Can Marijuana Use Cause Death?

PRO (yes)

Thomas Geller, MD, Associate Professor of Child Neurology at the Saint Louis University Health Sciences Center, et al., wrote in their article "Cerebellar Infarction in Adolescent Males Associated with Acute Marijuana Use," published in Pediatrics in Apr. 2004:

"Each of the 3 cannabis-associated cases of cerebellar infarction was confirmed by biopsy (1 case) or necropsy (2 cases)... Brainstem compromise caused by cerebellar and cerebral edema led to death in the 2 fatal cases."

Apr. 2004 - Thomas Geller, MD ★★★★★

Liliana Bachs, MD, Senior Medical Officer at the Norwegian Institute of Public Health, et al., wrote in their article "Acute Cardiovascular Fatalities Following Cannabis Use," published by Forensic Science International in 2001:

"Cannabis is generally considered to be a drug with very low toxicity. In this paper, we report six cases where recent cannabis intake was associated with sudden and unexpected death. An acute cardiovascular event was the probable cause of death. In all cases, cannabis intake was documented by blood analysis."

2001 - Liliana Bachs, MD ★★★★★

CON (no)

Stephen Sidney, MD, Associate Director for Clinical Research at Kaiser Permanente, wrote in a Sep. 20, 2003 editorial published in the British Medical Journal:

"No acute lethal overdoses of cannabis are known, in contrast to several of its illegal (for example, cocaine) and legal (for example, alcohol, aspirin, acetaminophen) counterparts."

Sep. 20, 2003 - Stephen Sidney, MD ★★★★★

Joycelyn Elders, MD, former US Surgeon General, wrote in a Mar. 26, 2004 editorial published in the Providence Journal:

"Unlike many of the drugs we prescribe every day, marijuana has never been proven to cause a fatal overdose."

Mar. 26, 2004 - Joycelyn Elders, MD ★★★★★

Denis Petro, MD, Founding Director of Patients Out of Time, stated in his 1997 paper "Pharmacology and Toxicity of Cannabis", published in Cannabis in Medical Practice - A Legal, Historical and Pharmacological Overview of the Therapeutic Use of Marijuana:

"The estimated lethal human dose of intravenous Marinol is 30 mg/kg (2100 mg/70 kg). Using this estimation of lethal dose, the equivalent inhaled THC would represent the smoking of 240 cannabis cigarettes with total systemic absorption of the average 8.8 mg of THC in each cigarette.

Since absorption is much less than 100 percent, the amount of smoked marijuana required to reach lethality is on the order of one to two thousand..."
cases. I'm therefore not sure about how to classify those deaths.

At the time I published that study [see above] I would probably not classify [the cannabis] as primary causation because it was not broadly accepted that [a death from cannabis] could occur at all. Today I see reports coming all the time that acknowledge cannabis cardiovascular risks, and the situation may be different."

Nov. 28, 2005 - Liliana Bachs, MD ★★★★★

The Institute of Medicine published in its Mar. 1999 report titled "Marijuana and Medicine: Assessing the Science Base":

"The cardiovascular changes [from marijuana use] have not posed a health problem for healthy, young users of marijuana or THC. However, such changes in heart rate and blood pressure could present a serious problem for older patients, especially those with coronary arterial or cerebrovascular disease.

Cardiovascular diseases are the leading causes of death in the United States (coronary heart disease is first; stroke is third), so any effect of marijuana use on cardiovascular disease could have a substantial impact on public health. The magnitude of the impact remains to be determined as chronic marijuana users from the late 1960s enter the age when coronary arterial and cerebrovascular diseases become common.

Smoking marijuana is also known to decrease maximal exercise performance. That, with the increased heart rate, could theoretically induce angina, so, this raises the possibility that patients with symptomatic coronary artery disease should be advised not to smoke marijuana, and THC might be contraindicated in patients with restricted cardiovascular function."

Mar. 1999 - Institute of Medicine ★★★★★
"Marijuana and Medicine: Assessing the Science Base" (988 KB) ★★★★★

"Marijuana has been used as a medicinal herb for thousands of years, going back to ancient civilizations in Egypt, India and Africa. In all that time, up to and including the present day, there has never been a report of a fatality directly due to the consumption of marijuana.

In contrast, over 1,000 people die annually in the US from an overdose of our most common non-prescription drug, aspirin. In addition, many thousands of deaths result from the legal prescription drugs."

Nov. 15, 2001 - Bill Zimmerman, PhD ★★★★★

The U.S. Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA) published a July 2001 report from the Drug Abuse Warning Network (DAWN), Mortality Data From Dawn:

"Marijuana is rarely the only drug involved in a drug abuse death. Thus, in most cases, the proportion of marijuana-involved cases labeled as ‘One drug’ (i.e., marijuana only) will be zero or nearly zero."

July 2001 - Substance Abuse and Mental Health Services Administration (SAMHSA) ★

"No one has ever died of THC [marijuana] poisoning, mostly because a 160-lb. person would have to smoke roughly 900 joints in a sitting to reach a lethal dose."

Nov. 4, 2002 - TIME Magazine ★★★
Francis L. Young, Administrative Law Judge for the US Drug Enforcement Administration (DEA) wrote in his Sep. 6, 1988 decision in a case attempting to reschedule marijuana so that it can be prescribed by physicians:

"Drugs used in medicine are routinely given what is called an LD-50. The LD-50 rating indicates at what dosage 50% of test animals receiving a drug will die as a result of drug induced toxicity...

At present it is estimated that marijuana's LD-50 is around 1:20,000 or 1:40,000. In layman terms this means in order to induce death, a smoker would have to consume 20,000 to 40,000 times as much marijuana as is contained in one marijuana cigarette.

NIDA-supplied [National Institute of Drug Abuse] marijuana cigarettes weigh approximately 0.9 grams. A smoker would have to consume nearly 1,500 pounds of marijuana within about 15 minutes to induce a lethal response.

In practical terms, marijuana cannot induce a lethal response as a result of drug-related toxicity."

Sep. 6, 1988 - Francis L. Young ★★★