Legalizing marijuana for medical purposes continues to be a controversial topic. Currently, eighteen states and the District of Columbia have enacted laws to reclassify marijuana from a scheduled I controlled substance to a schedule that would allow physicians to legally prescribe it for approved medical conditions. The approved medical conditions for which marijuana may be used is state specific. Advocators believe that therapeutic marijuana would be an effective alternative for traditional therapies that have failed. However, since FDA-approved indications are lacking, marijuana use for medicinal purposes may be limited due to safety and efficacy issues. There are also concerns about escalated adverse effects, heightened abuse potential, and increased production/availability should legalization occur.

Marijuana, also known as Cannabis sativa or hemp, is a plant that contains cannabinoids, including ∆-9-tetrahydrocannabinol (THC), cannabidiol, and cannabinoxil. Cannabinoids are absorbed and distributed rapidly throughout the body due to their lipophilic properties. However, pharmacologic effects differ depending on route of administration (e.g., ingested, chewed, or smoked). Two types of cannabinoid receptors exist: CB1 receptors, found in the CNS as well as the lung, reproductive, and vascular endothelial tissue; and CB2 receptors, located in peripheral and immune tissue as well as retinal and microglia cells. THC is a partial CB1 receptor agonist with limited CB2 agonist activity and accounts for most of the psychological effects associated with marijuana use. THC action at the cannabinoid receptors in neural tissues or opiate receptors in the forebrain leads to indirect inhibition of the emetic center in the medulla oblongata.

Cannabis use for medical purposes dates back to 1500 BC as recorded in the Chinese Pharmacopeia, the Rh-Ya. The compound was brought to North America by Jamestown settlers in 1611 and was added to the United States Pharmacopeia in 1850. Several ailments for which it was used included neuralgia, tetanus, cholera, rabies, gout, convulsive disorders, leprosy, and incontinence. Today, cannabis has been utilized to treat muscle spasticity associated with multiple sclerosis, Crohn’s disease, or damage to the spinal cord; anorexia or cachexia associated with AIDS; nausea and vomiting associated with cancer chemotherapy; reduction of intracocular pressure in patients with glaucoma; and chronic pain.

Legalizing marijuana for medical use is a debatable topic and arguments for and against its use are prevalent. The 1999 Institute of Medicine (IOM) report, "Marijuana and Medicine: Assessing the Science Base", concluded that marijuana’s active components are effective for symptomatic relief but are not curative measures for indications such as pain, nausea and vomiting, and appetite stimulation, and should be tested rigorously in clinical trials. During the 2012 presidential candidate debate which addressed medical marijuana, President Barack Obama supported medical marijuana use for treating conditions such as glaucoma and cancer and equated prescribing marijuana to the prescribing practices of controlled substances such as morphine. Also, in a 2011 interview presented on The Kudlow Report (National Broadcasting Company), US Representative Ron Paul expressed his support for medical marijuana use and proposed that it should be
regulated similar to alcohol regulation through bill HR 2306, which allows marijuana to be removed from the list of federally controlled substances.\(^9\) In Texas, two bills have been proposed this year. Texas House Bill 184 filed by Representative Harold Dutton (D-Houston) allows for the possession of one ounce of marijuana to be classified as a misdemeanor C instead of misdemeanor B to save state expenses for courts and police arrests as well as reduce overcrowding in jails.\(^10,11\) Texas House Bill 594 by Representative Elliott Naishtat (D-Austin) allows a licensed physician to recommend medical marijuana use in patients to treat specific illness without risk of patient or physician punishment and provides patients with an affirmative defense in court, should an arrest occur.\(^11\) Alternately, Lev-Ran and cohorts\(^2\) addressed a downside of legalizing marijuana for medicinal purposes when examining the relationship between mental illness and cannabis use. In a cross-sectional study using data from over 43,000 respondents participating in the National Epidemiologic Survey on Alcohol and Related Conditions, these researchers found that patients with mental illness demonstrated significantly higher weekly marijuana usage compared to individuals without mental illness. Additionally, over a 12-month period, 72% of cannabis users were mentally ill patients, and it was estimated that these patients consumed 83% of all cannabis used by this sample population. Investigators concluded that mentally ill patients should be screened for cannabis use, and should be a key target population for prevention and treatment measures.

While somewhat effective, there are concerns about medical marijuana efficacy, safety, and purity because the FDA does not regulate plants. About fifty years ago, the potency of seized marijuana was approximately 1% THC while today, potencies may reach up to 20% THC. Due to limited regulation, marijuana can be contaminated by molds, fungi, or herbicides. In addition, legalizing marijuana for medical use will impact the practice of medicine in terms of ethical responsibility and liability. Several medical societies such as the American Psychiatric Association, the American Medical Association, and the American Society of Addiction Medicine are opposed to medical marijuana because it is not FDA-approved and is not a standardized or purified product that has sound scientific evidence.\(^3\) Marijuana is known to be the most widely abused illegal drug in the world. Because only smoked marijuana is currently available for medical use, there is fear that medical marijuana will be the gateway to legalizing recreational marijuana, which could potentially increase the number of addicted individuals.\(^3\) Patients with debilitating conditions may benefit from short-term (less than six months) smoked marijuana if all other treatment regimens have failed, symptoms are expected to be relieved by quick-onset cannabinoids, and treatment is closely assessed by a medical team and analyzed for effectiveness.\(^7,8\) Further research emphasizing evidence-based medicine as opposed to belief-based medicine is necessary to support the use of plant-derived cannabinoids in humans.

References


