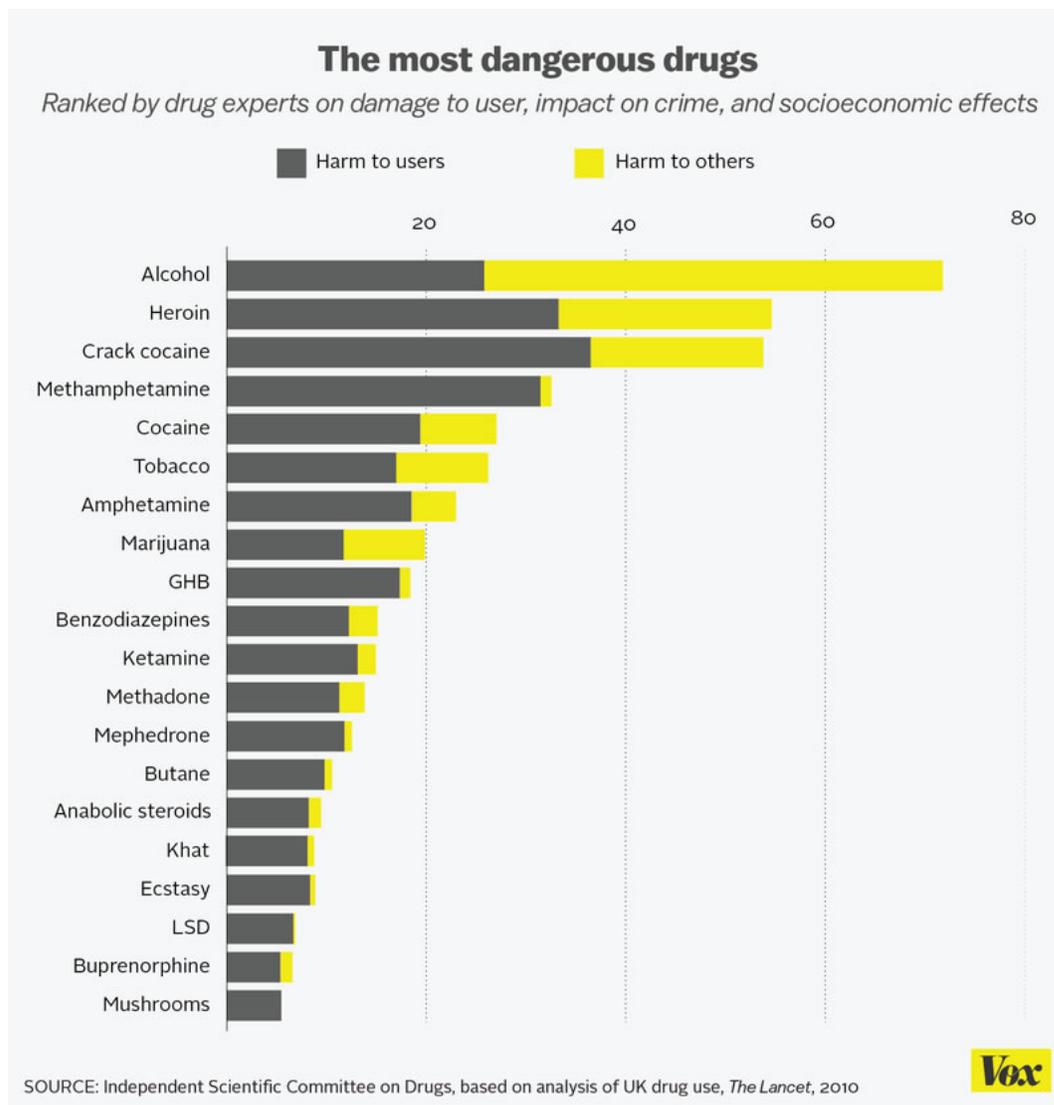


The 3 deadliest drugs in America are all totally legal

Updated by [German Lopez](#) on November 10, 2015, 9:40 a.m. ET [@germanlopez](#)
german.lopez@vox.com // [Javier Zarracina/Vox](#)

As the US debates drug policy reforms and [marijuana legalization](#), there's one aspect of the [war on drugs](#) that remains perplexingly contradictory: Some of the most dangerous drugs in the US are legal.

Don't believe it? The available data from the Centers for Disease Control and Prevention (CDC) shows [tobacco](#), [alcohol](#), and [opioid-based prescription painkillers](#) were responsible for more direct deaths in one year than any other drug. The chart above compares those drug deaths with the best available data for cocaine, heroin, and marijuana deaths.



Now, this chart isn't a perfect comparison across the board. One driver of tobacco and alcohol deaths is that both substances are legal and easily available. Other substances would likely be far deadlier if they were as available as tobacco and alcohol. And federal data excludes some deaths, particularly less-direct illicit drug deaths, which is why the chart focuses on direct health complications for all drugs.

Deaths also aren't the only way to compare drugs' harms. Some drugs, such as alcohol and cocaine, may induce dangerous behavior that makes someone more predisposed to violence or crime. Other drugs like psychedelics may trigger underlying mental health problems or psychotic episodes. When evaluating the overall harm caused by drugs, all of these factors should be taken into account.

But the high total number of deaths is still a major concern for public health policy — and, according to experts and researchers, lawmakers could do more to curb deaths caused by the three deadliest drugs.

1) Tobacco

Behold, the deadliest substance in America.

When it comes to deadliness, no single substance comes close to tobacco. To put its risk in perspective, more Americans die from tobacco-caused health problems like lung cancer and heart disease than from reported drug overdoses, traffic accidents, and homicides combined.

The chart at the top of this article actually understates the number of tobacco deaths, since it only considers the most direct causes of deaths and excludes secondhand smoking, perinatal conditions, and residential fires.

Overall, cigarette smoking is linked to one in five deaths in the US each year, according to CDC estimates for average annual fatalities based on deaths between 2005 and 2009. Nearly 42,000 of the total 480,000 deaths from smoking are caused by secondhand smoke.

US tobacco use has greatly declined in the past several decades, although nearly one in five high school students and adults still smoked cigarettes in 2011. Experts attribute the decline to various factors, including education campaigns, mandatory warning labels, public and workplace smoking bans, and higher taxes on tobacco products. Continuing these efforts, public health officials hope, will continue pushing down the rate of smoking in the US. But states could also take additional steps, like increasing the smoking age

2) Alcohol

Alcohol-induced health problems, such as liver disease, led to more than 29,000 deaths in 2013. But that actually undercounts the number of deaths caused by alcohol: When

including other causes of death like drunk driving and homicides, the toll rises to 88,000 per year.

Even this higher number may understate the more general risk of alcohol. A previous analysis, led by British researcher David Nutt and published in *The Lancet*, took a comprehensive look at 20 of the world's most popular drugs and the risks they pose in the UK. A conference of drug experts measured all the factors involved — mortality, other physical damage, chance of developing dependence, impairment of mental function, effect on crime, and so on — and assigned each drug a score. They concluded alcohol is by far the most dangerous drug to society as a whole.

What makes alcohol so dangerous? The health effects of excessive drinking and drunk driving are two obvious problems. But there are other major issues rooted in alcohol-induced aggression and erratic behavior: injuries, economic productivity costs, family adversities, and even crime. (Alcohol is a factor in 40 percent of violent crimes, according to the National Council on Alcoholism and Drug Dependence.)

Still, *The Lancet's* report has come under some major criticisms. Although drug policy experts generally agree that alcohol is dangerous — and definitely more dangerous than marijuana — they argue the report misses some of the nuance behind each drug's harms. For one, it doesn't entirely control for the availability of these drugs, so it's possible heroin and crack cocaine in particular would be ranked higher if they were as readily available as alcohol. And the findings are based on the UK, so the specific scores would likely differ to some extent for the US — particularly for meth, which is more widely available in the states.

Alcohol is definitely more dangerous than marijuana

To show the Nutt analysis's flaws, Jon Caulkins, a drug policy expert at Carnegie Mellon University, gave the example of an alien race visiting Earth and asking which land animal is the biggest. If the question is about weight, the African elephant is the biggest land animal. But if it's about height, the giraffe is the biggest. And if the question is about length, the reticulated python is the biggest.

"You can always create some composite, but composites are fraught with problems," Caulkins said. "I think it's more misleading than useful."

The blunt measures of drug harms present similar issues. Alcohol, tobacco, and opioid painkillers are likely deadlier than other drugs because they are legal, so comparing their aggregate effects to illegal drugs is difficult. Some drugs are very harmful to individuals, but they're so rarely used that they may not be a major public health threat. A few drugs are enormously dangerous in the short term but not the long term (heroin), or vice versa (tobacco). And looking at deaths or other harms caused by certain drugs doesn't always account for substances, such as prescription medications, that are often mixed with others, making them more deadly or harmful than they would be alone.

Still, experts acknowledge, it's clear alcohol is dangerous and deadly. To curb the deaths and risks linked to alcohol, experts often suggest tighter regulations, taxes, and more education. A [previous analysis](#) by the RAND Corporation found that states that sold alcohol through tightly regulated, state-run establishments kept prices higher, reduced access for youth, and decreased drinking overall. And [studies](#) show that higher alcohol taxes could reduce consumption and, as a result, the problems the drug causes.

3) Prescription painkillers



Education Images/UIG via Getty Images

These can relieve pain, but they can be dangerous — especially when paired with other drugs.

Opioid painkillers have been linked to [an increase in overdose deaths](#) since 1999. These deaths frequently involve multiple drugs; [the CDC](#) found 31 percent of prescription painkiller-linked overdose deaths in 2011 were also related to [benzodiazepines](#), a legal anti-anxiety drug. Regardless, opioid deaths have gotten so bad that many government and public health officials now consider it an [epidemic](#).

Policymakers have responded to the deaths by putting tighter restrictions on the distribution of prescription painkillers and cracking down on "[pill mills](#)," or doctors, clinics, and pharmacies that dispense prescription painkillers unscrupulously or for nonmedical reasons.

Related [The prescription painkiller and heroin epidemic, explained](#)

But these crackdowns have [pushed](#) some drug users to the more potent and dangerous heroin, which is also an opioid, indicating that there's a careful balance to strike as policymakers consider more restrictions on prescription painkillers.

There's also [concerns](#) that restricting painkillers too much makes it more difficult for people to get the medicine they genuinely need for chronic, debilitating pain. A [2011](#)

report from the Institute of Medicine found that many Americans are undertreated for chronic pain. And multiple reports suggest doctors have avoided working in chronic pain treatment because the legal and regulatory hurdles are so big.

One way to reduce prescription painkiller deaths may be medical marijuana. A couple of studies have found that states that allow pot for medicinal purposes — particularly states that allow dispensaries, where marijuana is sold — have fewer prescription painkiller deaths than one would otherwise expect. Intuitively, this makes sense: Marijuana is a potent painkiller for some types of pain, so it can potentially substitute deadlier and more addictive opioids in some cases. But experts caution this field of research needs much more study to see how much of the relationship between medical pot and prescription painkillers is causation instead of correlation.

What about illicit drugs?

There's admittedly no good federal mortality data on the less direct and long-term impacts of illicit drug use. But there's reason to think the scale of overall deadliness in the chart at the top of the article wouldn't change much with additional data.

The deadliness of the harder drugs, like crack and cocaine, is severely limited in part because very few people use such substances, especially in the long term. About 0.1 percent of the US population 12 and older reported using heroin and roughly 0.6 percent reported using cocaine in the past month, a 2013 federal survey found. (This could change if the illicit drugs were legal and more accessible.)

Still, these harder drugs are dangerous. Cocaine and crack can lead to heart attack and stroke, and they can cause violent behaviors that make someone more prone to crime. And heroin poses a massive risk of deadly overdose — a risk that only gets worse as someone uses heroin more and more, according to Keith Humphreys, a drug policy expert at Stanford University.

"The main risk of cannabis is losing control of your cannabis intake"

Marijuana is more widely used, but it's never been definitively linked to direct deaths or even other medical conditions. The research suggests using marijuana during adolescence could lead to some bad outcomes, particularly worse cognitive function. But studies have failed to conclusively link marijuana to lung disease or psychosis and schizophrenia, despite concerns from critics.

Still, marijuana carries some risks. "The main risk of cannabis is losing control of your cannabis intake," Mark Kleiman, a drug policy expert at New York University's Marron Institute, said. "That's going to have consequences in terms of the amount of time you spend not fully functional. When that's hours per day times years, that's bad."

Caulkins of Carnegie Mellon University put it another way: "At some level, we know that spending more than half of your waking hours intoxicated for years and years on end is

not increasing the likelihood that you'll win a Pulitzer Prize or discover the cure for cancer."

Still, the deadliness of the legal drugs shows they're not perfectly safe, either — and the public and policymakers shouldn't assume that a substance is more dangerous to society as a whole just because it's illegal.