

Medical Marijuana 2.0 Contact Hours

Quiz Button

Objectives:

- 1) Define marijuana and its function in the human body.
- 2) Explain the legalities of medical marijuana laws.
- 3) Understand the terminology associated with the medical marijuana industry and processes.
- 4) Indicate which medical conditions marijuana is able to treat.
- 5) Examine medical marijuana as a treatment for specific medical conditions.

What is Marijuana?

Marijuana is derived from a plant that has been used as a drug among other uses, for quite some time, millions of years in fact. When we say drug we are actually talking about the term in both traditional senses. On the one hand, marijuana is used as a recreational drug and on the other it can be used as a medicinal drug. This dichotomy has caused confusion and debate for the better part of a century that is just coming to the forefront of society during our time.

From the early 20th century up until 1996, marijuana was illegal in the United States. It is sometimes known by other names. Some are official, such as *cannabis*, which is the name of plant marijuana is derived from. Others

are slang, like "weed", "pot", or "grass". Conventional wisdom as well as the law has classified marijuana as a dangerous recreational drug in the United States for the last century. But advocates for marijuana as therapeutic remedy for a variety of medical conditions have won long-fought legal battles over the last 18 years to make marijuana a legal option for patients who suffer from these conditions. However, these legalities differ from state to state.

Marijuana has traditionally been known to stimulate appetite as well as to create a feeling of being "high" or "stoned" in those who use it. To imbibe marijuana, it can be smoked, ingested in edible foods of all kinds, as well as being vaporized and inhaled.

The Food and Drug Administration has approved a pharmaceutical called Marinol (Dronabinol) that is a man-made form of the active natural substance in marijuana, THC (delta-9-tetrahydrocannabinol). It is used by doctors to legally treat the nausea and vomiting that is caused by cancer chemotherapy. It is also used to treat weight loss and the loss of appetite in HIV/AIDS patients because like marijuana, Marinol stimulates the appetite. There is controversy as to whether Marinol also recreates the effect of being high, or intoxicated in some way. Most reports, including those from the pharmaceutical industry, indicate that it does not.

New Florida Amendment Passed November 8th, 2016

Amendment 2 added the following section to Article X of the Florida Constitution

ARTICLE X, SECTION 29.— Medical marijuana production, possession and use.

(a) PUBLIC POLICY. (1) The medical use of marijuana by a qualifying patient or caregiver in compliance with this section is not subject to criminal or civil liability or sanctions under Florida law. (2) A physician shall not be subject to criminal or civil liability or sanctions under Florida law solely for issuing a physician certification with reasonable care to a person diagnosed with a debilitating

medical condition in compliance with this section. (3) Actions and conduct by a Medical Marijuana Treatment Center registered with the Department, or its agents or employees, and in compliance with this section and Department regulations, shall not be subject to criminal or civil liability or sanctions under Florida law. (b) DEFINITIONS. For purposes of this section, the following words and terms shall have the following meanings: (1) "Debilitating Medical Condition" means cancer, epilepsy, glaucoma, positive status for human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), post-traumatic stress disorder (PTSD), amyotrophic lateral sclerosis (ALS), Crohn's disease, Parkinson's disease, multiple sclerosis, or other debilitating medical conditions of the same kind or class as or comparable to those enumerated, and for which a physician believes that the medical use of marijuana would likely outweigh the potential health risks for a patient.

(2) "Department" means the Department of Health or its successor agency.

(3) "Identification card" means a document issued by the Department that identifies a qualifying patient or a caregiver.

(4) "Marijuana" has the meaning given cannabis in Section 893.02(3), Florida Statutes (2014), and, in addition, "Low-THC cannabis" as defined in Section 381.986(1)(b), Florida Statutes (2014), shall also be included in the meaning of the term "marijuana."

(5) "Medical Marijuana Treatment Center" (MMTC) means an entity that acquires, cultivates, possesses, processes (including development of related products such as food, tinctures, aerosols, oils, or ointments), transfers, transports, sells, distributes, dispenses, or administers marijuana, products containing marijuana, related supplies, or educational materials to qualifying patients or their

caregivers and is registered by the Department.

(6) "Medical use" means the acquisition, possession, use, delivery, transfer, or administration of an amount of marijuana not in conflict with Department rules, or of related supplies by a qualifying patient or caregiver for use by the caregiver's designated qualifying patient for the treatment of a debilitating medical condition.

(7) "Caregiver" means a person who is at least twenty-one (21) years old who has agreed to assist with a qualifying patient's medical use of marijuana and has qualified for and obtained a caregiver identification card issued by the Department. The Department may limit the number of qualifying patients a caregiver may assist at one time and the number of caregivers that a qualifying patient may have at one time. Caregivers are prohibited from consuming marijuana obtained for medical use by the qualifying patient.

(8) "Physician" means a person who is licensed to practice medicine in Florida.

(9) "Physician certification" means a written document signed by a physician, stating that in the physician's professional opinion, the patient suffers from a debilitating medical condition, that the medical use of marijuana would likely outweigh the potential health risks for the patient, and for how long the physician recommends the medical use of marijuana for the patient. A physician certification may only be provided after the physician has conducted a physical examination and a full assessment of the medical history of the patient. In order for a physician certification to be issued to a minor, a parent or legal guardian of the minor must consent in writing.

(10) "Qualifying patient" means a person who has been diagnosed to have a debilitating medical condition, who has a physician certification and a valid qualifying patient

identification card. If the Department does not begin issuing identification cards within nine (9) months after the effective date of this section, then a valid physician certification will serve as a patient identification card in order to allow a person to become a "qualifying patient" until the Department begins issuing identification cards. (c) LIMITATIONS.

(1) Nothing in this section allows for a violation of any law other than for conduct in compliance with the provisions of this section.

(2) Nothing in this section shall affect or repeal laws relating to non-medical use, possession, production, or sale of marijuana.

(3) Nothing in this section authorizes the use of medical marijuana by anyone other than a qualifying patient.

(4) Nothing in this section shall permit the operation of any vehicle, aircraft, train or boat while under the influence of marijuana.

(5) Nothing in this section requires the violation of federal law or purports to give immunity under federal law.

(6) Nothing in this section shall require any accommodation of any on-site medical use of marijuana in any correctional institution or detention facility or place of education or employment, or of smoking medical marijuana in any public place.

(7) Nothing in this section shall require any health insurance provider or any government agency or authority to reimburse any person for expenses related to the medical use of marijuana.

(8) Nothing in this section shall affect or repeal laws relating to negligence or professional malpractice on the part

of a qualified patient, caregiver, physician, MMTC, or its agents or employees. (d) DUTIES OF THE DEPARTMENT. The Department shall issue reasonable regulations necessary for the implementation and enforcement of this section. The purpose of the regulations is to ensure the availability and safe use of medical marijuana by qualifying patients. It is the duty of the Department to promulgate regulations in a timely fashion.

(1) Implementing Regulations. In order to allow the Department sufficient time after passage of this section, the following regulations shall be promulgated no later than six (6) months after the effective date of this section: a. Procedures for the issuance and annual renewal of qualifying patient identification cards to people with physician certifications and standards for renewal of such identification cards. Before issuing an identification card to a minor, the Department must receive written consent from the minor's parent or legal guardian, in addition to the physician certification. b. Procedures establishing qualifications and standards for caregivers, including conducting appropriate background checks, and procedures for the issuance and annual renewal of caregiver identification cards. c. Procedures for the registration of MMTCs that include procedures for the issuance, renewal, suspension and revocation of registration, and standards to ensure proper security, record keeping, testing, labeling, inspection, and safety. d. A regulation that defines the amount of marijuana that could reasonably be presumed to be an adequate supply for qualifying patients' medical use, based on the best available evidence. This presumption as to quantity may be overcome with evidence of a particular qualifying patient's appropriate medical use.

(2) Identification cards and registrations. The Department shall begin issuing qualifying patient and caregiver identification cards, and registering MMTCs no later than nine (9) months after the effective date of this section.

(3) If the Department does not issue regulations, or if the Department does not begin issuing identification cards and registering MMTCs within the time limits set in this section, any Florida citizen shall have standing to seek judicial relief to compel compliance with the Department's constitutional duties.

(4) The Department shall protect the confidentiality of all qualifying patients. All records containing the identity of qualifying patients shall be confidential and kept from public disclosure other than for valid medical or law enforcement purposes. (e) LEGISLATION. Nothing in this section shall limit the legislature from enacting laws consistent with this section. (f) SEVERABILITY. The provisions of this section are severable and if any clause, sentence, paragraph or section of this measure, or an application thereof, is adjudged invalid by a court of competent jurisdiction other provisions shall continue to be in effect to the fullest extent possible

Marijuana and the Human Body

Marijuana gives people some feeling of intoxication, which is usually referred to as being high, or what is also referred to as stoned. This feeling has been traced to the THC content of the plant. It was only in the 1960s that scientists began to understand how marijuana makes people feel this way when they first discovered that THC was the central functioning element in marijuana. In the 1980s scientists went a step further and was able to pinpoint the parts of the brain and body that marijuana interacts with. These spots in the human body are called cannabinoid (CB) receptors and are known as cannabinoid receptor 1 (CR1) and cannabinoid receptor 2 (CR2).

Natural chemicals created within the human body known as anandamide, which has a similar chemical structure to THC and is known to be associated with bliss and pleasure, and 2-

AG (2-arachidonoyl glycerol), connect with these CB receptors in the human body. All together this is known as the endocannabinoid (EC) system, which is located throughout the human brain, impacting the communication between cells in these areas. For instance, cannabinoids can behave as a sort of braking system, making the information between cells delay or decelerate. This is how marijuana is able to impact so many different areas of the body and how they feel. It is when THC impacts the CR1 receptors that the feeling of being “high” is produced.

The Legal Issue

Starting in 1996 the United States has seen 20 states (Alaska, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, Vermont, and Washington) as well as the District of Columbia (Washington, D.C.) enact laws that make medical marijuana (also referred to as cannabis) legal on state and local levels in those states. It is either on the ballot or being considered by the governors and/or state legislatures of other states like Florida, Florida, Kentucky, Maryland, Missouri, New York, Ohio, Pennsylvania, Tennessee, Utah, West Virginia, and Wisconsin. (In Alabama and Indiana they have pro-medical marijuana legislation that does not necessarily legalize its use.)

What this means is that the states themselves have lifted (or are considering lifting) restrictions on smoking marijuana if it complies with their regulations on medical conditions that would benefit from treating those conditions with marijuana. Please take note however that under Federal law using marijuana is still a crime, as it is still a Schedule I drug as per the Drug Enforcement Agency, the DEA. This actually means that marijuana is still classified by the DEA as one of

the most dangerous drugs out there. Medical marijuana has also not been approved by the Food and Drug Administration, the FDA as a “safe and effective medication.”

This is very confusing for lawmakers and citizens alike but the delicate balance has been maintained as well as possible by the states as they develop their systems and regulations to deal with this. The American Medical Association (AMA) has proposed that the Federal government reassess their classification of marijuana as a Schedule I drug so that researchers can have more freedom in their exploration of the therapeutic uses of marijuana. Up until recently, because of this classification, more studies have been geared towards the negative impact of marijuana on the human body as opposed to there being an objective slant to the scientific research necessary to discover the truth about medical marijuana.

Part of the reason these states created their medical marijuana laws was to be able to establish legal defenses to that state's criminal possession statutes and/or to dispose of that state's criminal punishments for marijuana use that is professed to be for medical use. Each state's laws differ considerable with regard to specifications and application. Several of these states are still confronting intense public deliberations regarding their marijuana statutes' effectiveness, safety, and validity.

One way the states are dealing with this has been to establish specified zoning and enforcement codes that regulate whether marijuana dispensaries can conduct business in certain neighborhoods. A marijuana *dispensary* is the physical location where medical marijuana patients are able to procure marijuana. Dispensaries exist in different forms that will be discussed more in detail below.

Another way the states handle the new laws and regulations has been to create patient registries. These registries arrange for a level of security against the threat of state

prosecution for illegal possession of marijuana, if the patient possesses a particularly quantities of marijuana designated for their personal and medically oriented needs. Furthermore, growers and dispensaries of medical marijuana are sanctioned in certain states but they may have limitations placed on just how many plants or marijuana items per patient. There may be further controls placed on medical marijuana at more local levels.

How Patients Receive Medical Marijuana

Pharmacies are not allowed legally to dispense of medical marijuana due to the fact that medical marijuana is still illegal under Federal law. This means that physicians also are not permitted to prescribe marijuana as a pharmaceutical. Rather, if doctors believe marijuana would be helpful for their patients, they must “recommend” marijuana to their patients as a remedy. Not all doctors are yet in agreement that marijuana has beneficial medical properties. Marijuana is only to be considered as a potential treatment after concluding that it would be therapeutically beneficial to the patient regardless of side effects.

If a doctor wants to recommend medical marijuana for a patient they must compose a letter that details their patient’s diagnosis as well the doctor’s decision to use marijuana to treat their patient’s condition. It is strongly suggested that patients keep track of where this letter is kept at all times, in case they would need to show their doctor’s endorsement to law enforcement. Other states like California require that the patients take these letters to receive official ID cards that they can use for this purpose. The letters and/or ID cards are also so patients can be able to show they are legitimately allowed to buy marijuana when they are purchasing it at authorized dispensaries.

As long as the doctor making the recommendation is still treating the patient for the condition the doctor has recommended marijuana for, the recommendation letter remains valid. Since not all physicians have conceded to the research that shows the therapeutic benefits of medical marijuana, one way a patient can find a doctor that is willing to consider this course of treatment is to get referrals to these doctors from dispensaries or pro-medical marijuana groups. Certain contentions have been made about this, as it has been sometimes shown that some doctors will provide people with recommendation letters for medical marijuana for conditions that some might not see therapeutic value for, so that citizens can use marijuana recreationally under the guise of it being medical use.

These dispensaries, which distribute marijuana in place of a pharmacy, can be made legal under local or state laws but would still be considered illegal enterprises under Federal law. This is but one of many contradictions that doctors, patients, and distributors face. Other terms for dispensaries can be "cannabis clubs," "collectives" or "co-ops." Some dispensary names have been designed to designate the establishments as places of health and caregiving, as is the hopeful intention. The marijuana that is distributed out of collectives or co-ops is often grown in conjunction with the patients themselves, who are all members of the organization. This to one way proponents of the medical marijuana system deals with the contention made by detractors that dispensaries tend to buy marijuana from illegal sources and allow misuse of the law by people looking to use marijuana recreationally.

It should be noted that at the time of publication, two states do allow legal recreational use of marijuana, in Washington State and Colorado. These states also have medical marijuana laws.

Conditions and Symptoms Treatable with Marijuana

According to a variety of official sources, including the US Government Accountability Office (GAO), Harvard Medical School, the National Institute for Mental Health (NIMH), the diseases and medical conditions that medical marijuana has proven beneficial to include: AIDS (HIV) and AIDS Wasting, Alzheimer's disease, arthritis, asthma/breathing disorders, Crohn's/gastrointestinal disorders, epilepsy/seizures, glaucoma, Hepatitis C, migraines, multiple sclerosis/muscle spasms, nausea/chemotherapy, pain/analgesia, psychological/psychiatric conditions/disorders, Tourette's syndrome, spasticity, cancer, cachexia, and other terminally ill conditions.

You might take note that these are a vast variety of conditions that this one substance has been shown to help relieve the symptoms of. This is why medical marijuana proponents have fought so hard to win the right for patients to have access to this particular treatment. Many people believe that there is only type of marijuana. Marijuana is a plant that can be grown in many different strains. These strains can be genetically guided, with more and more research available, to treat specific conditions. The two general types of marijuana are known as "indica" and "sativa." However marijuana growers can manipulate the elements of marijuana strains down to even more specific functions.

Indica and sativa can be cross-bred to create hybrids. Indica is known to produce a stronger body high that is associated with the stereotype of laziness that has been described in marijuana users, which is characterized often as being stoned. Sativa is known to be associated with a more energetic and spirited type of high, that fits in with the giggly stereotypes described in marijuana users. But aside from this, they also have different medical applications. Indica is known is to be effective for pain relief, insomnia, muscle relaxation, reducing nausea, stimulating the appetite, reducing anxiety, alleviating eye pain, decreasing anxiety and

stress, and suppressing seizures to name a few. Sativa is known to alleviate depressive symptoms and stimulating creativity, relieving headaches and migraines, acting as an expectorant, and general energizing and stimulation.

Marijuana and AIDS/HIV

Marijuana has been shown to help AIDS/HIV patients to increase weight gain by stimulating the appetite and suppressing nausea, as well as relieving anxiety and providing pain relief.

In addition, in 2012 the Public Library of Science One, known as *PLoS One*, published a report from Mount Sinai School of Medicine Science researchers in New York, detailing the effect of treatments that focus on the two cellular receptors triggered by THC that seems to efficiently obstruct a form of HIV that causes the disease to progress more quickly as the infection enters its later phases. This happens when the THC interacts with CR2, which is not only found in the brain but also on cells in our immune systems, including CD4 cells (also known as “T-cells”, the white blood cells that fight infection and are killed off by HIV/AIDS), gastrointestinal tracts, and peripheral nervous systems.

When THC impacts CR2 in the gastrointestinal tracts and peripheral nervous system it relieves nausea and neuropathic pain among other symptoms. Some older studies have shown the impacted CR2 can suppress CD4 cells and thus using marijuana by smoking it led to a faster evolution of the AIDS virus.

More recent studies are showing that smoking marijuana or using Marinol is not in fact an immune suppressant, but are actually correlate with increasing CD4 counts while decreasing viral loads. It is still not known exactly how this works. The Mount Sinai/*PLoS One* report did not go as far as to conclusively label marijuana as one of nature's

best antiretrovirals (medications for the treatment of infection by retroviruses, primarily HIV), but the research shows that additional investigation into cannabinoids is necessary and would eventually conclude that the drug has both symptom-reducing and antiviral characteristics.

Marijuana and Alzheimer's Disease

THC has been known to curb the development of acetylcholinesterase in the brain. These are the neural enzymes that have been established to generate the growth of damaging protein deposits in the brain, causing Alzheimer's disease. Medical marijuana has been reported to relieve symptoms like loss of memory; declining motor, judgment, and social skills; and dementia.

A recent study conducted at the Roskamp Institute in Florida was published in the journal of *Molecular and Cellular Neuroscience*, explaining how cannabinoids play a role in impeding the impact of Alzheimer's disease and may even be able to eliminate the disease completely. As Alzheimer's is what occurs in the brain when certain "impaired" proteins, known as amyloid- β proteins ($A\beta$), are unable to be unloaded from the brain. Cannabinoids have been shown in this study to be able to decrease amyloid- β proteins levels in the brain and enhance cognitive performance in animal testing. It shows that the endocannabinoid (EC) system does in fact impact how amyloid- β proteins travel through the brain.

Marijuana and Pain Relief

Using marijuana for pain relief is one of the more controversial uses of the drug. Many studies have revealed different conclusions regarding the impact of various parts of the marijuana plant on pain toleration, intensity, and relief,

as well as how the drug should best be ingested to help with pain and what age ranges should employ use of the drug for this purpose.

Researchers at the Imperial College London have shown that another plant extract from the cannabis plant known as *cannador*, is very powerful in the alleviation of pain in post-surgical patients. Scientists from McGill University Health Center (MUHC) have disclosed research demonstrating that when patients have suffered from chronic neuropathic pain and smoked marijuana, that their pain was relieved in addition to experiencing more positive moods and improved the quality of their sleep patterns.

Most recently however, the scientists at Oxford University's Centre for Functional Magnetic Resonance Imaging of the Brain (FMRIB) announced in the journal *Pain* that marijuana will only help sufferers of pain experience a more manageable pain and not eliminate pain altogether. The officials at the Mayo Clinic never recommend that marijuana be used to relieve chronic pain for patients that are ages teenagers or younger.

Marijuana and Psychological/Psychiatric Conditions and Disorders

Perhaps one of the most controversial medical areas that marijuana has been suggested as treatment for psychological and psychiatric conditions and disorders. This is in large part due to marijuana's association as an illegal substance that is related to addiction, considered a psychiatric disorder known as "substance abuse disorder" in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). This is also because of its label as a "gateway drug." This means that marijuana has been labeled as the drug that drug addicts of harder drugs, like cocaine and heroin, use to bridge the gap between being no users and into their abuse of much more

dangerous substances with no therapeutic value. Some see this as the reason that marihuana has been deemed a Schedule I substance. Others argue that if marijuana were more realistically regarded as a substance not as dangerous as these other “harder” drugs that it would not be used as a gateway drug in the first place.

There are many studies that associate using marijuana recreationally with the inducement of mania in bipolar disorder, anxiety symptoms in anxiety disorders, or the heightening of the risk of developing psychosis.

However, other studies have shown that marijuana use serves to abate the symptoms of anxiety by calming the patients. Varying dosage of marijuana ingested has pointed to as the difference in effects. It has been suggested that administering at lower doses is when anxiety symptoms are treatable, and when administered in high doses that anxiety is exacerbated.

With regard to bipolar disorder, certain studies have shown that marijuana use actuates an elevation of one's mood. Further studies in animals have shown improvement of depressive symptoms. Post-traumatic stress disorder (PTSD) is another condition whose symptoms have been convincingly treated with medical marijuana due its relaxing effects.

The body's EC system on its own, that is without the influence of marijuana, is part of what controls and balances our moods, appetite, pain, and memory. When marijuana is then introduced into our bodies and interacts with the EC, patients under the guidance of their mental health providers can manipulate these factors just as pharmaceutical psychotropic medication is designed to, but without a lot of the dangerous known side effects of these prescribed drugs.

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