

Nation

Driving While High

Deadly crashes involving pot are on the rise. But stopping stoned drivers won't be easy

BY ELIZA GRAY • PHOTOGRAPH BY GRANT CORNETT FOR TIME





HERE'S A DISPATCH FROM THE hazy frontier of law enforcement: On an afternoon in June, Joe Golec, a 32-year-old cop from Northampton, Mass., was making a mock DUI evaluation in a sunny classroom at Salem State University with a group of other cops from around New England. Dressed in khakis and a T-shirt, he introduced himself to Kristina, a 39-year-old waitress dressed in jeans and a white top, one of several volunteers who had spent the afternoon drinking so that Golec and the other cops could practice their sobriety-test skills.

Golec's first task was to take Kristina's vital signs. He asked her how much she had slept the night before, what she had eaten that day and how much she'd had to drink—two beers, she told him, about two hours before. Wearing surgical gloves, he took her pulse and measured her blood pressure, then repeated his observations out loud. He asked her to walk a straight line and balance with one foot raised in the air. He told her to close her eyes, tilt

her head back and tell him when 30 seconds had passed.

What made Golec's job harder? He wasn't only trying to figure out if Kristina was drunk. He was looking to see if she was stoned.

Police and public-safety experts in the U.S. have spent decades getting drunk drivers off the roads. They have made vast progress: based on random stops, the number of drivers with some alcohol in their system was 35.9% in 1973. By 2007, the figure had fallen to 12.4%, according to the Department of Transportation. But spotting drivers who are high presents a more complex challenge for cops charged with keeping the roads safe. And it has become harder now that roughly a third of all Americans are living in states that have decriminalized marijuana. It is a job to which few if any of the old rules apply.

To put it simply: proving that someone is driving stoned is a thornier problem than determining that a driver has had too much to drink. The body metabolizes pot in a way

that makes it nearly impossible for scientists to agree on an appropriate legal limit for motor-vehicle operation, let alone come up with a toxicological test—like a simple breath-alcohol test—to measure how much a driver has inhaled. While it would seem obvious that driving while stoned is a bad idea, there isn't enough evidence to prove it. Partly because of the roadblocks that years of illegality have posed, there is a dearth of scientific research on exactly how pot impairs driving and precisely how risky it is.

But it is no surprise that solving the problem is a priority for public officials, since there is evidence to suggest that driving high is a real danger. From 1999 to 2010, during a period of widespread decriminalization, the rate of drivers who died in crashes with marijuana in their system tripled, from 4% to 12%, according to a review of some 23,591 driver deaths in six states. The data does not show whether marijuana caused those crashes, but it does tell us that the number of drivers on the road with pot in their system has been rising fast and at the very least correlates with mortality. It seems, at least for people at the wheel, there may be such a thing as being too mellow.

Defining a Legal Limit

THE PROBLEM OF IMPAIRED DRIVING goes all the way back to the repeal of Prohibition in 1933. Americans saw a spike in automobile accidents due to drunken driving, prompting intoxication research that established 0.15% as the acceptable limit for alcohol in the blood while driving. Drunk-driving laws proved hard to enforce at first, with cops forced to rely on subjective signs like alcohol on the breath or a flushed face, but that changed in 1954 with the invention of the Breathalyzer, a hand-held machine that could calculate alcohol in the blood by measuring vapors in the breath. Thanks to activism from groups like Mothers Against Drunk Driving, it is now illegal in all 50 states to drive with a blood-alcohol level of 0.08% or above. Police officers commonly use breath tests on the roadside, and today toxicological results have mostly taken the place of subjective police testimony in court.

The body's relationship with alcohol is straightforward: as your blood-alcohol content rises, you get drunker, and as it declines, you sober up. While tolerance can alter the effects—at a 0.08% blood-alcohol level, someone who rarely drinks

How Dope Affects Driving

TIME talked to Dr. Marilyn Huestis, a lead marijuana researcher at the National Institute on Drug Abuse, to assess key side effects of driving while high.

TAP BUTTONS FOR MORE

Reduced awareness

Brain imaging shows that it's harder for people who are high to focus on several things at once, such as a changing stoplight, an approaching bicycle and a car signaling a turn.

Hallucinations

Research is sparse, but Huestis says pot-related cases can happen and are an "underappreciated" threat on the road.

Limited vision

"It's harder to see events in your periphery," says Huestis, referring to the tunnel-vision effect of pot, which impairs drivers' ability to recognize obstacles to their far left and right.

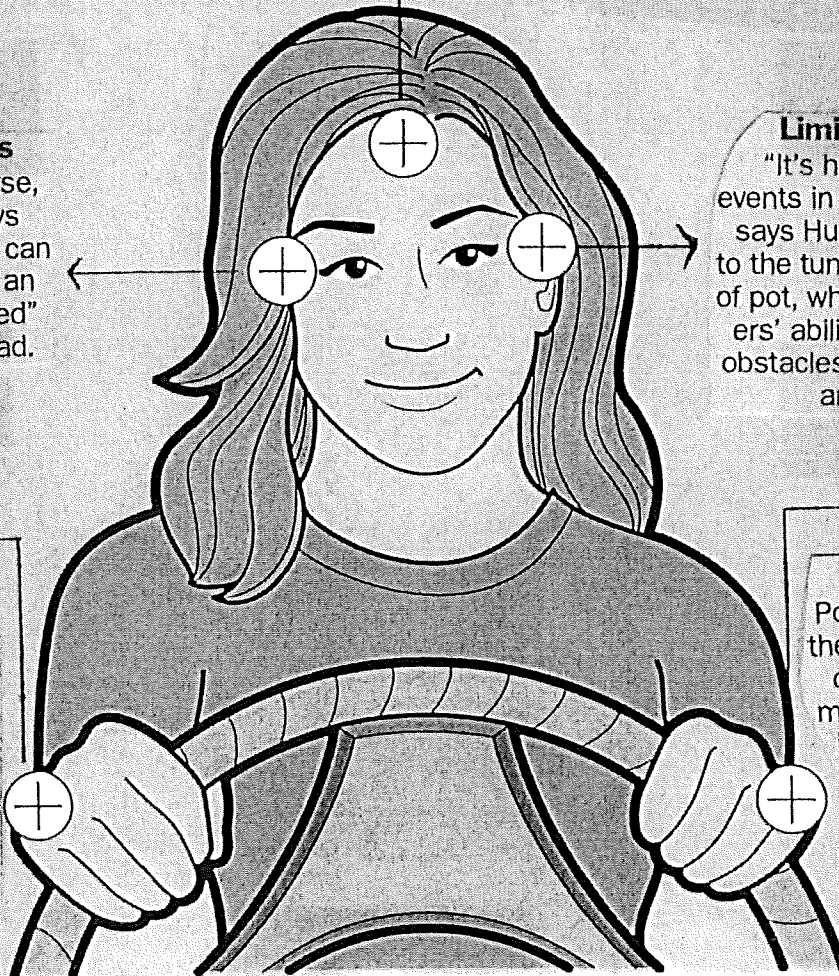
Slower decisions

Being high can impair users' executive function and problem-solving ability. That makes it harder for drivers to make a smart choice—do I swerve or slam on the brakes?—on the fly.

By Sam Frizell

Sluggish reflexes

Pot can negatively affect the parts of the brain that coordinate and initiate movement, which makes it tougher to physically control a car.



is likely to seem drunker than a booze hound—the science says that at 0.08%, all people are impaired to some degree in the skills they need for safe driving.

With marijuana, it is not so simple. When you smoke pot, the psychoactive ingredient, THC, spreads throughout your body but leaves your blood quickly as it is absorbed

by your fatty tissues and brain, so that the amount of THC in the blood is not a good indicator of impairment. It is even possible to have less THC in your blood when the effects of pot are at their peak, usually about 10 to 30 minutes after your last puff. A recent study of 1,046 drivers in New Zealand who were killed in car accidents showed that, counter-intuitively, drivers with lower levels of THC in their system were actually more likely to be responsible for a crash.

The way the body breaks down pot means that scientists have not been able to agree on a level of THC that causes impairment. In the 1980s, when the National Institute on Drug Abuse (NIDA) held a summit to do just that, the task proved too daunting. "We had a room of toxicologists and nobody could come up with a number," recalls J. Michael Walsh, a substance-abuse consultant and former NIDA researcher. Thirty years later, little has changed, leaving cops, prosecutors and users looking for measuring sticks. "Our society wants a black-and-white solution: 'This is a number. If you are over it, you are impaired.' It's a little clearer with alcohol. With marijuana, it's less clear," complains Mason

Tvert, a spokesman at the Marijuana Policy Project in D.C. "People are trying to fit marijuana into an alcohol box, and it doesn't fit."

The body's metabolism of marijuana also makes it harder to equip law-enforcement officers with a toxicological test that can give an accurate measure of impairment when the driver was on the road. As anyone who has smoked pot and taken a drug test for work knows, urine tests can detect marijuana for days—even weeks—after the last puff, especially if you are a frequent smoker. Fat stores THC, and as it trickles out of those tissues over the following days, it is converted into a metabolite that is detectable in urine. That makes urine tests a less than ideal measure of someone's intoxication level when they were driving. THC disappears from blood quickly as it is absorbed in the brain, making blood tests a more reliable measure of recent use but not a great correlate of impairment. Blood tests are also invasive and logistically challenging—they can require a trip to the hospital or a telephonic search warrant from a judge, creating a lag between the time the driver was on the road and the blood test, leading cops to under-

estimate the amount of THC in the blood when the person was driving.

These challenges have made it hard for state legislators to write laws that are fair or effective. It is illegal to drive under the influence of marijuana in every state. The question is: How do you prove the driver was under the influence? A handful of states—Pennsylvania, Montana, Washington, Nevada, Ohio and Colorado—have set a numeric limit for THC in the blood, ranging from 1 nanogram (a billionth of a gram) of THC per milliliter of blood to 5 nanograms. States are in a quandary: set the limit too high, like the 5-nanogram limit in Washington, and Dr. Robert DuPont, president of the Institute for Behavior and Health, will tell you it's a "license to drive stoned." Set it too low—like the zero-tolerance policy for THC adopted in Wisconsin and 10 other states—and marijuana lobbyists will accuse you of convicting someone who might have last smoked a month ago. Nevada and Ohio have split the difference with a lower limit for THC found in blood and a higher one for metabolites found in urine, but such distinctions just underscore the confusion.

Adding to the screening contro-

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versy is a more basic debate. Scientists don't even agree on the level of risk that marijuana poses to drivers who are high. Marijuana reduces motor coordination, slows reaction time and impairs decisionmaking, according to NIDA. Studies have also suggested that marijuana may impair peripheral vision and the ability to concentrate, two vital skills at the wheel. And yet the body of scientific work on marijuana's effect on motor-vehicle operation is small, and even then the results are all over the map. Some studies show that marijuana brings no extra risk of crash, while others show that it doubles the risk. Alcohol, by contrast, increases by 13 times the

risk of being killed for drivers ages 21 to 34.

Primitive Tells

OTHER NATIONS ARE GROPING FOR legal and medical standards too. New Zealand uses a system that combines subjective signs of impairment with a zero-tolerance policy. If—and only if—a Kiwi driver fails the field sobriety test, any amount of the drug in his blood is illegal. It's an interesting idea that might help address cases in which a driver has used marijuana and alcohol in small amounts that would have little impact on their own but can be deeply intoxicating when combined.

Educating the public about the dangers of driving while high will help. Many Americans don't know that smoking pot can impair their driving or that it is illegal to drive while high. According to the police, in late August, Pittsburgh Steelers running back Le'Veon Bell told the cop who pulled him over in Pennsylvania, "I didn't know you could get a DUI for being high." (Bell learned fast. He is now facing a DUI charge and a possible two-game suspension.) Colorado has started a TV advertising campaign to deter the practice. In one ad, a long-haired man

slowly presses a button on his backyard gas grill over and over, looking deeply confused about why it won't start. "Grilling high is now legal," the tagline reads. "Driving to get the propane you forgot isn't."

Until those campaigns start working, cops like Golec will have to rely on what may seem like primitive tells. Golec knows a stoned driver tracking a pencil across her face would struggle to keep an eye from wandering. Poor judges of time, most pot-impaired drivers would overestimate the passage of 30 seconds. The sobriety test is far from perfect, but for now, said an instructor in Golec's course, "this is the only game in town."

Technology may come to the rescue. A retired Canadian police officer and a physician have teamed up to create a new Breathalyzer that will detect marijuana use in the past two hours, a decent measure of impairment since pot's effects are usually felt for about two to three hours after use. Co-developer Dr. Raj Attariwala says the technology will get more precise as legalization spurs research. "In the 1970s, we didn't know a lot about alcohol either, so that's basically where we are," he says. "We are on the cusp. We've got a lot to learn." ■