTER 1

# Legalization Nation

The country is changing its marijuana laws,  
and that is changing the country.









# More States Are Saying Yes to Pot—but Not All

WHAT DOES IT MEAN WHEN OKLAHOMA AND OTHERS BUCK THE NATIONAL TREND TOWARD LEGALIZATION?

BY RICHARD JEROME

**O**N MANHATTAN'S UPPER WEST SIDE, THE skunky scent of marijuana floats down sidewalks, around corners, and across the Broadway median, wafting into Starbucks, CVS, and the stately lobbies of prewar apartment buildings. Across the East River in Queens, elite tennis pros at the 2023 U.S. Open complained of the pot stench blowing through from a nearby park—German player Alexander Zverev likened one court's ambience to "Snoop Dogg's living room."

It's not just a New York experience, of course. Willingly or not, one can inhale the acrid aroma (derived from chemical compounds called thiols and terpenes) in cities, suburbs, and rural hamlets from coast to coast, wherever the sale and consumption of recreational cannabis—via joints, blunts, bongos, brownies, or otherwise—has been legalized.

To date, 24 states plus the District of Columbia have sanctioned the personal use of marijuana in limited amounts, following the trail first blazed by Washington and Colorado in 2012. (Medical mari-

juana, meanwhile, is now legal in 38 states and Washington, D.C.). Most recently, Ohio voters said yes to recreational weed in November 2023, despite opponents who focused primarily on the potential risk to children, especially from edibles that could be mistaken for candy. Voters nevertheless approved the measure 57 percent to 43 percent.

In another seven states, pot has been decriminalized—the sale of marijuana for personal consumption remains illegal, but users can face fines and low-level misdemeanors without jail time. The most prominent supporter of decriminalization rather than outright legalization of recreational pot is President Joe Biden, who in December 2023 pardoned thousands of people who had been convicted of simple marijuana possession and use on federal lands and in Washington, D.C. "Sending people to prison for possessing marijuana has upended too many lives and incarcerated people for conduct that many states no longer prohibit," Biden said. "And while white and Black



**LEGALIZE  
MARIJUANA**

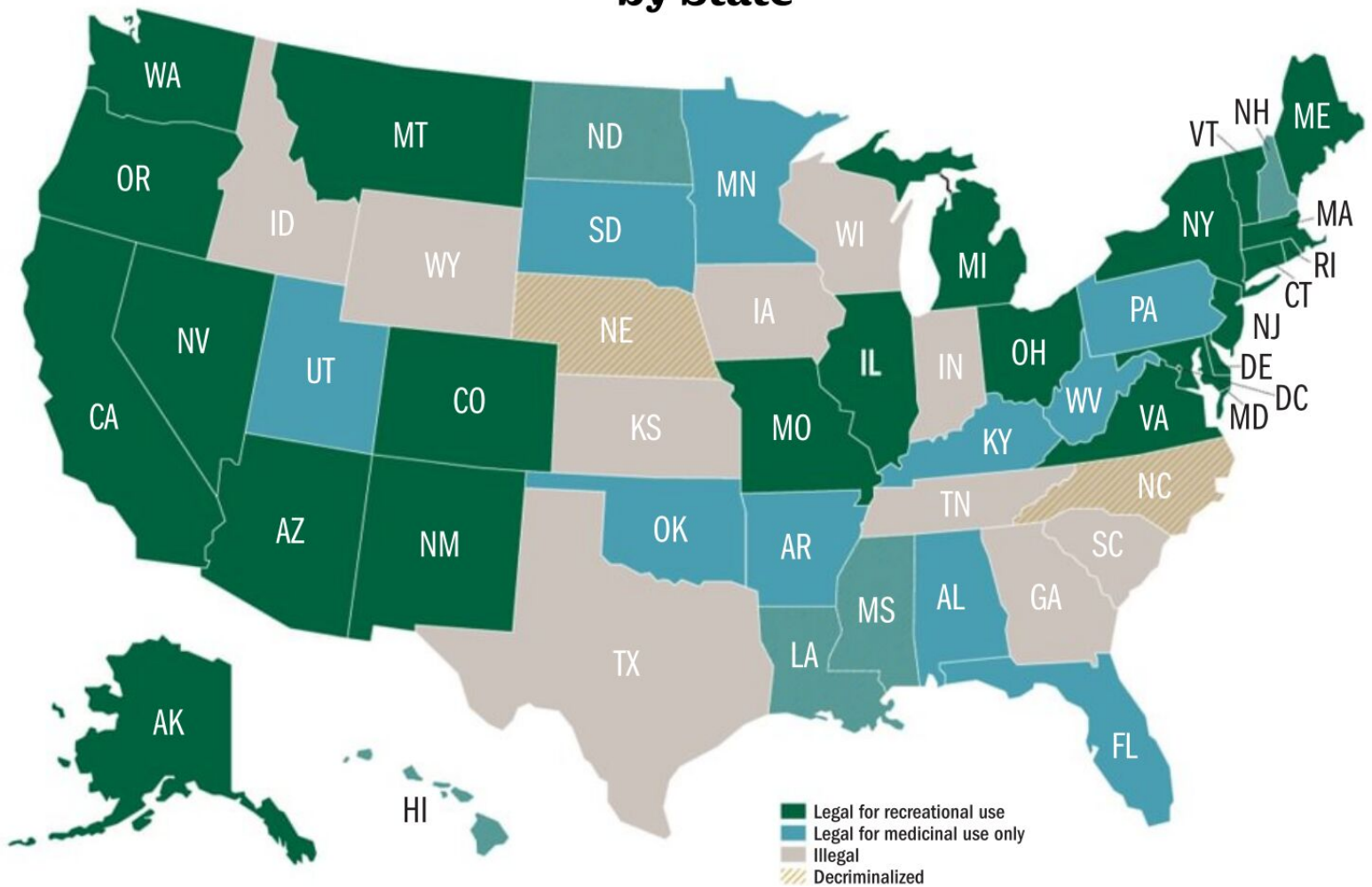
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## Legality of Cannabis by State



and brown people use marijuana at similar rates, Black and brown people have been arrested, prosecuted, and convicted at disproportionate rates.”

While it may seem that pro-weed momentum is building inexorably toward legalization across the nation, the train has occasionally stalled, if not quite derailed, particularly in some of the nation’s most conservative states. In March 2023, for example, Oklahoma (where medical marijuana is allowed with a doctor’s prescription) dealt recreational pot advocates a landslide defeat when nearly 62 percent voted against it. The results came a few months after ballot measures in three other states—North Dakota, South Dakota, and Arkansas—had failed in the 2022 midterm elections.

ANTI-CANNABIS ACTIVISTS ARE BUOYED BY THESE victories. Luke Niforatos, executive vice president at Smart Approaches to Marijuana (SAM), which opposed the Oklahoma initiative, suggests his fellow

organizers should be more ambitious and push for the repeal of legal marijuana in other states. Beyond that, he’s looking toward reforms, such as limits on marijuana potency, with the goal of having the cannabis industry “treated like tobacco.”

“I think we’re reaching a fever pitch in terms of the harms of these new marijuana products and the overreach of the industry,” Niforatos says. “I think what we’re seeing is a backlash to industry overreach, a backlash to an industry that is targeting kids with child-friendly products, an industry that is advertising everywhere, just like Big Tobacco did. I think people in Oklahoma were really sick of that.” Niforatos says that by polling voters in Oklahoma, his organization found particular concern over the risk of secondhand smoke for children.

A number of significant factors worked against marijuana legalization in the Sooner State and the trio of states that had rejected pro-pot measures in the previous election cycle—beginning with the cal-



endar. “This is a tougher issue to succeed on in an off year, where you just don’t have the same kind of turnout from younger voters, where this is especially popular, as you do in a presidential year,” explains Alex Kreit, director of the Center on Addiction Law & Policy and an assistant Professor of Law at Northern Kentucky University. Moreover, all four “no” states are bastions of conservatism where Donald Trump won in 2020 by between 27 and 33 percent of the vote. While support for marijuana legalization has increased over time across demographics—more than doubling nationally since 2000—Republicans and other conservatives are still less likely to support such measures, especially when it comes to recreational use. An October 2022 Pew Research Center poll, for instance, found that 45 percent of Republicans and independents who lean Republican supported legalizing both recreational and medical marijuana, compared with the 59 percent of all U.S. adults who believe you should be able to light up without being hassled by the cops.

Many Republican leaders have vocally opposed legalization. In Oklahoma, for example, Gov. Kevin Stitt called his state’s rejection of legalization “the best thing to keep our kids safe.” Oklahoma Faith Leaders, a multi-denominational Christian organization, was also against legalization, saying, “Oklahoma doesn’t need another drug problem,” and referencing the issue the state is having with foreign-linked criminal enterprises including illegal pot and human trafficking. Agricultural groups also campaigned against legalized pot, assailing the ballot initiative as a threat to rural communities because pot farms tie up valuable farmland and agricultural resources. “We have seen a strain on our rural electric and our rural water utilities. We have also seen a rise in crime,” said Scott Blubaugh, president of American Farmers and Ranchers. Added the Oklahoma Cattleman’s Association, “We must protect our rural way of life from out-of-state and foreign interests that do not have the best interests of our state at heart.”

In Arkansas, 56 percent of voters rejected Issue 4, which would have legalized personal-use cannabis and allowed commercial sales. The Arkansas Family Council Action Committee opposed the proposal, citing, among other things, concern over substance abuse and the effects of pot use on children, and it enlisted prominent conservative leaders, including former Arkansas governor Mike Huckabee. In South Dakota, voters did an about-face: They sup-

ported legalization 54 to 46 percent in 2020, but a successful legal challenge on procedural grounds spearheaded by the state’s popular GOP governor Kristi Noem halted the reform. Then, in 2022, 53 percent of South Dakotan voters rejected a new legalization initiative.

In some moderate swing states, such as Pennsylvania and New Hampshire, legalization polls well, but divided legislatures remain gridlocked on the issue. On the federal level, meanwhile, lawmakers are also stalemated—bipartisan legalization and decriminalization bills have both stalled. Marijuana advocates remain undeterred, however, and believe the arc of time and public sentiment still bends toward weed. They point out that sometimes voters will reject cannabis the first time out but then vote in favor of it in a later election, as happened in Arizona. More states will surely put pot on the ballot in



**IN OKLAHOMA, GOV. KEVIN STITT  
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2024—a presidential election year, which could drive younger (and Democratic-leaning) voters to the polls. “We’ve been losing for many years, and it’s something that we don’t forget,” says Morgan Fox, political director at the National Organization for the Reform of Marijuana Laws (NORML), a non-profit that has been advocating for the legalization of pot for more than half a century. Now, Fox predicts, “we’re gonna see support continue to grow.”

Niforatos says his organization is ready to go “more on the offensive” by working to regulate the medicinal industry in Oklahoma and working to rescind legalization more broadly. “Most American states have not legalized [recreational] marijuana,” he says. “The president of the United States is against the legalization of [recreational] marijuana, and neither major party has the legalization of marijuana in either of its platforms. So we are very far away from anything being inevitable.” □



*A misguided association between Mexico and pot influenced America's perceptions of the drug. Here, refugees from the Mexican revolution arrived in Marfa, Texas, in 1914.*







# Immigration History and Marijuana Law

THE TWO HAVE A SURPRISING LINK, AS THE DEMONIZATION OF CANNABIS IN THE 20TH CENTURY WENT HAND IN HAND WITH AN INCREASE IN NATIVIST FEARS.

BY OLIVIA B. WAXMAN

**T**HE DEBATE OVER MARIJUANA'S LEGALITY in the United States has never been about just one plant. As scrutiny of the U.S.–Mexico border continues in American politics, experts say it's important to remember that it's always been tied to concerns about immigration—though not in the way many people think.

“One of the really important things people often presume is that Mexicans have had a more tolerant attitude toward cannabis than Americans, and that's just not the case,” says historian Isaac Campos, author of *Home Grown: Marijuana and the Origins of Mexico's War on Drugs*. “Cannabis was demonized in other places as well, especially in Mexico. The history of these kinds of regulations is way more similar between Mexico and the U.S. than different.” Hallucinogenic drugs like peyote had been used in Mexico for millennia but became extremely controversial during the colonial era, when the Spanish associated them with communion with the devil and with madness. But it was the Spanish themselves



who first brought cannabis to Mexico, in the 16th century, for use as an industrial fiber. In the colonial era, the drug produced from that plant—*marihuana* or *mariguana* in Mexican Spanish, and marijuana in English—eventually took on the same negative associations that other drugs carried.

“Cannabis came to gain this reputation in the 19th century when it starts to appear as a recreational substance that’s smoked in cigarettes and is overwhelmingly concentrated in some of Mexico’s most marginal environments—prisons and soldiers’ barracks,” says Campos. “So you have this drug that’s kind of associated with danger and indigenous Mexico, then in these environments associated with violence and danger. Then this mixes with a bunch of other stuff—[such as] widespread anti-alcohol sentiment, especially among the elites—and that led people to think a drug like marijuana could trigger violent, savage responses in its users. Then all of this mixes with sensationalism in the press, which was always excited to write about violent incidents [involving] the lower classes.”

Before the 1930s, there were few regulations on the sale and use of cannabis in the United States. Major U.S. pharmaceutical firms were importing cannabis from India in a format that was “ideal for smoking purposes” and that Campos says shows that pharmacists knew it was being used recreationally. “I’ve actually found evidence that Mexicans were crossing the border into the U.S., buying cannabis in pharmacies, and taking it back to Mexico, probably to sell there,” he says. “So the smuggling was

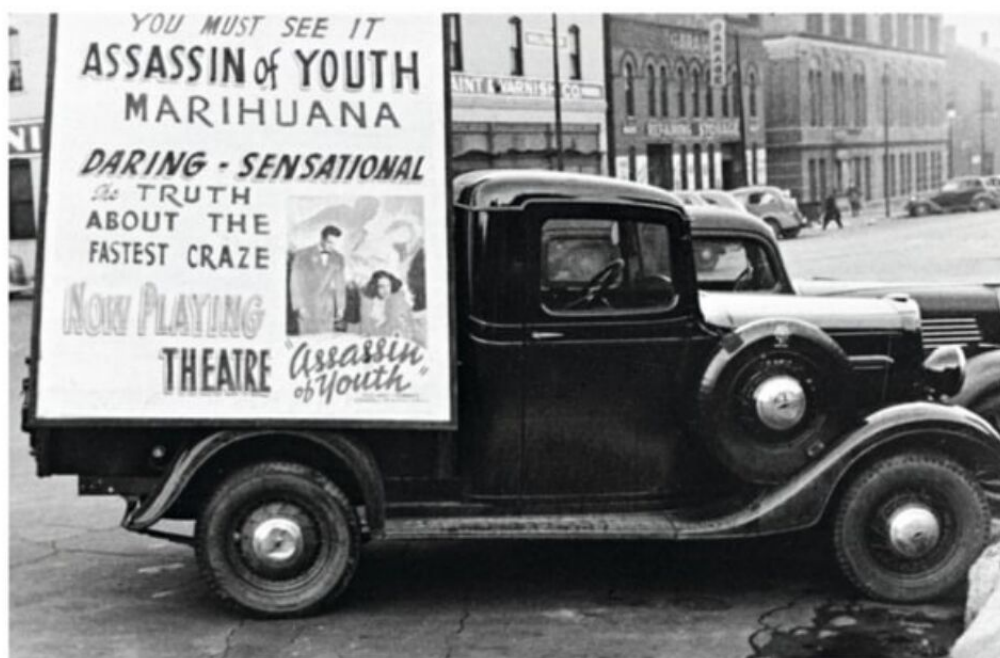
going in the other direction at that time because many states in Mexico had already prohibited it.” The Mexican government banned pot in 1920.

SO MARIJUANA HAD A BAD REPUTATION IN MEXICO before it got a bad reputation in the U.S.—and when Americans seized on that idea, they also picked up the side of it that had to do with not only what was being smoked, but especially who was smoking it.

“The vast majority of immigrants were not using marijuana. In fact, there was very little evidence that they were using it very much at all,” Campos says. Nevertheless, it didn’t take long for the wave of anti-immigrant sentiment at that time to become part of the conversation. The temperance movement, which succeeded in amending the Constitution to ban alcohol in 1919, dovetailed with a similar Progressive-era push to reform pharmacy laws to regulate opiates. Cannabis was lumped in with those concerns. And as nativist sentiment spread in the U.S. in the early 20th century, some Prohibition advocates framed drinking and drugs as something done by foreigners. Mexican immigration—which had spiked due to the Mexican Revolution of 1910, as refugees fled to the U.S. to escape civil war—was already a flashpoint, and Campos says that influx of immigrants would have contributed to the growing negative sentiment around marijuana. “When drugs are seen as foreign, they’re seen as more dangerous,” he says. Emily Dufton’s book *Grass Roots: The Rise and Fall and Rise of Marijuana in America* quotes a 1917 Treasury Department report that noted as its

chief concern the fact that “Mexicans and sometimes Negroes and lower-class whites” smoked marijuana for pleasure, and that they could harm or assault upper-class white women while under its influence. And in 1911, a member of California’s State Board of Pharmacy wrote of the fear that a recent wave of immigration from India had brought with it a rising demand for pot, and that this “very undesirable lot” was “initiating our whites into this habit.”

TIME published its first







Customs agents arrested a marijuana smuggler near the U.S.–Mexico border in 1969.  
Opposite: Promotion for a sensational anti-marijuana film in Omaha in 1938.

article about pot in the United States in 1931, explaining to readers that “Marijuana is a variety of hemp weed (*Cannabis sativa*) long common in Mexico, lately becoming common in the U.S. Its leaves can be dried, ground and rolled into cigarettes [sic], which are bootlegged under the name of ‘muggles,’ ‘reefers,’ or ‘Mary Warners’ ... Smoking of marijuana cigarettes [sic] produces a state of intoxication similar to that induced by alcohol, stimulates playfulness, suppresses fear. Thousands are smoked in Harlem, in New Orleans, in other nightlife centers. In New Orleans many a schoolchild is said to be an addict; prison authorities find muggle-smuggling a perplexing problem.” The landmark federal drug law of the time, the Harrison Narcotics Tax Act of 1914, didn’t regulate marijuana, so states were passing their own laws banning it. And the immigration angle endured. “As marijuana penetrates further into the country, more cities and states start adopting prohibitions, and [they’re] clearly related to immigration, not only

from Mexico but also from the Caribbean,” says Richard Bonnie, professor emeritus at the University of Virginia School of Law and co-author of *The Marijuana Conviction: A History of Marijuana Prohibition in the United States*.

For example, when Harry Anslinger, head of the Federal Bureau of Narcotics from 1930 to 1962, testified before Congress in support of a ban on pot, he quoted a letter he got from the city editor of the *Alamosa Daily Courier* in Colorado: “I wish I could show you what a small marihuana cigaret [sic] can do to one of our degenerate Spanish-speaking residents. That’s why our problem is so great; the greatest percentage of our population is composed of Spanish-speaking persons, most of who [sic] are low mentally, because of social and racial conditions.” Anslinger was “publicizing ideas that had come from Mexico about marijuana causing madness and violence,” says Campos. “It’s important to emphasize those ideas originally came from Mexico. It wasn’t just that



there was racism against Mexicans; it's that Mexican ideas helped inspire fear about marijuana in the U.S.”

MARIJUANA HYSTERIA IS OFTEN ASSOCIATED with the exploitation film *Reefer Madness*, which came out in 1936. A poster warned moviegoers of this so-called “drag of concentrated sin.” But the film tends to get more credit for making marijuana taboo than it deserves, Campos says, as the fear was already there. (Rather, he explains, its public-health message was a way for it to get around Hollywood’s production code, which otherwise clamped down on sex and drugs on screen.) The following year, in 1937, Congress used its taxing power to make marijuana de facto illegal by making it very expensive to possess or distribute pot. Enforcement of marijuana laws was left up to the states.

In the postwar period, the idea that it was a so-called gateway drug began to spread, says Bonnie, who was associate director of the National Commission on Marijuana and Drug Abuse (1971–73) and secretary of the first National Advisory Council on Drug Abuse (1976–80) during a period of bipartisan enthusiasm at the federal level for a public-health-

focused approach to drug use. The commission’s first report indicated marijuana use was starting at a younger age, so a grassroots movement of concerned parents grew in the late 1970s and became galvanized in the 1980s as the crack epidemic prompted another increase in penalties. Bonnie sees the end of the health-focused era as “probably a contributing factor” in today’s opioid epidemic but believes that “the pendulum has begun to swing in other direction with marijuana and drug policy more generally.”

The number of Americans who favor legal marijuana in some form climbed from 12 percent in 1969 to almost 90 percent in 2022. And as fear has subsided, many who look back see the anti-immigrant elements of the legal history as one more argument for decriminalization—but Campos says that perspective doesn’t tell the whole story. To him, to suppose that anti-Mexican sentiment created anti-marijuana feeling in the U.S. is to deny Mexico’s own history as a country struggling with the same issues.

“It’s a useful narrative for reformers who want to argue the roots of the drug laws are racist,” he says. “But finding any policy in the early 20th century that wasn’t tainted by racism is really hard.” □

*Police deputies torched approximately 3,000 marijuana plants found growing in Ojai, Calif., in 1996.*





# A Brief History of Marijuana Law in America

What's really wacky about this weed is its strange path through the legal system.

BY SCOTT C. MARTIN



*Jack Herer (left, who died in 2010) and Dennis Peron (who died in 2018), advocates for Proposition 215, which legalized medical marijuana in California, celebrated its passage in November 1996.*

**The movement** toward the medicalization of cannabis has been hailed by some and decried by others—but unquestionably, its path has been unique in the history of American drug and medical policy. The federal government first regulated marijuana in 1937, when Congress passed the Marijuana Tax Act. As with the Harrison Narcotic Act of 1914, Congress deemed an act taxing and regulating drugs, rather than prohibiting them, less susceptible to legal challenge. As a result, the 1937 legislation was ostensibly a revenue measure. Just as the Harrison Act used taxation and regulation to, in effect, prohibit morphine, heroin, and other drugs, the Marijuana Tax Act essentially outlawed the possession or sale of marijuana. More stringent measures followed. The Boggs Act of 1951 provided stiff mandatory sentences for offenses involving a variety of drugs, including marijuana.

Then, in 1970, Congress passed the Controlled Substances Act, which established categories, or schedules, into which individual drugs were placed depending on their perceived medical usefulness and potential for abuse. Schedule 1, the most restrictive category, contained drugs that the federal government deemed as having no valid medical uses and a high potential for abuse. Part of President Richard Nixon's war on drugs, the

Controlled Substances Act placed cannabis into Schedule 1 along with heroin and LSD, more due to Nixon's animus toward the counterculture, which he associated with marijuana, than scientific, medical, or legal opinion. Indeed, in 1972, the Shafer Commission, an investigative body with some members appointed by Nixon, recommended that marijuana for personal use be decriminalized and thus removed from Schedule 1. Nixon rejected the commission's report. The Schedule I designation made it difficult even for physicians or scientists to procure marijuana for research studies.

Moreover, calls for medicinal marijuana did not originate in the pharmaceutical or medical communities. Largely, they have come from citizen support at the state level for medical access and decriminalization, through lobbying, activism, and ballot initiatives. State interest in medical marijuana emerged in the 1970s: Oregon, Alaska, and Maine decriminalized marijuana during the decade, and New Mexico approved a short-lived medical marijuana research program in 1978. Considering the federal government's demonization, prohibition, and research restrictions on marijuana, it is hardly surprising that popular demand and state action figured prominently in the path toward legalization. The baby boom generation realized, through personal

experience or social observation, that marijuana was not the Demon Weed, particularly in light of credible reports that it provided relief for a variety of ailments and symptoms. This made it easier for activist groups to promote grassroots efforts at the state and local levels.

These efforts have extended beyond the therapeutic uses of cannabis to successful campaigns to legalize its recreational use. Many Americans hail these efforts as the triumph of average citizens over a draconian legal system that imprisons large numbers of nonviolent drug users unnecessarily and an unresponsive regulatory regime that denies easily acquired relief to suffering patients.

However one assesses these claims, this unique path to legalization comes with problems. Without the careful scientific study and medical trials to which other new drugs are subjected, there can be no clear and reliable guidelines for the drug's administration or indications of potential side effects from prolonged use. Time will tell whether this path to legalization represents the unmitigated good advocates believe it to be.

*Scott C. Martin, PhD, is a professor of history and American culture studies at Bowling Green State University. He is the past president of the Alcohol and Drugs History Society.*





# I Thought Legalizing Pot Would Be a Disaster

But it turned out to be wonderful.

BY BRUCE BARCOTT

**In a California** courtroom in 2015, U.S. District Court Judge Kimberly Mueller wondered what exactly was at stake in the federal government's defense of marijuana prohibition. Mueller was hearing a case that challenged the government's Schedule I classification of pot, a status that ranks it alongside heroin as one of the world's most dangerous drugs. As the case wrapped up—the classification would stay in place—she put a question to the U.S. attorneys defending the federal ban: "If I were





persuaded” that marijuana’s status was unconstitutional, “what would you lose here?”

An ever-increasing number of Americans are asking the same question. A 2023 Gallup poll found that 70 percent of all Americans now support the legalization of marijuana.

What would be lost? I can answer that question. I’m a middle-aged non-stoner who’s been living in a marijuana-legal state. Here is what’s lost when pot goes legal: fear and destruction. Fear of the

unknown, fear of skyrocketing use rates, fear of reefer madness. Here in Washington state, we stopped destroying people’s lives for possessing this drug. What we’ve gained are new opportunities for responsibility, honesty, and freedom.

That’s not what I expected, but it’s the truth. When recreational use came on the ballot here in 2012, I was anti-pot. I hated marijuana. I hadn’t really touched the stuff since college. Moreover, I didn’t want my teenage children to have easier access to pot. Instinct told me to vote no to legalization.

Then a friend swayed my vote. Legalization wasn’t about whether I loved or hated pot, she said: “This is a race issue. It’s a civil rights issue.” Generations of African-American men sit in prison “because they were caught with a substance that’s less harmful than alcohol,” she said. “You’re a white guy, so you don’t have to worry about it. Others do.”

Fair enough, I thought. I held my nose and voted yes. The next morning I woke to find that my state had legalized pot. My first thought involved the word *holy* and is inappropriate for a family publication. My second thought was this: What in the world did we just do? I spent the next two years searching for the answer.

I’m a science journalist. I sifted through peer-reviewed research and weighed competing claims on everything from climate change to brain science. A tide of research on pot and the developing brain flooded my office. I embedded within Colorado’s legal marijuana industry. At the 2014 Cannabis Cup in Denver, I achieved the status of Only Man Sober. At Children’s Hospital Colorado, I saw frustrated doctors dealing with the CBD craze, with parents desperate to calm their child’s seizures with marijuana-derived cannabidiol. I vaped, I ate, and I smoked—legally—with no untoward effects. And I observed how the rollout of legal, regulated pot affected my family, my friends, and my community.

Here’s what I found. Legal, well-

regulated marijuana has been an overwhelmingly positive change for my state, my community—and, yes, my family. That’s not the answer I expected.

There have been bumps. Pot-infused edibles have been a problem for some people—google “Maureen Dowd” and “bad trip”—but state regulators quickly reduced the allowed dosage and increased controls on the products. The solution was market regulation, not mass incarceration.

The upside? We no longer arrest 12,000 people in Washington state every year for marijuana possession. That means 12,000 people kept their jobs, went to college, supported their kids, and enjoyed happy and productive lives. Thousands of new jobs have been created. We’ve seen no pot-inspired crime wave, no mass conversion of citizens into stoners. Parents know more about pot than we did before; when we talk to our kids about avoiding it, we come from a place of knowledge, not fear. My family is safer and healthier because marijuana is regulated and legal.

Other states and municipalities have reaped or are about to reap those same benefits. In Washington, D.C., which implemented legalization in 2015, police made more than 5,700 arrests for marijuana in 2011. The racial disparity in those arrests is shocking. D.C.’s black residents were eight times more likely to be arrested for marijuana than their white neighbors, despite the fact that use rates were virtually identical. In D.C., as in so many other American cities, marijuana laws had become nets that harvest young Black men into the industrial prison system.

In many states now, those nets no longer exist. If you want to experience the gains, visit us out here in safe, sane, and regulated Washington state. Come see how we’re thriving. And see what the rest of America has to lose.

*Adapted from Weed the People: The Future of Legal Marijuana in America from TIME Books, available wherever books are sold.*





*Sean Azzariti, who had campaigned for legalization in Colorado, made the first legal recreational purchase in the United States.*





# A Decade Later, a Look Back at a Landmark Year

IN 2014, RECREATIONAL MARKETS OPENED, THE SUPER BOWL GAINED A NEW NICKNAME, AND A GIRL SCOUT SPOTTED A SALES OPPORTUNITY.

**BY KATY STEINMETZ**

**T**HE WORLD THAT LEGALIZATION ADVOCATES had long aspired toward began to latch on as a new reality in 2014. Here we look back at defining moments, great and small, from that year of momentous change.

## **THE WORLD'S FIRST LEGAL WEED MARKET OPENS**

Of all the milestone moments for marijuana in 2014, none was more remarkable or historic than the first day of legal recreational weed sales in Colorado. In snow and cold, thousands of people waited in line outside the roughly three dozen pot shops that were fully licensed and stocked by New Year's Day. Legalization advocates arranged and announced the first customer in advance: an Iraq war veteran named Sean Azzariti who had campaigned for legalization, saying the substance helped treat his post-traumatic stress disorder. At 8 a.m. in Denver, he bought an eighth-ounce of Bubba Kush weed and THC-infused truffles for about \$60.





*The first legal 4/20 Day in Denver brought out smokers by the thousands. Opposite: By remarkable coincidence, the first two states to legalize recreational pot use sent teams to the 2014 Super Bowl.*

Though the Netherlands is, mistakenly, often thought of as a place where cultivating and selling weed is completely aboveboard, Colorado opened the world's first fully legal and regulated marijuana market. "Nobody knows what is going to happen," Denver city councilman Charlie Brown told TIME shortly before opening day, which in the end was remarkably calm. "We're the pioneers here."

### THE DOOBIE BOWL

Oh, how easy the jokes came when the only two states to have legalized weed at the time went head-to-head in the Super Bowl. With the Seattle Seahawks taking on the Denver Broncos, fans and journalists quickly suggested renaming the event the "Stoner Bowl," "Doobie Bowl," "Smoke-A-Bowl" or "first ever Marijuana Bowl." Some wondered if Cheetos or Doritos would step in as a special sponsor. Allen St. Pierre, the executive director of the National Organization for the Reform of Marijuana Laws (NORML), joked that the matchup should be dubbed the "Super Oobie Doobie Bowl," a name that caught on in the media.

### GIRL SCOUT DOES SMOKIN' BUSINESS

Girl Scout cookie-selling season may be all Thin Mints and Samoas for the cookie-eating public, but the girls hawking those treats have to work long, hard days, awkwardly hovering outside grocery stores with competing cookies inside or going door to door. That is, unless you're a brilliant 13-year-old named Danielle Lei. In February 2014, Lei and her mother set up shop outside a medical marijuana dispensary in San Francisco and sold 117 boxes of cookies in two hours.

The story went viral, with pundits dubbing Lei "enterprising," "one smart cookie," and "due a special merit badge." But not everyone found Lei's capitalization on the munchies a feat to applaud. "If you are wondering, we don't allow our Girl Scouts to sell cookies in front of marijuana shops," tweeted the Girl Scouts of Colorado.

Happily for Lei, the chapter of the Girl Scouts that oversees the area where she lives took a more libertarian approach. "Girls are selling cookies, and they and their parents pick out places where they can make good sales," a spokeswoman for the



Girl Scouts of Northern California told Mashable. “We’re not telling people where they can and can’t go if it’s a legitimate business.”

### **BANKS GET THE YELLOW LIGHT**

After legal pot shops first opened on New Year’s Day, a big problem quickly emerged from the haze. Because the federal government views weed as an illegal substance, banks balked at working with people running new weed-dispensing retail stores in places like Colorado. That forced multimillion-dollar businesses to operate entirely in cash. Worried about robberies, proprietors started using false walls, armed guards, vaults, and decoys who would run empty briefcases out of their stores.

In February, the federal government helped change that dangerous state of affairs by issuing guidance from the Department of Justice and the Treasury Department outlining how banks could do business with legal marijuana outfits. “Taken together, they offer a long-sought roadmap for both the banking and marijuana industries,” TIME’s Alex Altman wrote.

### **A HISTORIC APRIL 20**

The city of Denver has long been known for its annual 4/20 celebration, a rally to celebrate weed on its unofficial holiday of April 20. But in 2014, the first year that legal recreational pot shops existed in the U.S., organizers lit the city up. Tens of thousands of people convened at Denver’s Civic Center to have a collective smoke at 4:20 p.m., while seas of stoners attended an industry expo, concerts by the likes of Snoop Lion, and formal competitions among dispensaries to present the finest strains and vaporizers.

In advance of the 4/20 rally, organizers had attempted to get permission from Denver city officials to temporarily allow the public consumption of marijuana, which remains illegal in the Rocky Mountain state. Though their arguments that the city suspends its rules against the public consumption of alcohol for certain festivals fell flat, mass arrests did not come to pass. Police did issue dozens of \$150 citations for the public consumption of weed at the rally, up from five in 2013.





**NEW YORK EMBRACES “COMPASSIONATE CARE”**

In July, Gov. Andrew Cuomo signed the Compassionate Care Act, making New York the 23rd state, along with the District of Columbia, to legalize medical marijuana. The news was greeted as bittersweet by legalization advocates: The reform put a powerful state on their side of the issue, but it also happened to be one of the most restrictive in the country. No smoking of cannabis, for instance, was allowed, and only patients who had a serious ailment on a limited, predefined list could be prescribed the drug. “There is no doubt that medical marijuana can help people,” Cuomo said when he signed the bill into law. “We are here to help people. And if there is a medical advancement, then we want to make sure that we’re bringing it to New Yorkers.”

Earlier in 2014, Maryland and Minnesota became the 21st and 22nd states to legalize some form of medical marijuana. Debates in each state centered around how to provide oversight, so that

people didn’t abuse the system, while giving sick patients access to another treatment option.

**D.C. DECRIMINALIZES**

In the spring, Washington, D.C., officials passed a law decriminalizing the possession of small amounts of marijuana. Having less than an ounce of weed in one’s pocket would lead to a \$25 civil ticket (and confiscation of the drug) instead of handcuffs and jail time. The District joined 17 states that have some form of decriminalization, but reform in the nation’s capital is more salient than most. Congress has the power to intervene when a law passes in D.C., one-fourth of which sits on federal land. While lawmakers on the House Oversight Committee held a hearing after the new law passed, they did not block it, and decriminalization went into effect in July. The Capitol Police, Secret Service, and U.S. Park Police retained the power to arrest anyone carrying any amount of weed under the power of federal statutes.

*A marijuana flag at the Coachella music festival in California. Opposite: Medical marijuana gained approval in New York (top) while advocates showed signatures for decriminalization in Washington, D.C.*





## WASHINGTON POT SHOPS OPEN THEIR DOORS

The first legal marijuana was bought and sold in Washington state at 8:03 a.m. on July 8, 2014. A young man from Kansas started waiting in line before sunrise in Bellingham in hopes of being the inaugural customer in the world's second regulated, taxed marijuana market. Due to the lengthy review process required before stores could open, just a handful of shops unlatched their doors on opening day, but customers happily queued for hours to get their hands on a limited supply that many stores started rationing and selling at higher price points throughout the day.

The first edible products went on sale in Washington almost exactly a month later, slowed by strict oversight aimed at keeping THC-packed lollipops and brownies out of kids' hands. At 10:30 p.m. on Aug. 6, a happy first customer took home bags of "Crazy Carnival Nuts," "420 Party Mix," and "Twisted Trail Mix."

## VOTERS LIGHT UP FOR POT ON ELECTION DAY

On Nov. 4, Oregon became the third state to legalize recreational marijuana for adults age 21 and older, with voters approving plans to set up a fully taxed and regulated market like those in Colorado and Washington state. By early the next morning, the votes in Alaska had been counted, and that state became the fourth to embrace the historic social experiment. "The results are in, and marijuana prohibition is on its way out," said Rob Kampia, the Marijuana Policy Project's executive director.

In Washington, D.C., voters overwhelmingly approved a "soft legalization" measure. While sales remained illegal, residents would be able to possess up to 2 ounces of weed for personal use and cultivate up to six plants at home. Legalization advocates won smaller victories, too. Guam became the first U.S. territory to legalize medical marijuana, while South Portland, Maine, legalized weed



(in a somewhat symbolic vote, given that possession was still illegal statewide). Legalization advocates' lone loss on Election Day came in Florida, where a medical marijuana proposal fell three points short of the 60 percent it needed to pass.

## CALIFORNIA: THE NEXT FRONTIER

There was perhaps no bigger prize for legalization advocates than California, where more than 1 in 10 Americans live. In September, the Marijuana Policy Project, the group behind the successful legalization effort in Colorado, officially formed the committee that would successfully work to legalize recreational marijuana in the nation's most populous state in 2016. □



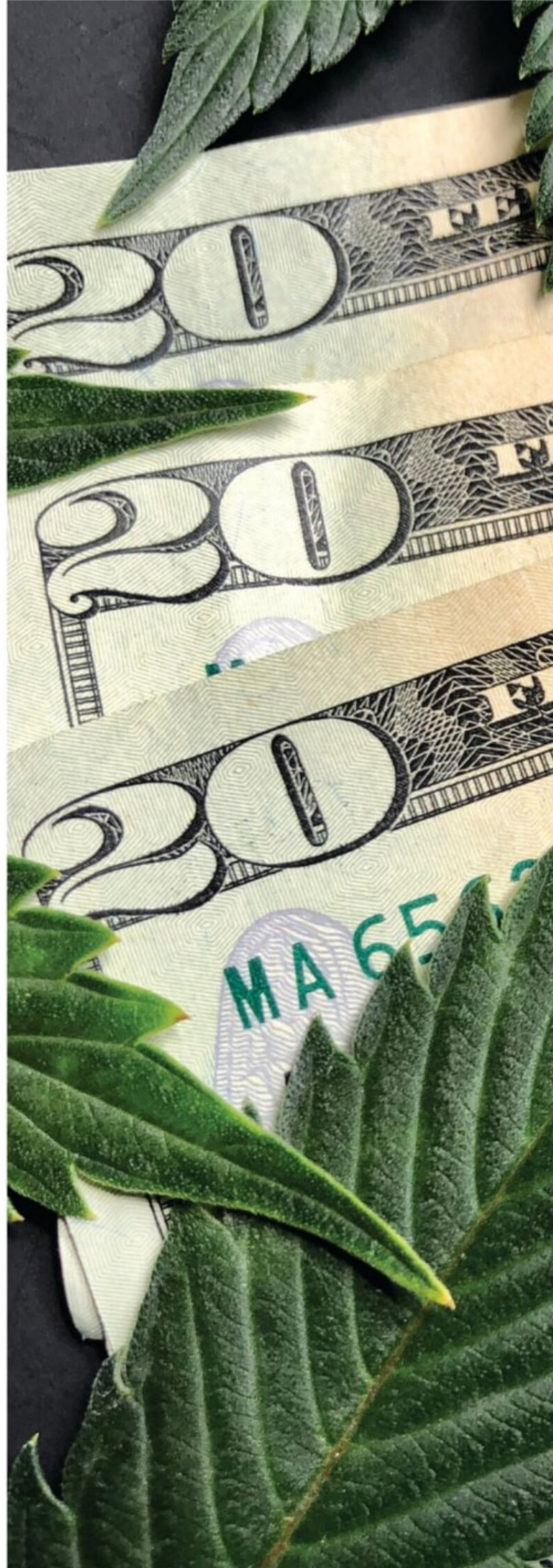
# The Economics of Legal Weed Don't Work

TWO EXPERTS BREAK DOWN THE SURPRISES AND COMPLEXITIES OF THE MODERN MARIJUANA BUSINESS.

BY BELINDA LUSCOMBE

**I**N 2012, COLORADO AND WASHINGTON became the first two U.S. states to fully legalize the recreational use of cannabis. Many others followed their lead, and more than a decade later, almost 75 percent of American adults live in a state where either medical or recreational use is legal. Musicians, actors, and sports stars ranging from boxer Mike Tyson to actor Jaleel White have jumped into the market with their own brands of weed, hoping to lure people who want to get high with a high-end product. The newly legal industry was predicted to be a multibillion-dollar business and a big tax revenue win for the states.

But it hasn't been that simple, according to the authors of the 2022 book *Can Legal Weed Win?: The Blunt Realities of Cannabis Economics*. Two economists from the University of California, Davis's department of agricultural and resource economics found that the future of the legal cannabis business, hampered by regulation, competition, and standard agricultural issues, was a bit hazy. TIME spoke with











*A worker carried off harvested marijuana at Ladybug Farms near Watsonville, Calif.*





the authors, Daniel Sumner, who is also a former assistant secretary of economics at the U.S. Department of Agriculture, and Robin Goldstein, who is also the author of a controversial best-selling guide to wine, *The Wine Trials*.

### **More than half of American adults can now buy weed legally. How's business going?**

**DANIEL SUMNER:** It's been tough. There's still a whole lot of illegal weed out there available to that same group of consumers, and most of them choose the illegal product because it's half the price. Also, they have been consuming the product for the last 20 to 40 years; they've been dealing with this guy who knows a guy, and they're reasonably happy with the product.

### **Why is legal weed more expensive?**

**SUMNER:** To get a license to start with in most states, you hire a consultant to help you through the regulation maze. And then you wait. In Vermont [which legalized recreational cannabis in 2018], for example, you've hired your consultants, you've gotten your venue for your retail store, you've purchased a greenhouse or rented one as your cannabis growing facility, and [years later] you're still waiting. [Retailers started selling in Vermont on Oct. 1, 2022.]

**ROBIN GOLDSTEIN:** In many states, the agencies are understaffed, and the process is very lengthy, time-consuming, and difficult for people to get through. So it can take years and years, and in the meantime, they have investors, they're burning cash, and a lot of people have lost their money just by waiting.

**SUMNER:** And at the farm level, the illegal producers really are, for the most part, off the grid. They're not paying attention to labor regulations or pesticide regulations or other things that are the same for every farmer, not just for cannabis. That is a cost disadvantage for the legal guy. And that's one where almost everybody would say, "We really ought to enforce that." I wish we could figure out a way to enforce it on the illegal guys, but we haven't figured that out yet.

### **Have we not seen an influx of customers who wanted to try weed but who were turned off by the criminal aspect?**

**GOLDSTEIN:** Yes, but it's a small percentage. In many of these states that have legalized, the penalties weren't that harsh already for the buyer. People who wanted to try it could try it. Evidence from around



the world, from places like the Netherlands that have had forms of legalization well before the U.S., suggests that you don't see a big increase in the total amount of weed smoking just because you legalize it.

**So what's happened to the medical marijuana industry as a result of legalization?**

**GOLDSTEIN:** In some states, there was legal medical weed for many years, and it was more or less unregulated. And now, with all these new rules, some of those people are breaking the laws. We don't think it was the intention of the voters generally to make more weed criminals. [In states where weed is legalized], there's not really that much reason for people to continue getting their medical recommendations. Once anyone can just walk into a dispensary and buy it, then what's the reason to pay a doctor to get this recommendation? There have been some states where the medical system has survived, including Colorado and Massachusetts, because they've got much bigger tax exemptions for the medical patients.

**A lot of people think weed is a growth industry and states like Colorado are riding this new product to economic prosperity. Is that not true?**

**SUMNER:** There are companies that have done well, and there are lots of companies that have not done well at all. There are growers that are doing OK, and there are lots of farms that are not doing OK at all. Now, that's true for other farms too. I've been looking at farm industries for a very long time, and that's the nature of agriculture. But cannabis is in this state of flux. It's been a gold rush, and a few people have found some gold, and a lot of people haven't. What I like to say is that the company that made a lot of money in the California Gold Rush was Levi's. It was making jeans for the guys digging for gold. [Similarly], there are some companies that have done OK in supplying the cannabis business with things that it needs as it modernizes.

**What about the investors? You mention in your book that John Boehner, the former Republican**

*Gummy manufacturing in Massachusetts. Opposite: Joint production in California.*







**Speaker of the House, and former Democratic U.S. Sen. Tom Daschle, both of whom previously opposed legalization, are now involved in the industry. Is there any money being made on the VC or investor front?**

**SUMNER:** Those two are among the consultants, for example, the lobbyists and the like, who may be doing OK.

**GOLDSTEIN:** The ones who are probably making the safest money are probably the ones who were taking flat fees. You can't not make money taking big consulting fees. But folks who took their compensation in the form of shares in these big cannabis holding companies, those stocks have not done well, on the whole.

**One of the hopes of the legalizing movement was that people who had been most injured by its criminalization would have a head start in taking advantage of that market. Has that happened?**

**SUMNER:** A lot of people who have been in the business for a long time and knew how to grow the crop thought that would be enough to allow them to really boom when it was made legal. What they didn't know was how to run a legal business, and

that was a real eye-opener for them. Take somebody who's been a small-time criminal. You say, "Go to your banker and get a loan for a half a million dollars so you can build a modern greenhouse. Come and fill out all the forms, and keep very clear records, because there's a computerized track-and-trace system that you have to implement..."

**GOLDSTEIN:** Yeah, and, "Go to your city council or your county board of supervisors and get the local approval." This is just a skill set that these people didn't have. Access to capital is part of it, and access to political capital is another part of it. In many cases, they didn't have either. No matter how many well-meaning, good-faith equity programs there are, having the resources to get into this business is way more than just no longer being officially considered a criminal.

**Is there a weed billionaire somewhere?**

**SUMNER:** Probably not, but there certainly are weed millionaires. The people who are trying to build it as an ongoing profit-making business—the honest ones—say we've got years to go here. Is one of them going to become Amazon? Probably not. But is one of them generating a regular few hundred million





*Today's market includes branded offerings from celebrities such as boxer Mike Tyson.*

dollars a year from a dozen stores scattered around? Probably yes.

**Can we tell yet if the problems are those of scaling and efficiency that are common to startups and small businesses or problems where regulation and the way the market is set up are never going to be solved?**

**GOLDSTEIN:** One of the problems with scaling is that it's all state-by-state at the moment, so you have to basically craft a strategy within a state based on that state's regulation and taxation system, and so forth. Expanding to multiple states is less like scaling up a business nationally and more like starting a whole new business in every state. If I were advising a cannabis company, I'd say try to compete on price. Everyone wants to create their own fancy weed brand backed by a celebrity. That's a really tough market to compete in.

**SUMNER:** People say this is a \$100 billion industry.

Robin and I are skeptical of that, but there could be a \$10 billion industry, which is a lot of money if shared among a few players. But we don't have any companies that are dominant in the market. There's nothing like a Reynolds Tobacco that has the brands and does the manufacturing. We've seen nothing like the consolidation yet where the really big money could be coming. We haven't even seen an indication that it's going that direction.

**Are there some states doing it better?**

**GOLDSTEIN:** Legal weed producers and sellers in Washington state and Colorado have a better chance at capturing market share than they do in other states. That's not just because of lower taxes and regulations. It's also because those two states have been open for recreational and adult use the longest. Over time, companies get more efficient at regulations, and regulators and legislatures adjust things over time, learning from early mistakes.



**What industry is weed most like? Alcohol?**

**SUMNER:** There are parallels, but there are really big differences as well, partly because weed has been illegal longer than it was legal, and alcohol was legal almost forever and then became illegal for a little while. There are other big differences: You can put a million dollars worth of weed in your station wagon and still have room for the kids. Moving illegal weed around is so easy compared with manufacturing and moving illegal alcohol.

**GOLDSTEIN:** I don't think there's any other industry that it's really that much like, and that's one reason we thought it was worth writing a book about it, because it's so unique and weird. You can draw parallels from alcohol, you can draw parallels from food and agriculture and tobacco, but there are so many huge differences. The value per ounce of this stuff is just through the roof, unlike any other product that's legal. It's more expensive than white truffle or saffron or beluga caviar.

**Are you proposing less regulation? There are a lot of people who would argue for more regulation around something that alters brain function.**

**SUMNER:** We understand that. But you can [have so many rules that you] make sure you have this very heavily regulated, pure product that no one buys, and all those people buy the illegal product. We'll let all these kids go out and buy illegal weed and let that industry prosper. For example, there's a rule that says in California, you can't buy it after 10 p.m., which is when lots of people are just starting to party. Why would you close the legal store at 10 o'clock?

**GOLDSTEIN:** The point certainly isn't that it should be unregulated completely; no product is unregulated. The point is it's a cost-benefit analysis—every additional rule you put on, you have to ask how much is this going to take away from the legal market and shift to the illegal market, where you don't have any safety standards at all. Every rule you pass, you need to think about that balancing test.

**How do you balance lowering the barriers to entry with the concern that an increase in the uptake of weed is not necessarily a public good?**

**SUMNER:** The evidence that legalization has caused increased overall consumption in society is not at all conclusive. But when we see the price of cannabis coming down for the average consumer, it's a legitimate question to ask: Is that a good thing for society? There are questions when it comes to something

that's having psychological effects. What can you do about it through regulation and government action? It's not clear what you can do to be effective, given you've got this parallel industry that's illegal. That's a real challenge, and we acknowledge it.

**Wouldn't one way to resolve this be not to make legal weed less regulated but make illegal weed more so?**

**GOLDSTEIN:** Then you have an enforcement problem. The intent of the voters was, Let's keep people out of jail for marijuana offenses. And let's stop punishing people for doing something that we don't believe should be illegal anymore, and if the result is you end up with much more criminal crackdowns and more drawing more people in jail than you did before, you risk frustrating the purpose that voters had or that legislatures had in legalizing it. With weed, you have this 80-year history of the stuff



**“YOU DON'T SEE A BIG INCREASE  
IN THE TOTAL AMOUNT OF  
WEED SMOKING JUST BECAUSE  
YOU LEGALIZE IT.”**

—ROBIN GOLDSTEIN

being produced in incredibly large quantities and distributed all over the world illegally and at low prices with high quality already. This preexisting illegal market is so robust that to come in and try to just bust that up, it's a logistical nightmare for law enforcement.

**SUMNER:** Society has signaled over and over again that we feel uncomfortable throwing millions of young Black men and young brown men in jail for what seemed to be relatively minor offenses in terms of violence. However, I will tell you that there are individual growers or retailers who are saying, “What the hell? I'm complying with all these regulations. And then there's a kid standing on the corner in front of my store selling weed at half the price. Why don't you arrest him?” So there are retailers and farmers who are very frustrated. But even most of them don't say, “Hey, bust my brother-in-law.” □



*A plant that processes industrial hemp.*







# Hemp Should Be Booming, but It Isn't

THE PURPORTED MIRACLE PLANT HAS BEEN ON THE SLOW TRACK BECAUSE OF ITS RELATIONSHIP TO MARIJUANA.

BY ARYN BAKER

**H**EMP WAS GOING TO SAVE THE WORLD, OR so the Baja hoodie-wearing hippies hanging out at California's Venice Beach back in the '80s would have it. The fast-growing, fibrous stalks could be used for insulation, rope, construction, and fabric—even the soft striped pullovers popular with surfers at the time. The founding fathers grew it, they claimed, and the first two iterations of the United States Constitution were drafted on hemp paper. The oil-rich seeds were good in granola, high in protein, and perfect for beauty products from shampoos to facial creams. When soaked and pressed, the seeds make a tasty milk, far creamier than soy. The plant was touted as a climate warrior as well, able to absorb massive amounts of carbon dioxide out of the atmosphere and suck toxins from the soil while requiring little water, no pesticides or herbicides, and few fertilizers to flourish. It could be used as a substitute for fossil fuels and engineered into compostable plastics.



There was only one problem: Because it's a close cousin of marijuana, the farming of hemp had been banned in the U.S. as part of the crackdown on illicit drugs. The solution, hemp advocates said, was to legalize weed.

As a ploy to decriminalize a popular drug, it was pretty transparent. But now that marijuana is legal in 38 states, and farming hemp—at least the non-psychoactive kind—is legal in all of them, does the miracle weed deliver on its fevered sales pitch?

Well, not exactly, says Jeffrey Steiner, director of the Global Hemp Innovation Center at Oregon State University: “From the standpoint of hemp being this miraculous, environmentally friendly crop that is going to solve all our problems, it's folklore.” The fact that hemp hasn't lived up to its promise has as much to do with overhype—it's still just a plant, even if it does have several unique qualities—as it does the complexities of the U.S. agricultural system, the long shadow of past restrictions, current regulatory laws, and Big Cotton.

Marijuana and hemp were effectively made illegal in the United States in 1937 and banned outright in

1970, even though industrial hemp has about as much in common with ganja as a brussels sprout does broccoli. Which is to say, it's the same species—*Cannabis sativa*—but maximized for different qualities: stems and seeds for industrial applications, and flowers heavy with the psychoactive delta-9 tetrahydrocannabinol (THC) to achieve a potent high. But in 2018, a new provision was added to the congressional farm bill (which is reauthorized every five years), allowing hemp to be grown as long as it contains no more than 0.3 percent THC. This opened up a source for the plant's non-psychoactive cannabidiol (CBD) compounds, which are widely promoted for health and wellness benefits, as well as an opportunity to put hemp's long-touted promise into practice.

IN MANY WAYS, HEMP DOES DELIVER. THE HIGH-protein seeds are used in animal feed, and the fibrous stalks are blended with lime to make hempcrete—a new building material that promises to replace carbon-spewing concrete with a carbon-sequestering, renewable alternative. Under certain, but not all, growing conditions, hemp requires less water and

*Barbara Pisch at her store Patriae in Asbury Park, N.J., where offerings include handwoven hemp products. Opposite: Workers stacked hemp bricks at a manufacturing facility in Alberta, Canada.*





land than textile rival cotton, and it is also good at phytoremediation, meaning that it can draw toxins such as heavy metals and even radioactive compounds out of contaminated soil. But so can tomatoes and sunflowers. And that's the problem—hemp does a lot of things other plants do and may even do some better, but because it was illegal for so long, scientists haven't adequately researched its properties or developed its potential.

That also means that some of the more miraculous attributes of hemp—that it is carbon negative, for example, storing 1.63 tons of CO<sub>2</sub> per one ton of hemp grown (equivalent to the amount released by driving 3,670 miles)—are based on very little data. Says Steiner, “We need an entire lifecycle analysis before we can know how much this crop can actually sequester.”

The same goes for claims that it doesn't need pesticides or herbicides. Hemp was only planted in the U.S. starting in 2019, after the law changed. Agricultural scientists haven't seen enough harvest cycles to know how pests, disease, and weeds will impact the crop, Steiner says. Indeed, there was barely any pest damage that first year. But once the bugs figured out there was something new on the block worth eating, they dove right in. Subsequent crops have been plagued by corn borer moths and beet curly top virus, common agricultural pests, but there aren't any hemp-approved, commercially available pesticides or herbicides because scientists haven't had time to develop them.

The nation's major crops—cotton, wheat, corn, and soy—have benefitted from decades of scientific research and development. The post-World War II era ushered in a green revolution that nearly doubled productivity with the introduction of advanced breeding techniques, fertilizers, pesticides, and herbicides. Hemp missed that bus, says Lawrence Smart, a hemp specialist and a professor at Cornell University's School of Integrative Plant Science. Smart and Steiner, who head two of the country's biggest academic agricultural programs on hemp, have only been studying it since it was made legal six years ago. Both say hemp has a lot of catching up to do before it can start competing with more established crops, even if it does have more desirable qualities.

Take hemp fabric, for example. Lustrous and durable, it has been woven into textiles for millennia, but it has never seen the massive industrialization process that turned cotton into the world's most



popular natural fiber, largely because its prohibited status curtailed innovations in hemp growing and processing. This makes cotton our default material—and our systems are now built around that. A modern cotton gin in the United States can clean, comb, and process a 480-pound bale of fiber every 90 seconds. Hemp is still largely processed by hand at 2G speeds, compared with cotton's 5G, says Steiner, likening it to the difference between advancements in cellular speeds. “Hemp production needs to get up to at least 3G before it can compete with other natural fibers,” he says.

Hemp is still tainted by its past. In most states, industrial hemp growers are regulated the same way as those growing high-THC marijuana crops. In New York state, where Smart runs his program, hemp farmers must pay \$500 for a three-year license and register with their local police station, where they are fingerprinted and undergo an FBI background check. Then they have to hire testing companies to certify that their crops have less than 0.3 percent THC, a process that can cost hundreds of dollars or more, depending on the size of the farm. For a high-value product, it might be worth the expense and the extra paperwork burdens, says Smart, but growing hemp for fiber doesn't seem worth it.

That could start to change when the U.S. farm bill is up for reauthorization again in late 2024. It's an opportunity, says Smart, for hemp to be fully decoupled from marijuana crops so that it can compete with other products. The alternative would be to legalize marijuana at the federal level, reducing the burden on farmers no matter what kind of *Cannabis sativa* they are growing. Maybe the aging hippies were right after all: For hemp to reach its full potential, marijuana still needs to be decriminalized at the federal level. □



✦ | CHAPTER 2

# Marijuana as Medicine

Much of the excitement about legalization revolves around the drug's possible health benefits.

PATIENT NAME

PATIENT ADDRESS

R<sub>x</sub>

Refills

SUBSTITUTED







# The Promise and Reality of the New Wonder Drug

THE POTENTIAL HEALTH BENEFITS OF MARIJUANA ARE MANY, BUT RESEARCHERS CAUTION THAT THE DRUG HAS DOWN SIDES TOO, AND THERE'S STILL A LOT TO FIGURE OUT.

BY MARKHAM HEID

**T**OWARD THE MIDDLE OF THE 19TH CENTURY, an Irish physician and professor named William O'Shaughnessy documented the "extraordinary" effects of the *Cannabis indica* plant. Based on his firsthand experiences with cannabis while he was working as a doctor in India, O'Shaughnessy praised the plant's ability to treat muscle convulsions and nerve pain. He also urged other researchers to explore the plant's medicinal potential.

O'Shaughnessy was not the first person to recognize the palliative qualities of cannabis. Quite far from it. Human beings have been experimenting with the plant for more than 5,000 years, and its first medical application dates back at least to 400 AD. But despite mankind's long history with cannabis, which in the U.S. is popularly known as marijuana, O'Shaughnessy is often credited with bringing the plant to the attention of the Western medical science community.

Today, almost 200 years since the publication







*Until 2016, this facility at the University of Mississippi was the only one authorized to grow marijuana for use in U.S. studies, which slowed the progress of research into pot's potential health benefits.*





*A lab worker analyzed cannabis from GW Pharmaceuticals, a British company.*

of O’Shaughnessy’s work, modern science has validated several of his early observations. According to a comprehensive 2017 report on medical cannabis produced by the National Academies of Science, Engineering, and Medicine, there is “substantial evidence” that marijuana can be an effective treatment for chronic pain, and also for some types of muscle spasticity in adults with multiple sclerosis.

But the National Academies report also found that for many medical conditions, the hype around cannabis outpaces the research. “There’s this magic

glow around cannabis in the United States right now,” says Margaret Haney, PhD, professor of neurobiology and director of the Cannabis Research Laboratory at Columbia University in New York City. “Whatever’s ailing you—anything from glaucoma to cancer to migraines—there are people who will tell you cannabis can help, even though, in most cases, we have no evidence of a medical benefit.”

Haney is quick to add that cannabis has a great deal of therapeutic potential. The human body possesses a special system—the endocannabinoid sys-





## THE STATE OF THE SCIENCE ON MEDICAL CANNABIS

In the U.S. and around the world, cannabis is now the focus of numerous clinical trials and other research efforts. Experts are examining the drug's ability to treat mental health disorders, digestive diseases, neurological conditions, and many other commonplace maladies. But while its potential can seem almost limitless, the current evidence supports the use of cannabis in just a handful of medical scenarios.

"There are three indications for which there is substantial evidence that cannabis can be helpful," Haney says. Cannabis can calm muscle spasticity in adults with multiple sclerosis, she reports. It can also relieve chronic pain. "For chronic or neuropathic pain, we don't have a lot of good treatments, so there's a lot of potential for cannabis to fill that void," she says.

Cannabis researchers who treat patients with chronic pain agree the drug can be helpful, but even then, it's no slam dunk. "In my medical practice, I see a lot of patients with pain that don't respond well to the gold-standard, FDA-approved drugs," says Benjamin Cocchiaro, MD, assistant clinical professor and co-investigator at the Drexel University Medical Cannabis Research Center in Philadelphia. "In those situations, cannabis can be a useful alternative." However, Cocchiaro says that, like other drugs, cannabis doesn't work for everyone. It also comes with risks and side effects that must be weighed against its potential benefits, he adds.

Along with pain and muscle spasticity, Haney says there's strong evidence that cannabis can help relieve the side effects of chemotherapy. "For chemo-induced nausea and vomiting, as well as pain, cannabis can be a safe and therapeutic option," says Brooke Worster, MD, a medical cannabis researcher and assistant professor at Thomas Jefferson University in Philadelphia.

Worster says that cannabis may eventually prove useful in the treatment of sleep and anxiety disorders. "The CBD component seems especially promising because of its calming properties," she says. But a lot of the details still need to be worked out. For example, THC—the main psychoactive agent in cannabis that provides the high—can increase anxiety and insomnia if used in high doses, she says.

Experts also mention glaucoma, Alzheimer's disease, Parkinson's disease, and irritable bowel syndrome as conditions that cannabis may eventually

tem—that plays a role in the regulation of appetite, pain, inflammation, learning, and other vital bodily functions. There are dozens of chemicals in cannabis, notably delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD), that can influence the activity of the endocannabinoid system. And so, mechanistically, there's reason to believe that cannabis could help relieve the symptoms of a wide range of maladies.

"The problem is that, for the most part, the research just hasn't been done," Haney says.



help to treat. On the other hand, they highlighted some conditions—mainly psychological illnesses—for which the use of cannabis appears to carry more risk than benefit. “Depression is a big one,” Worster says. “People might feel better temporarily, but in the long term, cannabis doesn’t affect depression in a positive way.” The situation is much the same for schizophrenia and bipolar disorder, she says.

### LOTS OF HOPE—AND PLENTY OF HURDLES

While research is advancing medical science’s understanding of cannabis and its appropriate uses, experts say there’s still a lot of unexplored ground to cover. “Compared to the state of the science on cardiovascular disease or cancer, our understanding of cannabis is embryonic,” Worster says. “We’re making progress, but we have a long way to go.”

The complexity of the cannabis plant presents



### “OUR UNDERSTANDING OF CANNABIS IS EMBRYONIC.”

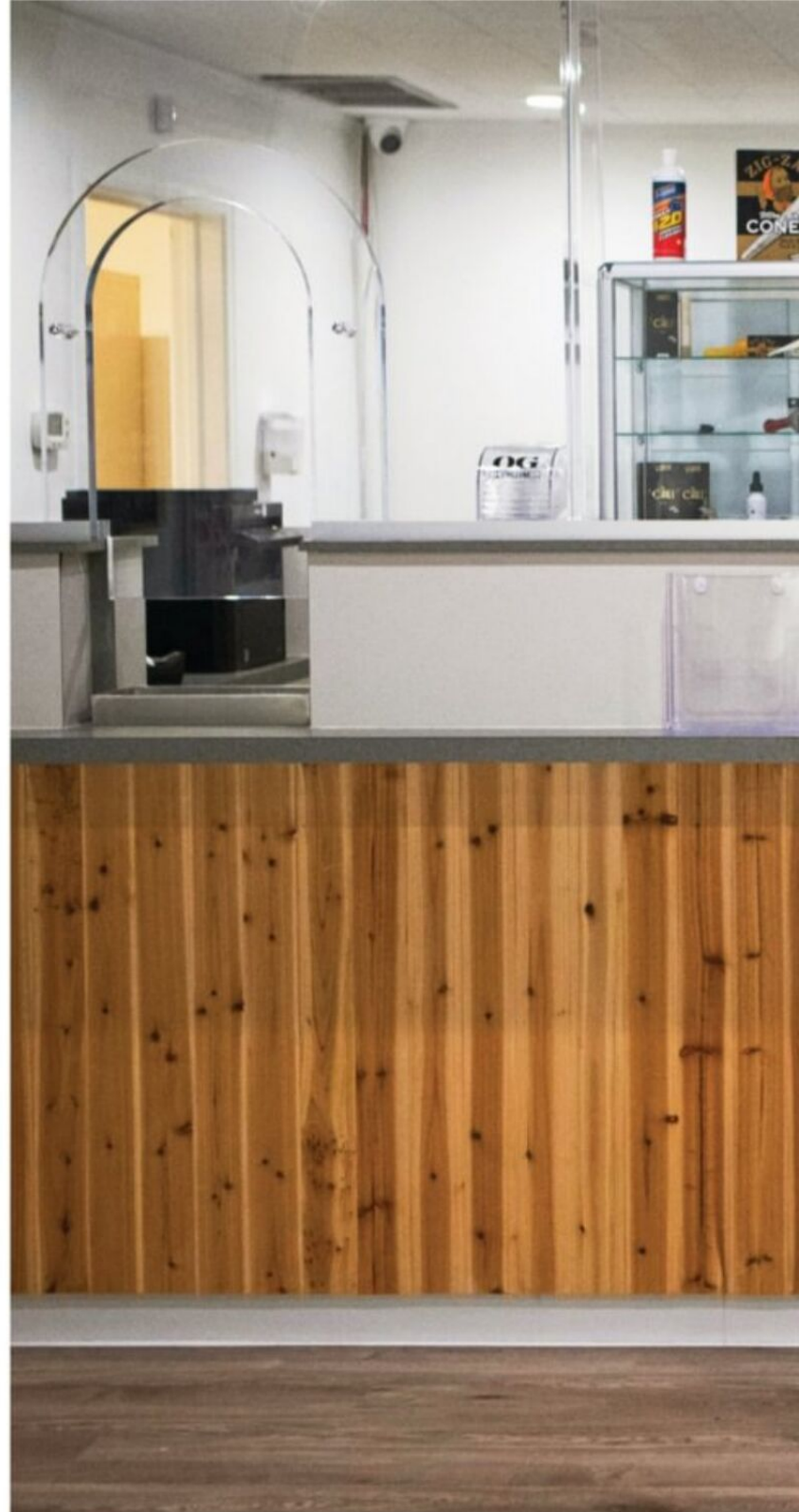
—BROOKE WOOSTER, MD

challenges. “There are more than 70 chemical entities identified in cannabis, yet thus far, clinical research has been focused on only a small proportion of them, namely THC and CBD,” says Brian Hutton, PhD, an associate professor at the University of Ottawa. “We know relatively little about the clinical effects of individual cannabinoids or of combinations of cannabinoids in different ratios in the context of disease treatment and prevention.”

Along with disentangling the effects of each of these individual compounds, experts must also sort out how different combinations of those chemicals work in concert, as well as the effects of different doses and methods of ingestion (e.g., smoking, edibles). On top of all this, they say the drug’s therapeutic effects may differ significantly based on a patient’s age. “Age-related changes, such as slower drug metabolism, altered pharmacokinetics, structural brain changes, and reductions in cognitive function, may alter the way in which cannabis exerts its effects,” says Dianna Wolfe, a clinical research

associate at the Ottawa Hospital Research Institute who, working alongside Hutton, has studied the effect of medical cannabis on older adults.

The lack of nationwide cannabis regulations, coupled with inconsistent and often unreliable guidance from both medical providers and dispensary workers, also makes things tricky for medical cannabis users. “It’s the Wild West right now,” says Haney. “If you go into a dispensary, what your budtender tells you about [the health benefits of] different strains or doses is usually going to be a lot of made-up nonsense.”







*A patient visited The Farm, a medical dispensary in Felton, Del.*

Likewise, there are plenty of “pot docs” who view cannabis as a panacea, “which it absolutely is not,” Worster says. “People have to understand that cannabis is not benign—there are harms associated with its use.” For example, cannabis can lead to a drop in cognitive functioning, as well as depression and suicidal thoughts. Especially in young people, older adults, and pregnant women, the drug’s established risks may far outweigh its benefits, she says.

While these kinds of warnings may sound alarmist, experts say they’re a necessary counterweight to the cannabis hype. “The drug absolutely has thera-

peutic potential, but it’s become a billion-dollar industry, and a lot of the discussion of it as medicine is being pushed by industry,” Haney says. “Right now, we have a lot of people forgoing proven medicine to take something for which there is no evidence of benefit.”

There’s a lot of reason for optimism about cannabis. But like any medicine, experts say the risks must be considered alongside the benefits. People are inevitably excited, because they can now use a drug that was once forbidden. But science will need a minute to figure out whether they should. □





## Are Edibles Actually Good for Sleep?

Research points in different directions, as marijuana seems to help some people but make nights more restless for others.

BY JAMIE DUCHARME

**About 14 percent** of U.S. adults said they used marijuana edibles as of 2022, and research suggests many of them do so in search of better sleep. One small 2021 study of cannabis users found that more than three-quarters thought they slept better thanks to the drug.

But despite the popularity of using edibles for sleep, the data on how well they help people drift off is surprisingly mixed. Using edibles is “very helpful for some people,” says Deirdre Conroy, clinical director of the University of Michigan’s Behavioral Sleep Medicine Program. But “for some





*People with chronic sleep issues should consider underlying causes before turning to marijuana, says one sleep-medicine doctor.*

people, it doesn't help at all, and for others, it works temporarily and then stops working."

Indeed, studies suggest some people—including those with sleep disorders, chronic conditions, and certain mental health issues—get better rest when they use cannabis, perhaps because it helps quiet symptoms associated with those diagnoses. Other studies have found that marijuana helps people fall asleep faster but may impair sleep quality, potentially because it throws off regular sleep cycles. Cannabis users are also more likely than non-users to get either more

or less sleep than recommended, research shows. And heavy and habitual users seem prone to insomnia and may struggle to sleep if they stop using the drug.

Studies looking specifically at edibles have yielded similarly mixed results. In the 2021 study in which most cannabis users said it helped their sleep, researchers found that edibles specifically were linked to shorter sleep duration and poorer overall sleep. A 2022 study also found that teenagers who used edibles were more likely to get inadequate sleep than peers who smoked pot, suggesting the way the drug is ingested may matter.

On the flip side, a 2022 research review found that oral cannabis use helped people with chronic pain to sleep, and a 2023 study found that people with anxiety who took edibles felt they slept better when they did. Edibles tend to produce a longer-lasting effect than smoking marijuana does, which may help some people fall and stay asleep through the night, the authors of the 2023 study wrote. People who used edibles high in CBD, a non-psychoactive component of cannabis, reported particularly strong sleep.

That makes sense, says Robert Welch, director of the National Center for Cannabis Research and Education at the University of Mississippi. People tend to think of cannabis products as all the same, but in reality, the effect can depend on the specific mixture of compounds in a given product.

THC, the psychoactive component of marijuana, makes some people feel energized and thus can interfere with sleep, particularly at higher doses. CBD, meanwhile, is more closely associated with sleep and relaxation; it seems to calm the central nervous system and boost levels of the sleep-promoting compound adenosine, Welch explains. Edibles that contain CBN, a byproduct of THC with mild sedative properties, are also often explicitly marketed as sleep aids, but there's not a ton of data to back up that claim.

Even if someone does their homework, it's hard to know exactly what's in a given edible, especially if it comes from one of the many unregulated head shops springing up across the country, which aren't subject to the same testing and production requirements as licensed dispensaries.

Even if labels are accurate, people respond to cannabis differently. The drug's effects can vary depending on a person's metabolism, other medications they're taking, and even how much they've eaten that day, Welch says.

Reactions are so individual, Conroy says, that personal experience matters just as much as what research shows—especially since marijuana is still illegal federally, which makes it difficult to study. "What we get in the science might be a bit different from the patient's perspective, largely because the availability has outpaced the science," she says. Negative research findings shouldn't invalidate the experiences of people who benefit from using edibles for sleep, she adds.

Atul Malhotra, MD, a sleep-medicine specialist at UC San Diego Health, says he doesn't actively recommend that patients use edibles for sleep, largely because the science is so unsettled—but if someone is already doing so and feels it's working well, he's not overly concerned. "I usually fall in the category of, 'If it ain't broken, don't fix it,'" Malhotra says.

The most important thing to keep in mind, he says, is that if you feel you need an edible to sleep, that may be a red flag for a larger issue. Before popping gummies, Malhotra recommends getting your sleep hygiene in order, such as by limiting caffeine intake and going to bed and waking at the same time each day. If you have serious issues with insomnia or daytime fatigue, it may also be worth consulting a doctor to rule out issues like sleep apnea or restless legs syndrome.

"There are plenty of people who self-medicate for those problems," Malhotra says. "I would rather address the underlying cause as best I can."



# Using THC to Cope with PTSD

SOME MILITARY VETERANS ARE EMBRACING THE DRUG AS SCIENTISTS SCRAMBLE TO STUDY ITS EFFECTS.

BY MARK THOMPSON

**J**OSE MARTINEZ KNOWS ABOUT TRAUMA. AS a U.S. Army infantryman in Afghanistan, he lost both legs, his right arm, and his left index finger to a land mine in 2012. Recovery was challenging. “In my eyes, I had pretty much failed when I stepped on a bomb and lost three limbs,” he says. “I was going insane because I did not understand why I was still alive.” Then, in December 2015, he broke his maimed left arm, his lone remaining limb, when his car flipped over after hitting black ice in the high desert near his Apple Valley, Calif., home. It’s no surprise, then, that he also knows about posttraumatic stress disorder. Doctors plied him with pills after both calamities. “I started taking so many prescription pills,” he recalls, “I was numb to the world.”

Over time, he ended up replacing those pills—up to 150 a day, he says—with marijuana. While Martinez says he smoked pot occasionally before enlisting in 2010, he obeyed the military’s prohibition against it before that bomb blast near Kandahar. He says

marijuana has stayed his pain and tamed his demons. “My brain’s telling me to freak out because I’m missing my limbs, but when I’m on cannabis, it tells me to calm down, you’re OK, you’re fine,” Martinez explains. Not only does it soothe the phantom pain of his missing limbs, but it also eases a racing and apprehensive mind riven with PTSD. “It relaxes me and helps me sleep at night,” he says. “I’m so supervigilant, and it really calms my anxiety, which can shoot up when I’m around a lot of people I don’t know.”

Back home, Martinez again became a frontline soldier, but now in a new battle—to prove that the ancient herb can help veterans like him who suffer from PTSD, a signature wound of the wars in Afghanistan and Iraq. But marijuana’s checkered legal, medical, and social history make it a controversial treatment. The federal government estimates that about 29 percent of the troops who served in those countries will experience some kind of PTSD. Advocates like Martinez argue, on the









*Jose Martinez, here in Apple Valley, Calif., in 2016, lost his legs, right arm, and left index finger in a land mine explosion in Afghanistan. Opposite: Signs of gratitude on the wall of his home.*

basis of their experience, that marijuana is good for more than just getting high.

Research has shown that pot can be useful in the treatment of pain, making it a potentially suitable alternative to opioids for some—though the research on medical marijuana and PTSD remains wanting. That’s because the Drug Enforcement Administration (DEA) has listed marijuana as a Schedule I substance—dangerous, with no medical benefit—for nearly 50 years, though that status is up for reconsideration in 2024. But in 2016, the DEA did loosen a regulation in order to open the door to more research. Prior to that, the government had approved the first clinical study designed to determine if weed works to ease the anxiety, depression and sleeplessness and other PTSD symptoms that war can incite. The question still needs further

study, but if the answer ends up being yes, the benefits could go well beyond the battlefield.

According to estimates from the VA’s National Center for PTSD, which are considered by many experts to be conservative, about 1 in 15 Americans will suffer from PTSD at some point during their life. For some, the trauma will be sparked by man-made events such as combat, car crashes, violent attacks including rape, or other abuse. For others, the trauma will be the result of disasters such as fires, flooding, and earthquakes.

For all, the lasting effects can be debilitating, and a growing number of people are banking on the idea that marijuana may help. Compounds in marijuana, either individually or combined with others, affect cannabinoid receptors in the brain and elsewhere, influencing the user’s physiology and mental state.



Marijuana's mind-altering qualities were known when it was used as medicine in ancient China, and in fact, it was considered an accepted medicine by U.S. doctors until 1942, when the nonprofit U.S. Pharmacopeia, founded in 1820 to help protect people from poor-quality medicine, removed it from its list of drugs, deeming it harmful and addictive.

Marijuana's classification as a Schedule I drug in the 1970s ensured it would be nearly impossible for scientists to study it, and much of the research on its place in medicine halted. Still, in 1988, Francis Young, an administrative law judge with the DEA, was able to write, "Marijuana, in its natural form, is one of the safest therapeutically active substances known to man. By any measure of rational analysis, marijuana can be safely used within a supervised routine of medical care." In recent years, selective breeding has bolstered the potency of marijuana well beyond its Vietnam-era levels, especially when it is added to foods and eaten rather than smoked.

In 2016, the DEA approved the first-ever study of the use of the marijuana plant itself, not individual extracts, as a therapeutic drug. Marijuana consists of well over 300 chemicals, and backers say it may be the interaction among them, not any single ingredient, that generates its mellowing effect. It took the Multidisciplinary Association for Psychedelic Studies, a San Jose, Calif., nonprofit that advocates for increased therapeutic use of psychotropic substances, more than five years to win the required approvals for the study from three federal agencies: the Food and Drug Administration (in 2011), the Public Health Service (2014) and the DEA (2016). Colorado—one of the first states to legalize marijuana—funded the \$2.2 million investigation.

The randomized, blind, and placebo-controlled study charted the impact of several strains of marijuana bred to contain varying amounts (from zero to 12 percent) of psychoactive tetrahydrocannabinol (THC) and cannabidiol. Using marijuana from the National Institute of Drug

Abuse's farm, run by the University of Mississippi, 76 veterans with treatment-resistant PTSD living near the research sites in Baltimore and Phoenix were studied. The results were mixed—while subjects did find that marijuana eased their symptoms, so did the placebo group, at about the same level.

There is already promising research about pot's growing place in medicine. Animal studies suggest that it can ease anxiety, depression, and pain. But marijuana can also trigger problems among some users. A study on marijuana use by 2,276 veterans from 1992 to 2011 concluded that avoiding pot may be important for people with PTSD. "We definitely found a correlation between those who used marijuana, and used it more often, and PTSD-symptom severity," says Samuel Wilkinson, a psychiatrist at the Yale School of Medicine and the lead author of the study, published in September 2015 in the *Journal of Clinical Psychiatry*. "There's just no evidence that marijuana is beneficial for PTSD, and there's some preliminary evidence—like from my study—that suggests it may be harming people."

In other words, the science is mixed. "The belief that cannabis can be used to treat PTSD is primarily based on anecdotal evidence from individuals with PTSD who report that cannabis helps with their symptoms or improves their overall life and functioning," wrote the Department of Veterans Affairs on the topic. The VA included a lengthy list of problems researchers have uncovered among





regular users, including addiction, bronchitis, and psychosis.

“A lot of veterans have gravitated toward cannabis,” says Marcel Bonn-Miller, one of the investigators in the groundbreaking 2016 study. “That’s not a rigorous trial, but it shows that this is an important area to investigate.”

Study participants smoked up to 1.8 grams of marijuana daily. (“It’s kind of hard to estimate what ‘a joint’ means,” Bonn-Miller notes.)

Part of the push to use marijuana for PTSD owes to the fact that no existing therapy works for all PTSD patients. In cognitive-behavior and exposure therapies, counselors try to change how sufferers perceive their trauma and the reaction it causes in hopes of reducing or eliminating symptoms. In group therapy, PTSD patients discuss their fears in hopes of ridding them of their power. And there’s a



**PART OF THE PUSH TO USE  
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medicine chest full of drugs—often selective serotonin reuptake inhibitors, a kind of antidepressant—that can ameliorate the sadness and worry that often accompany PTSD.

Backers argue that marijuana should simply be one more part of a therapist’s tool kit. “Those of us who use it on a daily basis want nothing more than the research to be done,” says Aaron Newsom, a Marine who returned home to California from Afghanistan in 2005 with PTSD. After assorted pharmaceuticals failed to calm it, he says, he finally found relief with marijuana. That pushed him to help found the Santa Cruz Veterans Alliance, dedicated to sharing marijuana with fellow vets. “It is a safer and healthier alternative to most of the pharmaceuticals they pass out at the VA,” he says.

Congress considered lifting the ban on VA doctors’ discussing marijuana treatment options with their patients in states where pot is legal. This coincides with another challenge faced by PTSD suffer-

ers: “Lethal opioid overdoses among VA patients are almost twice the national average,” said Rep. Earl Blumenauer, an Oregon Democrat who championed the change, on the House floor in 2016. “This is at a time when the overwhelming number of veterans say to me that marijuana has reduced PTSD symptoms and their dependency on addictive opioids.”

While it’s nearly impossible to die from a marijuana overdose, prescription-opioid overdoses contributed to almost 17,000 deaths in the U.S. in 2021, and total overdoses from any opioid, prescribed or not, that year were more than 80,000. A study from 2014 found that opioid deaths fell by an average of 25 percent in states where medical marijuana use had been legalized. By comparison, the CDC estimates that alcohol abuse killed 140,000 people per year between 2015 and 2019.

Rigorous scientific studies of marijuana’s impact on PTSD should bolster arguments for or against its use, helping clear some of the 1960s haze from the debate. But skeptics say politicians and other advocates, pressured by true-believing marijuana boosters, have approved medical use in 38 states without adequate vetting. While doctors cannot legally prescribe marijuana in any state (they can only recommend it), its use, recreational as well as for PTSD, is happening across the nation regardless of local laws.

The military has a love-hate relationship with marijuana. Soldiers on the front lines have long smoked weed to help them bear the nightmare of war, including about 50 percent of those in Vietnam. But the military’s subsequent zero-tolerance policy sharply curtailed its use by troops in Afghanistan and Iraq. It would mark a surprising reversal for cannabis if, having been driven off the battlefield, it returned in joints, pipes, and bongs for those suffering from PTSD after serving in those countries.

Some aren’t waiting for science to confirm how they feel. After the bombing that changed his life but before toking up, Jose Martinez feared the outside world. “I was scared of people looking at me, and everybody was staring at me,” he remembers. “They looked at me like I was some type of animal, and I was feeling that and not really seeing what my life was about.” He credits marijuana with reintroducing him to the human race. “Smoking marijuana,” he says, “has slowly made me become the person I used to be.” □

*Adapted from an article that appeared in the Aug. 29, 2016, issue of TIME.*





*Marijuana helped Martinez find relief from PTSD. "It really calms my anxiety," he said.*



# Teen Marijuana Poisonings Have Skyrocketed

In a world in which the taboos around pot are disappearing, how do you protect your child from its dangers?

BY TARA LAW

**Recreational cannabis** is now legal in nearly half of U.S. states. Like any psychoactive substance, however, it comes with some health risks—especially for children and adolescents.

Over the last two decades, cannabis cases have flooded hotlines at U.S. Poison Control Centers, facilities across the country staffed by toxicology experts who provide 24-7 guidance to both the general public and health professionals. Using data from those poison centers, a study published in *Clinical Toxicology* reviewed almost 339,000 cases between 2000 and 2020 involving 6- to 18-year-olds and found a 245 percent increase in calls related to marijuana. The biggest rise came between 2017 and 2020, particularly with cases involving edibles.

The study did not describe the health issues caused by or associated with cannabis in these cases, but physicians who work with children say they can be serious, including episodes of psychosis. Other problems associated with cannabis are less dramatic but also concerning, including memory problems, worsened mood problems, and trouble in school.

## Why were more cases involving children and cannabis reported?

Cannabis cases rose by about 25 percent between 2010 and 2017 but jumped 40 percent between 2017 and 2020. This period

coincided with legalization in many U.S. states, notes Adrienne Hughes, MD, an assistant professor of emergency medicine at Oregon Health and Science University and the lead author of the study. In that time frame Illinois, Arizona, and other states legalized recreational or medical marijuana use. “Obviously, it’s only legal for adults and not children, but I think we can probably agree that it has rendered the drug more accessible to children, probably contributing to the perception that it’s safe as well,” says Hughes.

Another problem is that over the last few years, young people have increasingly used cannabis in newer forms, including vapes and edibles.

Edibles in particular have become more common among calls to poison control centers. Though studies have shown that teens believe they’re less harmful than the traditional method of smoking marijuana, edibles pose their own set of risks. It can be difficult to manage your dose, and edibles may take hours to kick in—which means kids may unwittingly eat more to try and feel their effects.

## What are the risks of cannabis for kids?

Marijuana is safer than many other illicit substances like cocaine or opioids, but that is not to say that it is 100 percent safe. Research suggests that kids may face greater mental health risks, such as worsened depression and anxiety, poor attention and memory

problems, and cannabis use disorder, than adults, as their brain is still developing.

In some cases, cannabis can even land children in the hospital. Willough Jenkins, MD, a psychiatrist at Rady Children’s Hospital—San Diego, the largest children’s hospital in California, says that in the last few years, she’s seen a dramatic increase in the number of older children being hospitalized after consuming cannabis. She now sees several adolescent patients a week with cannabis hyperemesis syndrome, a condition involving severe vomiting caused by prolonged exposure to cannabis, which puts them at risk of weight loss, dehydration, and malnourishment. Patients are typically treated with IV fluids or, in extreme cases, feeding tubes.

Jenkins also sees two or three cases a month in which cannabis use appears to have triggered a psychotic episode. “You have a youth coming into the hospital very confused, usually very disoriented, not knowing where they’re at, hallucinating,” she says. “These youth come in not able to feed themselves, not being able to get to the bathroom.”

If you’re wondering about the right way to talk to your kids about cannabis, building trust and creating a “sense of safety” is essential, says Emily Jenkins, who researches youth substance use and is an associate professor in the school of nursing at the University of British Columbia (and is not related to Willough Jenkins). Ideally,





*A 17-year-old rolled a joint during a 4/20 Day celebration in Denver.*

you can avoid a specific, serious talk about it, as that could very well make a teenager shut down to anything you're saying—it's better to bring up the subject in a more casual way, such as when marijuana is mentioned in a television show.

### **How can I help my child use cannabis safely?**

Emily Jenkins notes that Canada, where she lives and which has legalized cannabis, offers a list of guidelines designed to make consuming cannabis safer. In particular, she says, parents should recognize that the greatest risks come when kids are younger—under 16, per the Canadian guidelines—and using cannabis too frequently (daily or almost every day). She adds that choosing cannabis products with a lower THC

content (experts often classify a THC level of 15 percent or more as high potency) as well as avoiding smoking to avoid breathing in carcinogens, can also help.

Willough Jenkins, the California psychiatrist, says she sometimes works with adolescent patients to adopt healthier ways of smoking, such as reducing the amount they consume or the amount of time they spend using cannabis.

Some children are using marijuana as a way to cope with mental health challenges, such as depression or anxiety, and may need additional help to address their underlying condition. Experts generally agree that parents should watch for red flags that show their child's cannabis use is getting out of control, such as missing school or showing up

intoxicated, excessive coughing, or acting paranoid. It's also essential that some teens don't use cannabis at all, including children with conditions such as cystic fibrosis, who are taking other medications and might be at risk of dangerous drug interactions, or who have a family history of psychosis.

Willough Jenkins emphasizes that cannabis use is not "safe." However, when she encounters a patient using cannabis heavily, she does what she can to help them make their use safer.

"If I told them they can't use marijuana, they'd say, 'See you later,' which isn't what I want," she says. "So even though I would hope they would get to a place where they didn't need to use marijuana, I work with them where they're at."



*IBD patients say  
marijuana has helped  
alleviate nausea,  
vomiting, and diarrhea.*





# Can Cannabis Help with Digestive Ailments?

STUDIES SUGGEST THAT MARIJUANA CAN EASE SYMPTOMS FOR PATIENTS SUFFERING FROM IBD, CROHN'S DISEASE, AND ULCERATIVE COLITIS.

BY STACEY COLINO

**W**HEN JOE SILVERMAN DEVELOPED Crohn's disease at age 21, the symptoms started out mild. While the sight of blood in his stool initially freaked him out, what really bothered him was the frequent abdominal pain and bloating that occurred as his condition progressed to moderate and then severe. Dietary changes didn't make a difference, so he began taking prescription oral anti-inflammatory drugs that are often used to treat certain bowel diseases, which alleviated but didn't eliminate his discomfort. He started using prescription steroid suppositories to cope with flare-ups of the inflammatory bowel disease.

Even so, "I didn't feel well—my mind was cloudy, and I was in pain," says Silverman who is now 47 and the co-founder of the PSMC5 Foundation, which is dedicated to beating rare genetic disorders like the PSMC5 gene mutation (which his son has). So in 2013, he tried a new approach: He began getting intravenous infusions of an immunosuppressive

drug at four- to eight-week intervals to reduce inflammation in the lining of his intestines. "It helped, but I still had nausea, brain fog, discomfort, and trouble sleeping," he says.

In 2018, he decided to try something different as an adjunctive treatment, with his gastroenterologist's blessing: medical marijuana in the form of cannabidiol (CBD) and tetrahydrocannabinol (THC) capsules that he was able to purchase after getting a New York City medical-marijuana license. "Within an hour and a half of taking them, I felt better," Silverman says. "The bloating and pain went down, and my appetite came back."

Cannabinoids—a group of compounds that constitute the active ingredients in the marijuana plant—have been found to help alleviate chronic pain, as well as the nausea and vomiting that stem from chemotherapy for cancer. The U.S. Food and Drug Administration (FDA) has even approved specific cannabinoid products for chemotherapy-induced nausea and vomiting in cancer patients and



to stimulate appetite in patients with AIDS who have lost weight.

In recent years, there has been growing interest in the use of medical marijuana for gastrointestinal disorders, such as inflammatory bowel diseases (IBDs) like Crohn's and ulcerative colitis (UC). In a study in the December 2013 issue of the journal *Inflammatory Bowel Diseases*, researchers surveyed 292 patients with IBD at a major medical center in Boston about their use of marijuana and found that 12 percent were active users and 39 percent were past users. Among current and former users who used marijuana products for their symptoms, the majority felt it was "very helpful" in relieving abdominal pain, nausea, and diarrhea. A 2018 study in the *Journal of Pediatrics* found that among 99 teens and young adults with IBD, nearly one-third had used marijuana, and 57 percent of the users endorsed its use for at least one medical reason, most commonly relief of physical pain.

"A lot of people perceive this as a more natural therapy and preferentially want this over immunosuppressants for inflammatory bowel disease," says Byron Vaughn, MD, an associate professor of medicine and co-director of the IBD program at the University of Minnesota Medical School in Minneapolis. But if anything, experts see the primary role for cannabis as an adjunctive therapy, not as a replacement for medications that are used to treat IBD and other GI disorders.

### HELP OR HYPE?

Research investigating the effects of medical marijuana on various gastrointestinal disorders is limited, so there are many unanswered questions. Right now, one of the obstacles to this is the classification of cannabis as a Schedule I drug (along with heroin, LSD, and ecstasy) by the federal government. This reality has inhibited research in the U.S. to evaluate the effects of cannabis on various gastrointestinal disorders as well as other medical conditions.

And while the mechanisms of action aren't completely understood, this much is clear: The human body has an endogenous cannabinoid system—one that originates inside the body—that comprises cannabinoid receptors, endogenous cannabinoids (lipids that engage cannabinoid receptors), and enzymes that are involved in the synthesis and degradation of the endocannabinoids. In particular, CB1 receptors are abundant in the central nervous system, while CB2 receptors are more prevalent throughout



the gastrointestinal tract, explains Jami Kinnucan, MD, a senior associate consultant in gastroenterology and hepatology at the Mayo Clinic in Jacksonville, Fla.

A little background about cannabis: While it contains hundreds of compounds, the most well known are THC and CBD. THC is responsible for marijuana's psychoactive effects (that "high" sensation), whereas CBD is not psychoactive but seems to modulate the effects of THC, explains Christopher N. Andrews, MD, a clinical professor of gastroenterology at the University of Calgary.





*So far, a combination of CBD and THC appears to help GI patients the most. CBD oil can be added to tea.*

As far as inflammatory gastrointestinal disorders go, the greatest symptom benefit seems to come from preparations that have a combination of THC and CBD, Kinnucan says. This is partly because while CB1 receptors are activated by THC, CBD and THC have a synergistic effect on CB2 receptors. “In patients with inflammatory bowel disease, studies have shown that the combination improves abdominal pain and decreases bowel movement frequency,” she says. What’s more, cannabis use appears to decrease emptying of the stomach and gastric acid production, as well as reduce the movement of food

throughout the gastrointestinal tract, notes David Poppers, MD, a clinical professor of medicine in the division of gastroenterology and director of GI Quality and Strategic Initiatives at NYU Langone. As a result, cannabis use may improve the diarrhea-predominant form of irritable bowel syndrome (IBS), he says.

Whether cannabis actually improves the underlying causes of GI disorders is less clear. “In the test tube, all cannabinoids have some anti-inflammatory effects,” says Jordan Tishler, MD, an instructor of medicine at Harvard Medical School and president



of the Association of Cannabinoid Specialists, a professional organization dedicated to education about cannabinoid medicine. “In human studies, if you look for blood markers of inflammation, you don’t see any change after using cannabis,” Tischler says. When it comes to treating IBD, “there isn’t a lot of evidence that cannabis really modifies the underlying disease process. But it treats the symptoms people have.”

Other experts agree. “When you tease it out, this is more of a symptom-based therapy,” Vaughn says. “With IBD, there seems to be a calming effect on symptoms such as nausea, vomiting, pain, and diarrhea.” Vaughn reports that he sees patients with Crohn’s disease get more of an effect from cannabis than those with ulcerative colitis.

In a review of 20 studies in a 2021 issue of the *Journal of Clinical Gastroenterology*, researchers examined cannabis use among patients with IBD and found that cannabinoids had no effect on inflammatory biomarkers, and they were not effective at inducing remission, which is the ideal end

point. However, patients who used cannabinoids reported significant improvements in abdominal pain, nausea, diarrhea, appetite, and overall well-being. Similarly, a double-blind, randomized, placebo-controlled study published in a 2021 issue of *PLOS One* found that patients with mild to moderate ulcerative colitis who smoked marijuana cigarettes daily for eight weeks—while continuing to take their usual UC medications—experienced improvements in both their symptoms and quality of life compared with those who were given placebo cigarettes, which contained cannabis flowers from which THC had been extracted. However, based on blood tests, neither group experienced reduced inflammation.

All that said, it’s possible that the impact of cannabinoids on symptoms could have trickle-down effects that decrease the need for other prescription drugs. For example, a study in a 2019 issue of the *European Journal of Gastroenterology & Hepatology* found that when patients with IBD used medical cannabis to treat their symptoms, their need for

*Doctors don’t yet know what dosage imparts positive effects while avoiding negative ones.*





other medications was significantly reduced over the course of a year because their symptoms improved.

### POTENTIAL DRAWBACKS

A cautionary note: There's a tipping point with using cannabis for GI disorders. "Cannabinoids reduce the tone of the lower esophageal sphincter, which can increase heartburn and reflux symptoms," Kinnucan says. "They also decrease gut motility, causing the stomach to empty more slowly, which can increase nausea and be problematic for patients with gastroparesis," a disorder that delays the movement of food from the stomach to the small intestine.

Another potential risk: chronic, daily cannabis use can cause cannabinoid hyperemesis syndrome, which is characterized by recurrent nausea, vomiting and abdominal pain, Andrews notes. "Some people have many months with cannabinoid hyperemesis. Even if they stop using cannabis, it's possible [the usage] may have induced a permanent change." In addition, some develop cannabis use disorder, a form of dependence that occurs when the brain adapts to ongoing use of the drug. A study in a 2020 issue of the journal *Drug and Alcohol Review* found that approximately 27 percent of lifetime marijuana users develop cannabis use disorder, defined as problematic or continued use despite experiencing loss of control, social or medical problems, cravings, tolerance, or withdrawal.

"We don't know what the right dose is where patients can have the positive effects and avoid the negative effects—and not all patients respond the same way to the same dose," Kinnucan says. Plus, cannabis is used in many different ways—as edibles, smoking or vaping, dabbing, oils, or tinctures—and the dosing is different with each route.

"There's little regulation of cannabis, and the THC levels are extremely high now," Andrews says. Thirty years ago, the percentage of THC in typically accessible marijuana was in the single digits, he says, whereas these days THC is often 20 percent or higher. With these higher concentrations, "we have no idea what they will do to the [body's] cannabinoid system long term," Andrews says.

There's also a concern that people with IBD and other gastrointestinal disorders might stop using other treatments that have been approved by the FDA for their condition. "Because they feel better, they may have a false sense that they are better," Kinnucan says. "It's important to continue medical therapy to prevent progression of the disease."

Looking ahead, "what we need is to really start doing large, multicenter, randomized, controlled studies to examine the effects on IBD, using specific forms of cannabis at specific doses," Tishler says. Until more is known, the onus is on patients to take precautions. Whether or not medical marijuana is legal where you live, "you need to talk to your doctor about whether this is right for you," Vaughn says. "It's good to be open—your doctor is not going to be judgmental." While this may seem like a privacy issue, it's important to realize there could be medical risks. For one thing, cannabis can have potential interactions with other medications, such as warfarin (an anticoagulant), benzodiazepines, and barbiturates, Kinnucan warns. Cannabis use is also more likely to cause problems in certain groups of people, like those who are pregnant or breastfeeding, who have significant psychiatric disorders, or who have a history of substance abuse, Poppers says.



### ONE RISK IS THAT CHRONIC DAILY CANNABIS USE CAN ACTUALLY CAUSE DIGESTIVE PROBLEMS.

Finally, remember that experts primarily view cannabis as adjunctive therapy—added as needed—for GI disorders. "This is not a panacea or a miracle drug," Vaughn says. "For some people, it helps their symptoms, and for some people, it doesn't."

While Joe Silverman found that medical marijuana does help ease his Crohn's symptoms, he has prioritized finding the most effective drug to treat the underlying cause of his condition. At the beginning of 2021, he and his doctor shifted the course of his treatment, and he began getting intravenous infusions of a different immunosuppressant drug every six weeks. "It has kept the inflammation [from the disease] at bay," he says. Silverman continues to use medical marijuana for flare-ups or tougher days in a measured fashion. "With being able to measure these cannabinoid products by a dosed milligram each time, I still feel in control mentally and physically while reducing pain in my gut," he says. That's the best of both treatment avenues. □



# How Much Does Marijuana Impact Your Driving?

The influence is at its greatest when in combination with even a little alcohol—a common pairing among younger users.

BY ELIZA GRAY







*The most recent study found that an increasing number of weekend nighttime drivers, 12.6 percent, have marijuana in their system.*

**The exact** impact of marijuana on driving ability is a controversial subject—and it's become more important as states continue to loosen their drug laws. And while U.S. drunk driving–related deaths actually had a period of decline between 2009 and 2019, driving after having used marijuana has become more common. According to the most recent national roadside survey from the National Highway Traffic Safety Administration of weekend nighttime drivers, 8.3 percent had some alcohol in their system, and 12.6 percent tested positive for THC—up from 8.6 percent in 2007.

It is illegal in all states to drive under the influence of anything, but years of work went into establishing the legal limit of .08 blood alcohol concentration (BAC) that exists in most states. The question is whether we can establish a similar threshold for pot.

To find out, researchers at the National Institute on Drug Abuse recruited 18 people, 13 of them men, between the ages 21 and 37 who reported using marijuana and drinking alcohol no more than three times a week. The participants took six 45-minute drives in a driving simulator—a 1996 Malibu sedan mounted in a 24-foot-diameter dome—at the University of Iowa. Each drive tested a different combination of vaporized high- or low-concentration THC, alcohol, and placebos. (To create a placebo, participants were given fruit juice with alcohol swabbed on the rim, topped off with 1ml alcohol, to mimic alcohol's smell and taste.)

The researchers looked at 250 parameters of driving ability, but this paper focused on three in particular: weaving within the lane, the number of times the car left the lane, and the speed of the weaving. Drivers with only alcohol in their system were impaired in all three areas, while those who used vaporized cannabis only had problems with weaving. Drivers with

a blood concentration of 13.1 ug/L THC, the psychoactive ingredient in cannabis, showed increased weaving that was similar to those with a .08 BAC. For reference, 13.1 ug/L THC is more than twice the 5 ug/L numeric limit in Washington state and Colorado.

Marilyn Huestis, PhD, the principal investigator in the study, says it is important to note that the study looked at the concentration of THC in the driver's system while they were driving. This is quite different from the concentration typically measured in a drugged driver out on the road whose blood may not be checked until several hours after an arrest, allowing the THC level to drop considerably from the time they were driving.

Huestis says the researchers are looking at how to estimate how long it takes for THC concentrations in the blood to drop. Huestis herself believes that the 5 ug/L limit is not strict enough, particularly when you take into account those with low tolerance.

The study also found that pot and alcohol have more of an impact on driving when used together. Drivers who used both weaved within lanes, even if their blood THC and alcohol concentrations were below the threshold for impairment taken on their own. "We know cannabis is primarily found with a low dose of alcohol," Huestis says. "Many young people have a couple beers and then cannabis."

Smoking pot while drinking a little alcohol also increased THC absorption, making the high more intense. Similarly, THC delayed the peak of alcohol impairment, meaning that it tended to take longer for someone using both to feel drunk. Such data is important to educate the public about pot's effects before they get on the road.

"I think this has [resulted in] really good knowledge from a well-designed study to add to the current debate" on marijuana's effects on road safety, Huestis says.



✦ | CHAPTER 3

# Brave New World

Recreational marijuana—it's not just for Cheech and Chong anymore.











*A marijuana dispensary in San Francisco. This location catered to medicinal users.*





# Navigating the Modern Marketplace

SATIVA, INDICA, PRE-ROLL, DAB RIGS—SOMETIMES IT SEEMS LIKE YOU NEED A DICTIONARY TO GET HIGH THESE DAYS.

BY AVA ERICKSON

**L**EGAL RECREATIONAL CANNABIS SALES have transformed what was once a back-alley operation to an over-the-counter purchase. According to Statista, there was an estimated \$21.1 billion in sales of recreational marijuana in 2022, with the total projected to reach \$37 billion in 2026. Here are the basics to know about the dispensaries that are popping up everywhere like Starbucks, and also the increasingly sophisticated world of growing your own.

## DISPENSARIES 101

Because they want to keep their licenses, dispensaries tend to be very serious about following regulations such as IDing all customers at the door and enforcing purchase limits. Additionally, most are cash-only businesses, as marijuana is still illegal federally, and traditional banking institutions don't want to risk a penalty by the federal government.

Once inside, you're not shopping off shelves. You speak to a budtender, who handles all the cannabis



and can guide you through the various strains and methods of ingestion. Budtenders generally expect a tip—10 to 20 percent of the sale is standard. Most dispensaries have websites where you can examine their offerings before visiting.

**THE MANY WAYS TO INGEST CANNABIS**

Laws vary from state to state regarding where one can consume marijuana. In some, users must be on private property, while in others, cannabis can be smoked wherever smoking tobacco is allowed.

But pot users have many options. Here are some of the most popular:

**Smoking** Those who want to follow the classic approach can buy loose leaves to go in pipes or to roll their own joints. Or they can go for pre-rolls, which are ready to smoke when purchased.

**Vaping** In the past 10 years or so, vaping has soared in popularity because it is convenient, subtle, and typically has a less potent smell than smoking. Vapes can be small pens or larger box-like devices, but they generally work the same, using a battery to heat up a cartridge filled with cannabis oil to vaporize (as opposed to burn) the cannabis. Dispensaries sell both disposable vapes that include a cartridge and battery and reusable vapes that allow you to purchase new cartridges as they run out and recharge the device’s battery.

**Dabbing** A much more recent phenomenon, dabs are a type of marijuana concentrate. It is made by extracting the intoxicating components of the cannabis plant to create an extremely potent substance that usually looks like hard wax or resin. It is ingested by vaporizing it with a “dab rig,” which is basically a variation on a bong.

**Edibles** The variety of form can be great, ranging from brownies to drinks to ice cream, but the most common form of edible is the packaged candy. Edibles often contain multiple doses per package, so it’s very important to read the label; getting the dose wrong can put a user in the fast lane to a bad experience. Users also need to keep in mind that unlike smoking or vaping, which hit fairly quickly, edibles take anywhere from 45 minutes to two hours to take effect.

**STRAINS AND POTENCY**

There are more than 700 strains of cannabis, but the two basic groupings are indica and sativa. This refers to the species of plant, and generally sativa is said to be energizing while indica is relaxing. Hybrid strains attempt to harness the benefits of both.

In addition to the strain, cannabis labels also have a potency analysis, the percentage of various cannabinoids (compounds found in marijuana plants) in the product. The most important cannabinoids







*Many modern users opt to grow their own. Opposite: The offerings at the Harborside dispensary in Oakland, Calif., provide data on the THC and CBD concentrations in each strain.*

are THC, THCA, and CBD. THC and THCA have psychoactive effects (THCA turns into THC when exposed to heat), while CBD is not intoxicating. Essentially, products that have a higher proportion of THC will get you higher.

A note to the older user: In the past few decades, the average potency of marijuana has increased significantly. According to the Yale School of Medicine, the average THC content of cannabis seized by the Drug Enforcement Administration in 1995 was around 4 percent, while in 2017, the average potency of marijuana on the market had risen to 17 percent. New ways of consuming cannabis, such as dabs and edibles, can have an even higher THC content, some with as much as 90 percent. There's reason to tread warily here: A systematic review published in the *Lancet* in 2022 found that high-potency cannabis may raise the risk of both psychosis and addiction.

### **HAVE A GREEN THUMB?**

Depending on who you ask, growing marijuana can be as easy as letting the dandelions in your yard go

to seed or something you need a degree in botany to excel at. Cannabis plants can be grown from seeds or clones, which are cut from vegetating “mother” plants. Growers may opt for clones, as they are guaranteed a female plant (only female plants produce buds, which is what contains THC), and it offers a head start on the growing process. But seeds are easier to purchase and haven't been exposed to diseases or poor growing environments, which can be an issue with clones.

Marijuana, like any plant, requires proper light, water, nutrients, and humidity. And after the plants are harvested, the buds will need to be dried before they can be used, which will take a week or longer. Home growers can then make their own edibles, another popular DIY marijuana activity that can be pretty easy to do. There are many approaches, but the simplest begins with making cannabis-infused butter that can be used in baking, or cannabis-infused oil for gummies. The process has its complexities, but for those who master them, it means not having to visit the dispensary at all. □



# Voices of the Legal Generation

IN COLORADO, TWENTYSOMETHINGS WHO WERE AMONG THE FIRST LEGAL RECREATIONAL USERS TALKED ABOUT WHAT THE CHANGE MEANT TO THEIR LIVES.

BY YE MING

**I**N 2015, TIME SENT NEW YORK -BASED PHOTOGRAPHER Danielle Levitt to Denver to photograph cannabis smokers in their early 20s.

Over the course of a weekend, Levitt met with more than 25 smokers, with whom she and her team had connected through a number of weed clubs, bars, and advocacy organizations in the Rocky Mountain state after it became one of the first two states in the country to legalize recreational marijuana use of up to an ounce for adults.

But why would someone want to be the face of a national issue that not only draws heated debate but is federally criminalized?

“[Marijuana] is something that has improved their perspective. It is a life-changer for them,” Levitt told TIME. “Any opportunity to share that with the greater public is a fantastic opportunity.”

In addition to the pot activists’ enthusiasm, it was Levitt’s ability to connect with her subjects that enabled her to capture their unique experiences.

*Chelsey Joseph, 25.  
“Cannabis has been a safe alternative to alcohol for my recreational enjoyment. As I’ve grown, I’ve tended to stay away from alcohol in social settings and choose to use cannabis instead. This has resulted in more memories, less vomiting, and no hangovers.”*









Above: Brittany Yetter, 22. "In December 2012, I got into a car accident. It messed up my neck and my back. I thought smoking [marijuana] really helped with the pressure and pain."  
Below: Meagan Lynn McCorkle (left), 25, and Sydnee Hines, 24. McCorkle: "Marijuana has completely transformed my city and brought people from all over the world to see what we are doing here. The legalization of cannabis in both Colorado and Washington set a new tone, and people are hearing it."







Above: From left to right, Sean Chan, 23, Jordan Lenhard, 23, Kim Lefebure, 21, Ben Daily, 25, and Charles Sanchez, 52. Lenhard: "The key benefits of marijuana for me are the pain relief after long days, as well as an alcohol substitute for stress relief which significantly helps me handle my busy lifestyle." Below: Kim Lefebure, 21. "[Before marijuana was legalized], there would be some sketchy drug dealers you would get a bag of pot from, and you wouldn't know what it was, and they might not have even known either. It was just a very quick process of money transfer. Now, when you go to a dispensary, you can say, these are my symptoms, and this is what I'm looking for. What should I get? What is your advice?"











*This page: Michael Metoyer, 21. "I work for a 420 tour company, so I have a very good relationship [to marijuana], as I work with it every single day."  
Opposite: Gustin Tubbs, 24, and Savannah Kay, 23. Tubbs: "It is our growing knowledge and acceptance of this plant that has led to much more responsible usage by informed patients or consumers."*





## How to Talk to Your Kids About Pot

Whatever your approach or your personal experiences, it is important to let your children know they can trust you if they run into trouble.

BY DARLENA CUNHA

**Our government** long considered pot to be illicit and harmful, lumping it in with other potentially deadly drugs such as heroin and ecstasy. In 2024, though, federal authorities are reconsidering this long-standing position, and one 2016 government report on marijuana found that it was not, as was so often claimed for years, a “gateway drug.”

Amid this shifting landscape, many parents know that their teenagers, eagerly exploring their newfound rights to their bodies and





to pushing boundaries, taking risks, and discovering life lessons for themselves, standing rigid on this issue may win parents points on a procedural and official level, but it may well leave them in the dust in terms of their relationship with their children, the honesty and trust levels between them and what matters most to them in the world.

When I was first introduced to weed in the early 2000s, it was absolutely illegal. The line was easy for my parents: Pot was bad. Marijuana was a gateway drug. I didn't go through five years of Reagan-era DARE (Drug Abuse Resistance Education) programs for nothing, did I? With the law and educational programs in their arsenal, my parents warned me about the lifelong path to addiction in which pot use would result. They expected me to use my reasoning and logic and the skills they painstakingly taught me for self-preservation and success. Then they wiped their hands of it, secure in the knowledge that they'd done everything they could. And I went right around them.

The first time I tried the drug was 2001. I was in Hawaii, spending a few months on a coffee farm during summer break. On the side, the farm workers harvested marijuana, keeping the plants hidden from helicopter surveillance in the dense brush and shrubbery around the farm. I knew absolutely nothing about it other than it was the worst. That's as far as DARE went. So when I saw a trusted group of my peers smoking it and heralding its positive qualities, I indeed used my logic and reasoning and determined that those programs and scare tactics must be hoey.

Then I inhaled like those kids showed me, and nothing happened. So I inhaled more. And then I got the spins so bad I had to lie down for hours, unable to move. I learned for myself, the way many teenagers do, that pot wasn't for me. Until three years later, when I found myself with a large group of kids in New Orleans celebrating our brand-new adulthood during Mardi Gras.

I never told my mother.

Sometimes it's OK for kids to not tell their parents everything. What's important is that I knew my mother would always be there for me. I may not have trusted her to react the way I wanted with news of my bad decisions, but I knew I could trust her if I ever needed help.

That's where we need to concentrate as parents. If we go overboard with punishments and deterrents, we risk pushing our kids away, not in the healthy way in which I grew apart from my parents but in a more pronounced way, where we lose our connection with our kids. Teenagers need to know we're there for them no matter what. Trust and friendship are not the same. What they need is an innate knowledge that they can count on us when times get tough.

The last time I smoked marijuana was in 2007. A fully fledged adult by that point, I was reintroduced to the drug by my neighbor, who suffered from chronic pain. It was better, she explained, than the pills the doctor tried to give her. Ever afraid of becoming addicted to pain medications, she decided instead to smoke illegal marijuana. My newly formed adult mind was blown.

But perhaps it shouldn't have been. With the narcotics crisis continuing to rage and multiple agencies cautioning against "clandestinely produced synthetic opioids," the pain-relieving qualities of marijuana may prove to be a safer and more effective long-term alternative. Of course, the Drug Enforcement Administration has for years opted for the safety of tradition when it comes to pot, only relatively recently easing some of its restrictions for research institutions looking to evaluate marijuana's benefits for cancer and epilepsy patients, among others.

Given everything we know, and everything we know we don't know about marijuana, the best battle to fight will be for our kids. Protect them, honor them, and understand that we're there as a moral compass. The law isn't going to tell us what to do about pot; we have to decide for ourselves. Just like our teens will.

experiences, have been using pot. So what are we supposed to do?

We're given a wishy-washy, contradictory set of guidelines at best. We're up against not only teen peer pressure but changing state laws, a burgeoning new industry, and introductory studies that may not be enough for the government but are certainly enough for our savvy teens using the internet to educate themselves on trending issues important to them.

Given that teenagers are prone



Snoop Dogg became a wildly successful businessman while staying true to his love of weed.

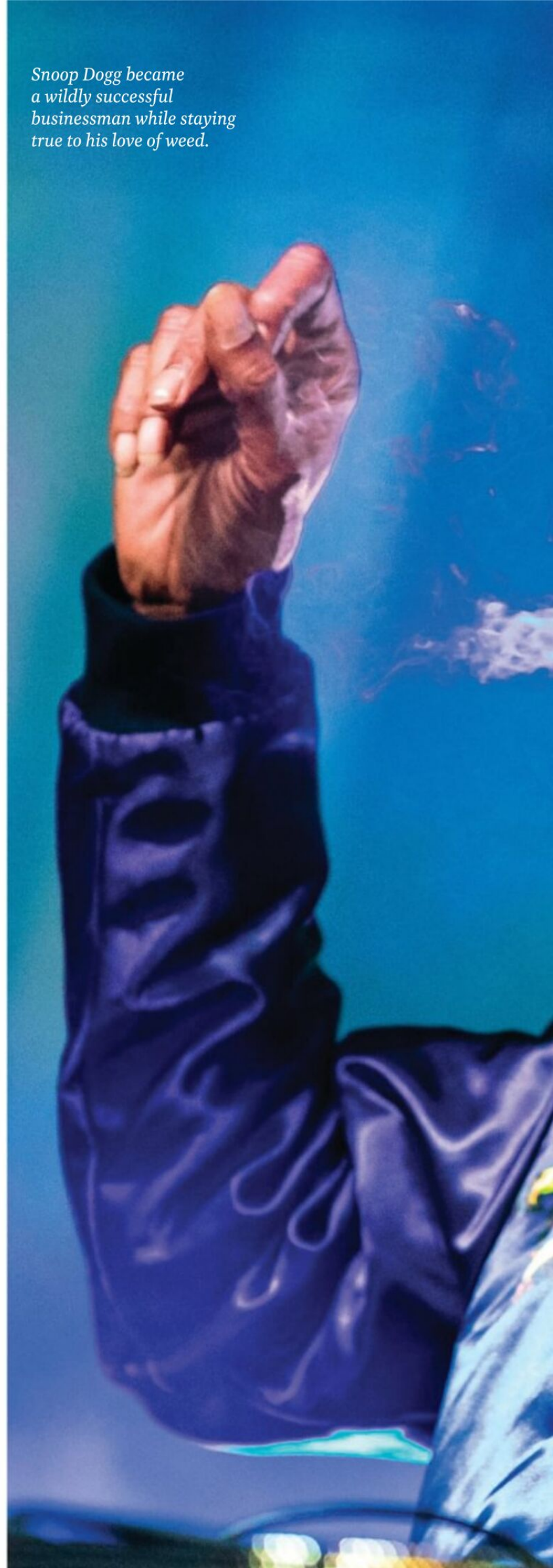
# The Stars Who Changed Perceptions of Stoners

NOTABLES FROM SNOOP DOGG TO RICK STEVES HAVE BROADENED NOTIONS ABOUT THE CHARACTER AND INDUSTRIOUSNESS OF PEOPLE WHO LIKE TO GET HIGH.

BY JED GOTTLIEB

**W**OODY HARRELSON FIRST MADE HIS name when he debuted in 1985 on the television show *Cheers*, playing a naive bartender from Indiana. It was the start of an impressively varied and long-running acting career in which he has appeared in blockbusters such as the *Hunger Games* franchise and prestige films such as *No Country for Old Men* and is still flourishing today, with eight projects either in the works or slated for release in 2024.

It might be easy to forget that Harrelson had a period where he was seen as something of a Hollywood oddball, and one reason is that he was an outspoken advocate for hemp and marijuana use before it was common for mainstream stars to speak out on the topic. And his were not just casually expressed opinions: In 1997, Harrelson attended the Golden Globes, where he was a best actor nominee for *The People vs. Larry Flynt*, wearing a suit made out of hemp. In 2003, he joined the advisory board of the National Organization for the Reform of Marijuana











*Seth Rogen's company Houseplant sells marijuana and ceramic weed paraphernalia.*

Laws (NORML). He later acknowledged that his public stances carried a professional cost. “I don’t know that it’s a helpful thing as an actor to be the poster boy for the marijuana movement,” Harrelson reflected in an interview with *Playboy* in 2009. “Certainly the media uses it a lot to marginalize.”

Cut to 2024, though, and those old margins look a lot like the center. Now celebrities can talk about pot hits without taking a reputational hit. Since breaking big, Rihanna has celebrated her love of blunts by posing with them in social media posts,

often while wearing marijuana-themed fashions. Instead of being ostracized, she became the youngest self-made billionaire woman in the U.S. in 2022. The then 34-year-old megapop star and Fenty Beauty CEO was worth \$1.4 billion at the time.

Many celebrities have even become drug dealers—or, to use the modern term, marijuana entrepreneurs. In 2022, when Harrelson and his co-owners opened a new pot dispensary in West Hollywood called The Woods, he was not pushing the envelope but joining a crowd that includes Jim Belushi, Jay-Z, and Bella



Thorne. The top-selling celebrity-associated pot brand in California, called Cann, is backed by none other than Gwyneth Paltrow.

But Snoop Dogg tops everyone when it comes to redefining what it means to be a stoner.

Snoop rose to fame on profane gangsta rap that championed getting high as a way of life. Over 30 years, he's released two dozen LPs and sold more than 35 million albums. He's also appeared in dozens of films and TV commercials, for Corona, Tostitos, Solo Stove fire pits, car insurance, and more. He co-founded a venture capital firm focused on the cannabis industry. And, naturally, he markets his own strains of marijuana: In 2015, he was the first major celebrity with his own branded line of pot.

"I helped make this business famous before it became legal," he told the *New York Times*. "The jazz musicians, the Bob Marleys, the Cheech and Chongs, the Willie Nelsons. All of those guys laid the foundation down. I just continued what they were doing and put a little bit more spice on."

A relentless entrepreneur and king of the million-dollar side hustle, Snoop is a workaholic who has stayed true to his love of weed. In 2021, when the *Times* spoke with him about his business acumen via Zoom, Snoop smoked a gargantuan blunt on camera during the interview.

Snoop, Seth Rogen, and *Broad City* star Ilana Glazer have demonstrated that you can be a stoner and have a strong work ethic—not to mention profit drive. Rogen's Houseplant business, which he runs with writing partner Evan Goldberg, not only sells its own weed but also a line of original ceramic paraphernalia, including a \$550 rolling tray.

"The impression of every stoner was that they're like a lazy loser, and I was anything but a lazy loser," Rogen told Bill Gates (another person who has admitted to smoking weed) on Gates's podcast, speaking of the actor's early days in Hollywood. "I was, like, creating a prolific career at the time when all I would do was smoke weed all day, every day, which is all I still do."

But the real change in attitude came with revelations that not just movie stars but people like Gates—CEOs, scientists, politicians (for more, see page 88), and PBS's favorite travel guide—have been secret stoners all along.

Tech and science gurus have been less open about usage, but we now know Apple founder Steve Jobs habitually smoked weed in the '70s, saying it made him more creative, and astronomer Carl Sagan used



## The Bard and the Bud

Did Shakespeare toke, or not toke? That is the question.

BY SARAH BEGLEY

**Some centuries-old** pipes found in the garden of William Shakespeare contain traces of cannabis, according to South African scientists who examined the relics with forensic technology.

The study, published in the *South African Journal of Science*, examined 24 pipe fragments from the town of Stratford-Upon-Avon, where Shakespeare lived. Some had been excavated from Shakespeare's garden. Using advanced gas chromatography methods, researchers detected cannabis on eight fragments—four of which were confirmed as from the Bard's garden, the *Telegraph* reports. Evidence of Peruvian cocaine was found on two others, though they were not from the same property.

Though some of his readers have long combed his work for what they see as coy references to drug use, there is no proof that Shakespeare himself used drugs, and earlier studies by the same South African research team, led by anthropologist Francis Thackeray at the University of the Witwatersrand in Johannesburg, have attracted the derision of many Shakespeare scholars.

The study, from 2015, encourages them to reconsider the evidence, however. It reads, "Literary analyses and chemical science can be mutually beneficial, bringing the arts and the sciences together in an effort to better understand Shakespeare and his contemporaries."



it to help him focus on work. It may be a while until the Surgeon General rips a bong hit with Snoop, but it could happen. After all, quintessential nerd Bill Nye the Science Guy is a strong advocate for legalizing and researching cannabis.

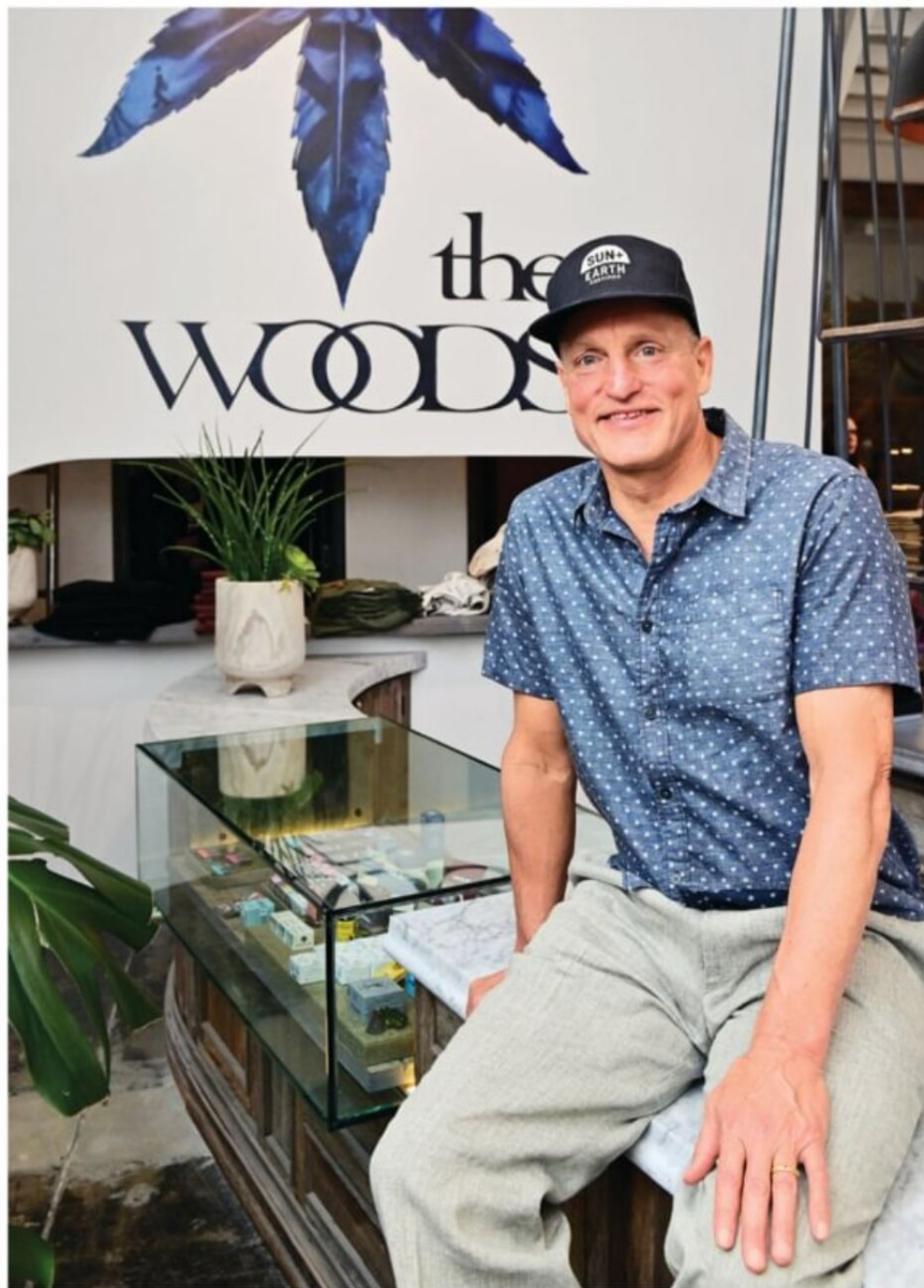
Nye cheering on legalization would have been unfathomable in the last century. But nobody shatters the stoner stereotype like PBS staple Rick Steves. Like Harrelson, he is a NORML leader, currently the chairman of the board of directors.

Steves is the wholesome, amiable, dorky host of PBS's long-running *Rick Steves' Europe*. He's also a smoker who doesn't let his enjoyment of the drug define him. "I never brag about smoking pot," he told the *Times* in 2018. "I smoke a little bit because it's fun, but it is not a big part of my life."

But he has let his image redefine the face of the typical marijuana user, and, more important to Steves, the legalization advocate. (Steves never forgets that legalization is a social justice issue at its core.)

"It is boring for me to talk at a Hempfest rally, because you're preaching to the choir," he said. "What I want to do is go to churches and rotary clubs and different organizations and share my beliefs.... It is fun to catch people a little bit by surprise that way."

Celebrity openness about marijuana use has not only busted stereotypes and promoted acceptability but moved the conversation to a more mature place. Harrelson, still a staunch advocate, has talked about the downsides of marijuana use. For a while he quit smoking completely, saying he felt like he was overdoing it. "I wanted to be emotionally available—to my family, to my friends," he explained in a 2023 interview on that folksiest of network news shows,



*Woody Harrelson in 2022 at the opening of his marijuana dispensary The Woods in West Hollywood.*

*CBS Sunday Morning*. "It was a good experiment."

Harrelson's experiment ended, he said, courtesy of another proud user of marijuana: Willie Nelson. This is the country singer who in 1980 got high on the roof of the White House and at his 90th birthday celebration in April 2023 sang "Roll me up and smoke me when I die." Harrelson and Nelson had been hanging out together, and, after turning down repeated offers from Nelson, Harrelson finally succumbed during a poker game and took a hit Nelson was offering. After Harrelson inhaled, Wilson said, "Welcome home, son."

It is a house that is getting more crowded all the time. □



# How LSD Cemented Willie Nelson's Relationship with Pot

A regrettable fling with the intense psychedelic—right before a concert!—helped him realize which drug he would rather grow old with.

BY SARAH BEGLEY

**It's no** secret that Willie Nelson is fond of weed. He even has his own brand of recreational marijuana—Willie's Reserve.

But pot is not the only drug the "On the Road Again" singer has tried over the years. In his 2015 memoir, *It's a Long Story: My Life*, Nelson recounted an experiment with LSD in the '70s. "Could I expand my mind?" he asked himself when deciding to take the plunge. "Could I lose my ego?"

He may not have lost his ego, but he did lose his grasp on reality. Nelson accidentally took triple the amount his "hippie

friend" recommended, just two hours before a concert, and had to perform while tripping.

"As I started singing, my voice sounded like it was coming from inside a cave," Nelson wrote. "Didn't sound like my voice at all.... The flickering lights out in the crowd took the form of fiery figures. Was I freaking? Were there demons out there?"

Once he was off stage, he felt even more panicky, but he realized that he had to relax as much as possible, because his trip would only worsen with anxiety. When it was over, he decided he would

never drop acid again.

"[E]xperimenting with LSD convinced me that I had already found the high that worked for me," Wilson wrote. "My love affair with pot became a long-term marriage. It was, by far, the smoothest of all my marriages. Pot and I got along beautifully. Pot never brought me down, never busted my balls. Pot got me up and took me where I needed to go. Pot chased my blues away. When it came to calming my energy and exciting my imagination, pot did the trick damn near every time I toked."

If it ain't broke, don't fix it.

*A well-stocked Willie Nelson lit up while relaxing at home in Texas.*





# The Highest Office, Indeed

Bill Clinton said he ‘didn’t inhale’ three decades ago—but the history of U.S. presidents and drugs is much older. And more recent.

BY OLIVIA B. WAXMAN

**On March 29, 1992,** Bill Clinton said something surprising during his ultimately successful campaign for the presidency. In response to what TIME called a “surgically worded question,” the then Arkansas governor admitted he’d tried pot in his 20s as a Rhodes Scholar at the University of Oxford.

“I’ve never broken a state law,” he said at a candidates’ forum. “But when I was in England, I experimented with marijuana a time or two, and I didn’t like it. I didn’t inhale it and never tried it again.”



At the time, comedian Johnny Carson joked, “That’s the trouble with the Democrats. Even when they do something wrong, they don’t do it right.”

The admission made headlines and was seen as a sign of the times—in previous campaigns, some noted, the remark would have been the end of the road—but Clinton was far from the first president to have used drugs. Though claims that various 19th-century presidents smoked marijuana aren’t uncommon, these accounts are likely dubious because trade hadn’t opened yet to Cuba and the Caribbean, so “whatever hemp was in the U.S. at the time wasn’t strong and was probably just used to make clothes,” says Brian Abrams, author of *Party like a President: True Tales of Inebriation, Lechery and Mischief from the Oval Office*. Still, the history of U.S. presidents using drugs that we’d recognize today as illicit goes back all the way to the beginning.

George Washington relied on laudanum, an opiate, to deal with chronic pain. Washington’s treatment was common at the time, but the substance was addictive and caused a high. “His painful, ill-fitting dentures made Washington’s mouth bulge out; he clamped his lips to hold them in,” according to the Smithsonian. “Supposedly, he lost his teeth by cracking Brazil nuts between his jaws. By the time Washington became president, he had only one natural tooth left. One set of dentures was carved from hippopotamus tusk and had a space to accommodate the single

tooth. This caused almost constant pain, which he tried to ease with laudanum.”

Some of the drugs used by presidents were weirder. For example, Abraham Lincoln was known to take a “blue mass” or “blue pill”—a medicine that scientists say was really “finely dispersed elemental mercury” that was commonly prescribed in the 19th century to treat melancholy, or “hypochondriasis.” Researchers say Lincoln likely suffered from mercury poisoning. According to Norbert Hirschhorn, the lead author of a study on Lincoln and mercury poisoning, during the 1850s, Lincoln was known to go from bouts of “jumping up suddenly and running out of the house for no reason” to bursting out into “inappropriate laughter.” After his inauguration, once Lincoln realized that the mercury appeared to be causing his mood swings, he stopped taking the drug.

By the 20th century, the drugs in question bore a lot more similarity to those used recreationally and medicinally today.

According to Abrams’s book, at the height of the Cold War, John F. Kennedy reportedly smoked three marijuana cigarettes with a mistress, but “when offered a fourth joint, the president begged off,” saying, “Suppose the Russians did something now.” During the 1960 presidential campaign and his time in office, Kennedy—who suffered from consistent and extreme pain—is also said to have gotten hooked on narcotics administered for





*Above: Clinton and Bush were both dodgy about past drug use, while Obama was up front about his. Opposite: Lincoln took mysterious blue pills, while Kennedy is said to have liked a joint.*

medicinal purposes by a doctor who practiced on Manhattan's Upper East Side. The doctor was known as "Dr. Feelgood" and was also known for doling out amphetamine to celebrity patients. When Kennedy's brother Robert suggested he lay off them, JFK said, "I don't care if it's horse piss. It works." (Dr. Feelgood's license was revoked in 1975.) A doctor who reviewed JFK's medical records in 2002 concluded that he was "being treated with narcotics all the time," and that's why he was constantly tired.

In the post-Clinton years, things have continued to evolve, with a slow move to greater candor.

George W. Bush had a religious awakening while he got sober at age 40, but he had a wilder lifestyle prior to that change. According to Abrams's book, while Bush was living in an apartment in Houston

in the 1970s, he drank and did cocaine at a nightspot called the Mileau.

Bush, like Clinton, was less than enthusiastic about going public with that part of his life. In 2005, audio leaked of a conversation that Bush appeared to have with an aide about how to avoid questions about past drug use, insisting that he "wouldn't answer the marijuana question" because he didn't want to have a kid say, "President Bush tried marijuana, I think I will."

Later on the tape, Bush says that if he's asked about cocaine, "rather than saying no," he would "draw the line and look people in the eye and say, you know, 'I'm not going to participate in ugly rumors about me and blame my opponent,' and hold the line."

By the time Barack Obama came to office in 2009, the social

change that Clinton's admission was said to have heralded had clearly taken effect. It was no secret during his term that, as a teen at Hawaii's Punahou School, Obama had been a member of the "Choom Gang" and had even thanked his drug dealer Ray in the yearbook. In his second memoir, *Dreams from My Father: A Story of Race and Inheritance*, the 44th president said he did drugs to take his mind off of his strained relationship with his father, who lived in Kenya: "Pot had helped, and booze; maybe a little blow when you could afford it."

Donald Trump, meanwhile, has claimed to have never used marijuana or any other drug. Joe Biden also says he is not a pot user, but when Kamala Harris, his vice president, was asked if she had ever tried marijuana, she joked, "I have...and I did inhale."



**UP IN SMOKE** 1978

The godfathers of pot cinema, Cheech Marin (right) and Tommy Chong—known better, of course, by their noms de cinema, Cheech and Chong—ultimately made 10 movies together in which marijuana somehow plays a role.



# From Chong to Kumar: Stoner Cinema Through the Years

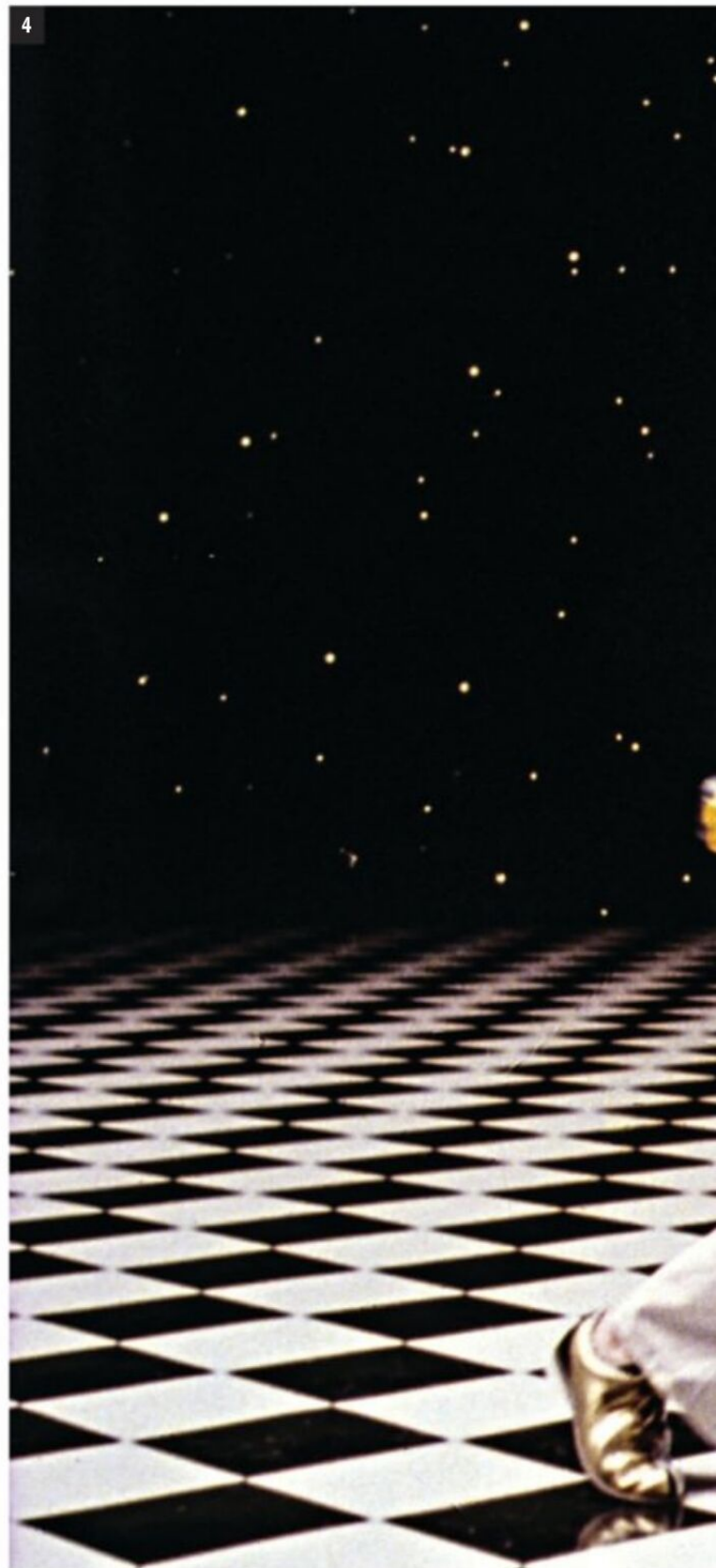
WHY IS A SETH ROGEN MOVIE NOT ON THE LIST? BECAUSE CHOOSING AMONG *PINEAPPLE EXPRESS*, *THIS IS THE END*, AND *SAUSAGE PARTY* WAS JUST TOO HEAVY OF A DECISION.

BY NICHOLAS HEGEL MCCLELLAND













**1 EASY RIDER** 1969

In the seminal biker film, Peter Fonda and Dennis Hopper sell some weed in California, then take off to New Orleans in search of America and themselves. They blow it.

**2 FASTTIMESAT RIDGEMONT HIGH** 1982

Sean Penn blazes as ultimate pothead Jeff Spicoli in this story based on reporting about high school life by writer Cameron Crowe.

**3 FRIDAY** 1995

Craig and Smokey, played by Ice Cube and Chris Tucker, raid the fridge during a bout of the munchies in this pot-laced movie about two guys and their adventures on a Friday afternoon in L.A.

**4 THE BIG LEBOWSKI** 1998

Jeff Bridges “abides” as Jeffrey “The Dude” Lebowski, a white-Russian-drinking, cannabis-toking slacker in this Coen Brothers tale of mistaken identity.





**1 HAROLD & KUMAR GO TO WHITE CASTLE** 2004  
The plot of this surprise hit kicks off when Harold (John Cho, at right) and Kumar (Kal Penn) get a serious case of the munchies.

**2 TED** 2012  
Mark Wahlberg plays an underachieving pot lover whose closest companion is a hilariously foul-mouthed talking teddy bear.

**3 THE BEACH BUM** 2019  
Matthew McConaghey, who broke out as a stoner in *Dazed and Confused* (1993), was back in the groove playing a pothead poet with co-star Snoop Dogg in the Florida Keys.



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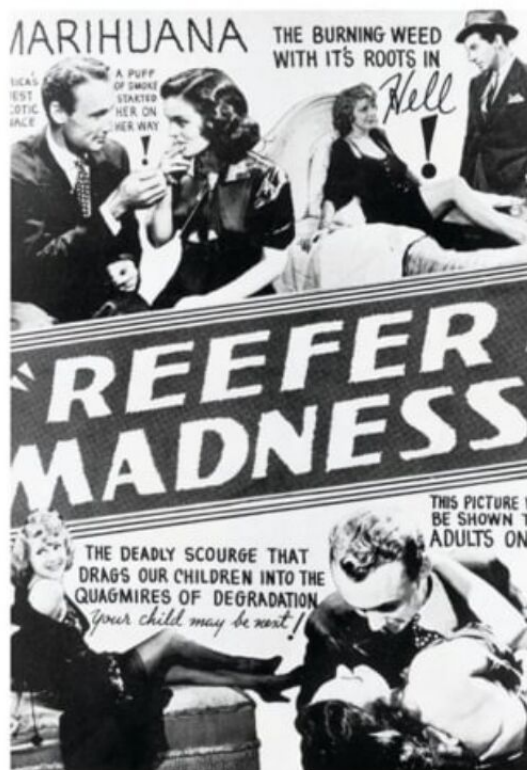


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*The 1936 film Reefer Madness helped give pot a bad name.*

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# Applications Are High Right Now

COLLEGES IN STATES WHERE POT IS LEGAL  
SEE A TEMPORARY BOOST.

*Celebrating 4/20 Day  
on the campus of the  
University of California,  
Berkeley in 2023.*



It seems some kids have more on their mind than academic rigor when choosing a college. According to a study published in *Contemporary Economic Policy* in December 2023, when states legalize recreational marijuana, it results in an increase in college applications by about 5.5 percent the next year. The boost is biggest at large state schools, where applications jumped a whopping 54 percent, but smaller private schools saw increases, too. The study did not show an increase beyond that first year, though, suggesting that the high wears off over time.









## The Many Ways of Cannabis

Some see it as a miracle drug. Others warn of its risks. This much is clear: The country is changing its cannabis laws, and cannabis is changing the country.

