



MEDICAL CANNABIS COACH™

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Welcome to Medical Cannabis!

This document was created to assist new users in gaining a basic understanding of medical cannabis and methods of use. Currently, more than 60 U.S. and international health organizations are supporting granting patients immediate legal access to medicinal marijuana under a physician's supervision. The medicinal value of cannabis is becoming hard to ignore with study after study proving its effectiveness.

Here we will go over some of the basics of Medical Cannabis. We will explain the common cannabinoids and how they interact with our bodies natural endocannabinoid system, the difference between Sativa and Indica plants, an intro into terpenes which make up the smell and taste of cannabis, and also methods of cannabis consumption.

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WELCOME TO THE WORLD OF MEDICINAL CANNABIS!

If you are reading this, you have come to a point in your life when you are either considering cannabis as a medicine, supporting someone who is considering cannabis, or may just be seeking information. In any situation, this is an opportunity to educate. As cannabis emerges from the subcultures, more and more people are finding sustainable relief from chronic pains, alleviating symptoms, and increasing general well-being. There are thousands of people all over our nation who have re-gained their lives, independence, and relationships. People have reason to be hopeful that medical cannabis is the “light at the end of the tunnel” and is to be embraced as an alternative to current healing models.

This work is by no means all encompassing. It is intended to equip the entry-level cannabis consumer with sufficient knowledge and information to make important decisions regarding their own use of medical cannabis. While some of the information might be a little “dry” and technical, you are encouraged to be diligent and commit to educating yourself to become independent and functional. This medicine requires self-education.

Here we go!

INTRODUCTION

For over 4,000 years the cannabis plant (marijuana) had been used medicinally by a variety of cultures around the world. It was used as medicine in the United States until 1937 when a new tax fee led to its discontinued use. In 1972 marijuana was placed in Schedule I of the Controlled Substances Act, meaning that the government considered it to have "no accepted medical use in treatment in the United States." History and evidence has proven otherwise.

Marijuana's schedule can be changed by Congress, the DEA, or the courts. Congress has voted on several bills to legalize the medical use of marijuana, however none of those bills were passed. The US Drug Enforcement Administration (DEA) has five criteria for reclassifying marijuana's schedule, and it believes that marijuana has not met those criteria.

1. The drug's chemistry must be known and reproducible
2. There must be adequate safety studies
3. There must be adequate and well-controlled studies proving efficacy
4. The drug must be accepted by qualified experts
5. The scientific evidence must be widely available

The government has authorized a few research studies into the health effects of medical marijuana. The US Food and Drug Administration (FDA) has not approved marijuana as a medicine, citing the fact that it has not gone through rigorous clinical testing like other new drugs must. Proponents state that marijuana is not a "new" drug, it should be "grandfathered" into legality, and it has not gone through FDA mandated testing because the government has blocked such efforts.

The pros and cons presented throughout this document reflect the numerous contentious issues involved in this debate. Read and decide for yourself whether marijuana should be a medical option.

PROs	CONs
Many patients, physicians, medical organizations, and lawmakers argue that anecdotal evidence and numerous scientific peer-reviewed studies have demonstrated that marijuana does have an accepted medical use in treatment in the US. They also believe that marijuana easily meets the FDA criteria over "whether a new product's benefits to users will outweigh its risks." Three different US government-funded studies have also shown that marijuana may have medical value -- the most recent being the 1999 \$1 million Institute of Medicine (IOM) study. Since 1995 every vote or poll on medical marijuana was "pro" to medical marijuana, suggesting that the majority of Americans are in favor of legalizing medical marijuana.	The official US government position currently states marijuana has "no accepted medical use" and "has a high potential for abuse." Many patients, physicians, medical organizations, and lawmakers opposed to medical marijuana believe that because marijuana has not been FDA-approved it is too dangerous to use. Others say that legal alternatives such as Marinol (synthetic THC - the main active ingredient in marijuana) and various FDA-approved anti-emetics make the use of marijuana unnecessary. They also argue that marijuana can be addictive, that it leads to harder drug use, and that its use - medical or otherwise - sends the wrong message to children, that smoking marijuana injures the lungs, harms the immune system, damages the brain, interferes with fertility, and impairs driving ability.

HISTORY OF MARIJUANA

Marijuana has been used as an agent for achieving euphoria since ancient times; it was described in a Chinese medical reference traditionally considered to date from 2737 B.C. Its use spread from China to India and then to N Africa and reached Europe at least as early as A.D. 500.

The first direct reference to a cannabis product as a psychoactive agent dates from 2737 BC, in the writings of the Chinese emperor Shen Nung. The focus was on its powers as a medication for rheumatism, gout, malaria, and oddly enough, absent-mindedness. Mention was made of the intoxicating properties, but the medicinal value was considered more important. In ancient India it was clearly used recreationally. The Muslims too used it recreationally as alcohol consumption was banned by the Koran. It was the Muslims who introduced hashish, whose popularity spread quickly throughout 12th century Persia (Iran) and North Africa.

HISTORY OF MARIJUANA IN USA

In 1545 the Spanish brought marijuana to the New World. The English introduced it in Jamestown in 1611 where it became a major commercial crop alongside tobacco and was grown as a source of fiber. By 1890,

hemp had been replaced by cotton as a major cash crop in southern states. Some patented medicines during this era contained marijuana, but it was a small percentage compared to the number containing opium or cocaine. It was in the 1920's that marijuana began to catch on. Some historians say its emergence was brought about by Prohibition. Its recreational use was restricted to jazz musicians and people in show business. "Reefer songs" became the rage of the jazz world. Marijuana clubs, called "tea pads," sprang up in every major city. These establishments were tolerated by the authorities because marijuana was not illegal and patrons showed no evidence of making a nuisance of themselves or disturbing the community. Cannabis was not considered a social threat.

Cannabis was listed in the United States Pharmacopeia from 1850 until 1942 and was prescribed for various conditions including labor pains, nausea, and rheumatism. Its use as an intoxicant was also commonplace from the 1850s to the 1930s. A campaign conducted in the 1930s by the U.S. Federal Bureau of Narcotics (now the Bureau of Narcotics and Dangerous Drugs) sought to portray marijuana as a powerful, addicting substance that would lead users into narcotics addiction. It is still considered a "gateway" drug by some authorities. In the 1950s it was an accessory of the beatnik generation; in the 1960s it was used by college students and "hippies" and became a symbol of rebellion against authority.

The Controlled Substances Act of 1970 classified marijuana along with heroin and LSD as a Schedule I drug, i.e., having the relatively highest abuse potential and no accepted medical use. Most marijuana at that time came from Mexico, but in 1975 the Mexican government agreed to eradicate the crop by spraying it with the herbicide Paraquat, raising fears of toxic side effects. Colombia then became the main supplier. The "zero tolerance" climate of the Reagan and Bush administrations resulted in passage of strict laws and mandatory sentences for possession of marijuana and in heightened vigilance against smuggling at the southern borders. The "war on drugs" thus brought with it a shift from reliance on imported supplies to domestic cultivation (particularly in Hawaii and California). Beginning in 1982 the Drug Enforcement Administration turned increased attention to marijuana farms in the United States, and there was a shift to the indoor growing of plants specially developed for small size and high yield. After over a decade of decreasing use, marijuana smoking began an upward trend once more in the early 1990s, especially among teenagers.

As described, Cannabis was a part of the American pharmacopoeia until 1942 and is currently available by prescription in the Netherlands, Canada, Spain, and Israel in its whole plant form.

In 1937, the U.S. passed the first federal law against cannabis, despite the objections of the American Medical Association (AMA). Dr. William C. Woodward, testifying on behalf of the AMA, told Congress that, "The American Medical Association knows of no evidence that marijuana is a dangerous drug" and warned that a prohibition "loses sight of the fact that future investigation may show that there are substantial medical uses for Cannabis."

Ironically, the U.S. federal government currently grows and provides cannabis for a small number of patients. In 1976 the federal government created the Investigational New Drug (IND) compassionate access research program to allow patients to receive up to nine pounds of cannabis from the government each year.

In 1988, the DEA's Chief Administrative Law Judge, Francis L. Young, ruled after extensive hearings that, "Marijuana, in its natural form, is one of the safest therapeutically active substances known... It would be unreasonable, arbitrary and capricious for the DEA to continue to stand between those sufferers and the benefits of this substance..." Yet the DEA refused to implement this ruling based on a procedural technicality and resists rescheduling to this day.

In 1989, the FDA was flooded with new applications from people with HIV/AIDS. In June 1991, the Public Health Service announced that the program would be suspended because it undermined federal prohibition. Despite this successful medical program and centuries of documented safe use, cannabis is still classified in America as a Schedule I substance “indicating a high potential for abuse and no accepted medical value. Healthcare advocates have tried to resolve this contradiction through legal and administrative channels to no avail.

In 1996, patients and advocates turned to the state level for access, passing voter initiatives in California and Arizona that allowed for legal use of cannabis with a doctor's recommendation. These victories were followed by the passage of similar initiatives in Alaska, Colorado, Maine, Montana, Nevada, Oregon, Washington, and Washington D.C. The legislatures of Hawaii, Maryland, New Mexico Rhode Island, and Vermont have also acted on behalf of their citizens, and every legislative session sees more bills introduced at the state level across the country.

In 1997, The Office of National Drug Control Policy commissioned the Institute of Medicine (IOM) to conduct a comprehensive study of the medical efficacy of cannabis therapeutics. The IOM concluded in 1990, that cannabis is a safe and effective medicine, patients should have access, and the government should expand avenues for research and drug development. The federal government has completely ignored its findings and refused to act on its recommendations.

Despite the federal barriers to research, hundreds of peer-reviewed studies have been published worldwide since the IOM report. While there is still much to learn, the medical potential is indisputable for a variety of symptoms and conditions.

QUESTIONS TO ASK –

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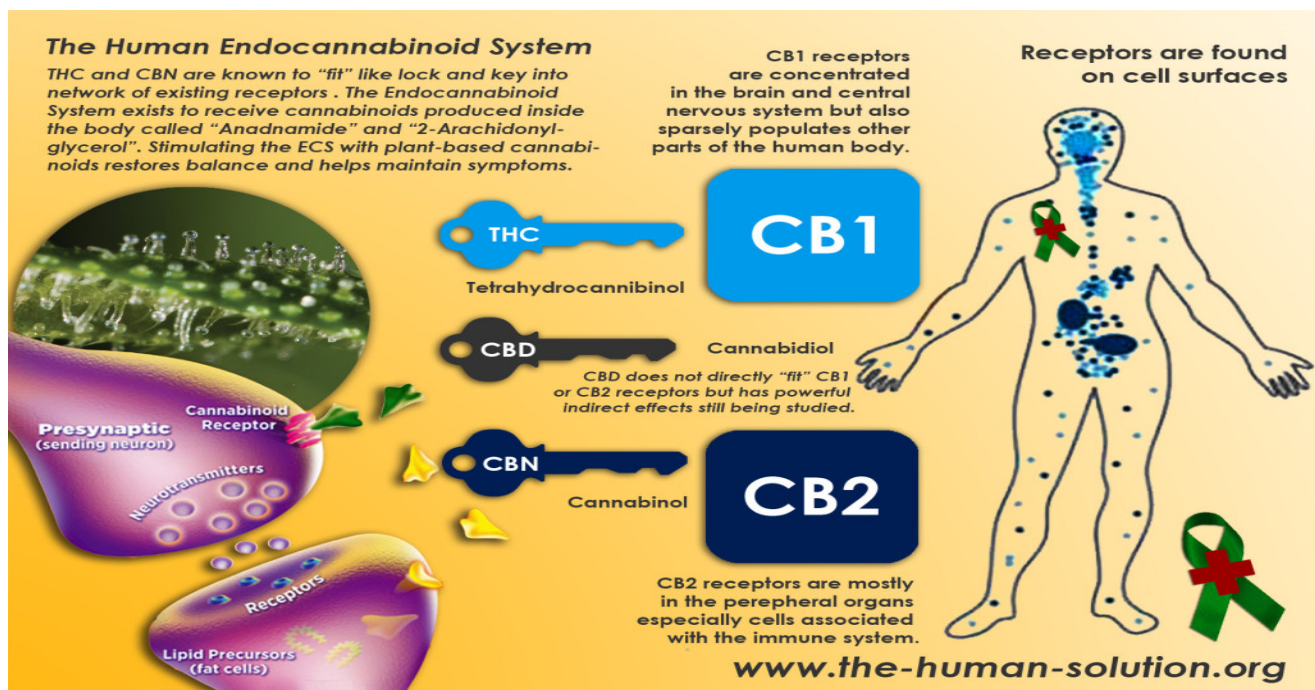
BEGINNER'S GUIDE

Medical cannabis is an effective treatment for a wide variety of ailments and helps alleviate symptoms for patients across the globe. This beginner's guide to consuming medical cannabis is meant to help new patients and their loved ones understand the many different ways medical marijuana can be administered and how to create an individualized treatment plan focused on symptom relief.

HOW CANNABIS WORKS AS MEDICINE

We live in ironic times: a plant that's been labeled criminal and dangerous is providing unrivaled relief for a variety of symptoms and conditions. Cannabis strains bring a colorful variety of medicinal effects, but when confronted with the question of how consuming marijuana could possibly be good for you, not everyone knows how to respond.

This brief look at cannabis chemistry is meant to arm you with a basic knowledge of how cannabis affects the brain and body. Not only will you better understand your medicine, you'll be able to educate others about why cannabis can truly be an effective remedy for patients suffering a myriad of ailments.



THE ENDOCANNABINOID SYSTEM

Some consume cannabis for its mind-altering effects, while others seek symptom relief. But cannabis wouldn't have some of its therapeutic benefits if our bodies didn't already contain a biological system capable of interacting with its active chemical compounds, like THC.

Our endocannabinoid system does just that. But it isn't there just to allow us to enjoy the effects of our favorite strain. It serves a vital purpose for our health and well-being because it regulates key aspects of our biology. So, what's it doing, and how does it work?

Homeostasis: Staying in the Goldilocks Zone

To understand the human endocannabinoid system, it's helpful to know a little about one of the most fundamental concepts in biology: homeostasis. And the best way to understand homeostasis is to think of Goldilocks and the three bears.

That classic fairy tale illustrated the idea that the best outcome often lies somewhere in the middle, between two extremes. We don't want things too hot or too cold, but *juuuuuuuust* right.

Homeostasis is the concept that most biological systems are actively regulated to maintain conditions within a narrow range. Our body doesn't want its temperature to be too hot or too cold, blood sugar levels too high or too low, and so on. Conditions need to be just right for our cells to maintain optimum performance, and exquisite mechanisms have evolved to draw them back to the Goldilocks zone if they move out. The body's endocannabinoid system (ECS) is a vital molecular system for helping maintain homeostasis—it helps cells stay in their Goldilocks zone.

Key Pieces of the Endocannabinoid System (ECS)

Because of its crucial role in homeostasis, the ECS is widespread throughout the animal kingdom. Its key pieces evolved a long time ago, and the ECS can be found in all vertebrate species. The three key components of the ECS are:

- Cannabinoid receptors found on the surface of cells
- Endocannabinoids, small molecules that activate cannabinoid receptors
- Metabolic enzymes that break down endocannabinoids after they are used

Cannabinoid Receptors

Cannabinoid receptors sit on the surface of cells and “listen” to conditions outside the cell. They transmit information about changing conditions to the inside of the cell, kick-starting the appropriate cellular response.

There are two major cannabinoid receptors: CB1 and CB2. These aren't the only cannabinoid receptors, but they were the first ones discovered and remain the best-studied. CB1 receptors are one of the most abundant receptor types in the brain. These are the receptors that interact with THC to get people high. CB2 receptors are more abundant outside of the nervous system, in places like the immune system. However, both receptors can be found throughout the body (Figure 1).

Endocannabinoids

Endocannabinoids are molecules that, like the plant cannabinoid THC, bind to and activate cannabinoid receptors. However, unlike THC, endocannabinoids are produced naturally by cells in the human body (“endo” means “within,” as in within the body).

There are two major endocannabinoids: anandamide and 2-AG. These endocannabinoids are made from fat-like molecules within cell membranes, and are synthesized on-demand. This means that they get made and used exactly when they're needed, rather than packaged and stored for later use like many other biological molecules.

Cannabinoids are a class of molecules characterized by their ability to activate cannabinoid receptors like CB1 and CB2. Anandamide and 2-AG are the two major endocannabinoids produced naturally in the body. THC is the psychoactive plant cannabinoid produced by Cannabis. All three of these cannabinoids can activate the CB1 and CB2 receptors, although each one has a different potency at each receptor.

Endocannabinoid Regulation of Brain Cell Firing

Brain cells (neurons) communicate by sending electrochemical signals to each another. Each neuron must listen to its partners to decide whether it will fire off its own signal at any given moment. However, neurons don't like to get too much input—there's a Goldilocks zone. If they get overloaded by signals, it can be toxic. That's where endocannabinoids come in.

How Does Cannabis Consumption Affect the Brain?

Consider a simplified scenario with one neuron listening to two others. One of these two neurons might become overactive and send too many signals to the neuron that's listening. When that happens, the neuron that's listening will make endocannabinoids specifically where it's connected to the overactive neuron. Those endocannabinoids will travel back to the "loud" neuron where they bind to CB1 receptors, transmitting a signal that instructs it to quiet down. This brings things back to the Goldilocks zone, maintaining homeostasis.

Endocannabinoid Regulation of Inflammation

Inflammation is a natural protective reaction the immune system has in response to infection or physical damage. The purpose of inflammation is to remove pathogens (germs) or damaged tissue. The inflamed area is produced by fluid and immune cells moving into the area to do the dirty work and return things to their Goldilocks zone.

It's important that inflammation be limited to the location of damage and doesn't persist longer than needed, which can cause harm. Chronic inflammation and auto-immune diseases are examples of the immune system getting activated inappropriately. When that happens, the inflammatory response lasts too long (which results in chronic inflammation) or gets directed toward healthy cells (which is known as auto-immunity).

CBD vs. THC: Why Is CBD Not Psychoactive?

It's important to remember that molecules like cannabinoids and other neurotransmitters rarely interact with only one receptor type; they often interact with many. The plant-based cannabinoid CBD illustrates this nicely, as it interacts with numerous receptor types in the brain. So, while plant cannabinoids may activate the same cannabinoid receptors as endocannabinoids, they will likely interact with several other receptors and therefore have distinct effects.

CBD is also interesting because it can affect overall levels of endocannabinoids in the brain, referred to as "endocannabinoid tone." CBD inhibits the FAAH enzyme, which breaks down anandamide. Thus, CBD can increase anandamide levels by preventing FAAH from breaking it down. Inhibiting the FAAH enzyme has been shown to be a useful strategy for treating anxiety disorders, and some of CBD's anti-anxiety properties may come from its ability to inhibit this enzyme and thereby increase endocannabinoid tone.

Whole plant philosophy

Whether you smoke it, eat it, vaporize it, or ingest it as an oil, the medicinal cannabis you put in your body contains many chemicals that work together to make you feel better. Of course THC and CBD are the major healing compounds, but there are hundreds of other chemical compounds in the cannabis plant. The interaction of these chemicals is called “the entourage effect.”

Pharmaceutical companies eager to create a patentable medicine derived from cannabis are always looking to extract one or two chemicals. This is happening now!

As CNN Dr. Sanjay Gupta recently pointed out, cannabis has 480 identified chemicals. Sixty-six of these are cannabinoids (the group that includes THC and CBD). But there are many other compounds found in the plant, including cannabigerols, cannabichromenes, nitrogenous compounds, amino acids, ketones, and terpenes, among others. While the effects of each individual compound are not yet understood, one thing is clear: The whole is more than the sum of its parts.

What are Cannabinoids?

One hefty word that belongs in every medical marijuana patient’s vocabulary is cannabinoid. Cannabinoids (e.g., THC and CBD) are the chemical compounds secreted by cannabis flowers that provide relief to an array of symptoms including pain, nausea, anxiety, and inflammation. These work their medicinal magic by imitating compounds our bodies naturally produce, called endocannabinoids, which activate to maintain internal stability and health. To put a complex system simply, they mediate communication between cells, and when there is a deficiency or problem with our endocannabinoid system, unpleasant symptoms and physical complications occur.

When cannabis is consumed, cannabinoids bind to receptor sites throughout our brain (receptors called CB-1) and body (CB-2). Different cannabinoids have different effects depending on which receptors they bind to. For example, THC binds to receptors in the brain whereas CBN (cannabinol) has a strong affinity for CB-2 receptors located throughout the body. Depending on a cannabis product’s cannabinoid profile, different types of relief are achievable.

What Are High-CBD Cannabis Strains and How Do They Differ from High-THC Strains?

This concept is the cornerstone of cannabis as medicine, and the results are so promising that these cannabinoids have been synthesized for legal prescription use. Some synthetic cannabinoid medications include Marinol, Nabilone, and Rimonabant. While these synthetic forms are effective, research shows that herbal cannabis contains a far wider variety of therapeutic compounds.

QUESTIONS TO ASK –

Start Low and Go Slow

If you are inexperienced in taking medical marijuana, the best rule of thumb is to start with a low dose and take it slow. The dosage needed will vary based on the type and severity of your condition, how much experience you have with consuming medical cannabis, and your method of delivery of the drug into your system. Consult with a healthcare professional to find out the minimum dosage you should be taking and make sure to research interactions with other drugs before starting treatment.

If smoking or using a vaporizer, wait for a few minutes between inhalations to gauge the strength of the strain. If consuming medical cannabis as an edible wait at least an hour to judge the full effects and wait at least four hours until taking a second dose.

Experiment with Strains and Methods

Finding the right medical marijuana strain for your needs can be difficult. You will likely need to experiment with different strains, to find the perfect treatment plan that works for you, fits your lifestyle, and most importantly, is optimal in relieving your symptoms. Finding the ideal delivery method for you can also be difficult.

Here are the main ways of consuming medical cannabis:

Smoking

Generally considered the most traditional way of consuming medical cannabis, this involves packing a small amount of dried cannabis into a pipe, water pipe (bong), or rolling paper, then burning it and inhaling the smoke.

PROS: This method produces instant relief and makes it easy to regulate the dosage; it is an inexpensive method and allows the user to transport the drug as a rolled joint wherever necessary.

CONS: Smoke may be harmful to your lungs and may not be the ideal option for patients with lung damage, asthma, or emphysema. This method also generates a lot of smoke that can make both you and your surroundings smell like marijuana.

Medical Cannabis Coach does not recommend burning the medicine in order to achieve a medicinal effect.

Vaporizing

Dried cannabis is inserted into a self-heating vaporizer and heated to a temperature hot enough to release its medicinal compounds.

PROS: It offers optimal use of your medical marijuana and will deliver instant relief with less harsh effects on your lungs when compared to smoking. There is very little smell and the amount of marijuana needed to produce the same effects as smoking is much less.

CONS: Good vaporizers can be very expensive and smaller handheld units need to be charged and take time to fully warm up when needed.

Edibles

Eating cannabis is an effective way to treat pain and can provide hours of relief. Today you can find all

types of edible foods such as cookies, popcorn, lollipops, and chocolate bars all with precise dosage. These are often referred to as “medibles” – medicinal + edibles.

PROS: Long-lasting relief and a great alternative for patients who would rather not inhale marijuana smoke. Not only is it a delicious treat you can take anywhere, but dosages can be carefully administered.

CONS: The effects of edibles can take anywhere from half an hour to several hours to fully kick in and, if not made by a reputable manufacturer, dosages can be difficult to determine. It's also important to take it slow if new to edibles as the effects can be radically different compared to smoking. Talk to your doctor to find your dosage before experimenting with edibles.

Other methods such as tinctures, patches, and topical salves are also available, generally providing a low dose for patients who want to strictly control the dose and stay away from inhaling or ingesting medical cannabis.

QUESTIONS TO ASK –

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THE CANNABIS EXPERIENCE

Cannabis is a popular topic these days. Thanks to the cascade of cannabis reform across the globe, many curious individuals are legally able to possess and consume cannabis for the first time in their lives. Getting started with the herb can be a bit daunting. What does being “high” feel like, anyway? To help introduce you to the herb, here’s what you can expect the first time you partake.

Compare Cannabis to Pharmaceutical painkillers?

Cannabis is quite different from opioids in terms of effect. While all opioids produce a similar effect, the cannabis experience varies significantly from person to person. Side effects are always a concern for the new user. As an example, the various side effects of opiate abuse are fairly well known and may include:

- Drowsiness
- Lethargy
- Paranoia
- Respiratory depression
- Nausea
- Death

Because of the intense effect produced by the interaction of several opiates and the brain, the drugs remain extremely addictive, sometimes causing measurable symptoms of addiction in under three days.

Opiates also cause your irises to relax, creating pinprick or pinpoint pupils. This is one of the big giveaways of opiate abuse, and it's hard to disguise.

Because of the way opiates often reduce your reaction times, driving while under the influence of opiates is often dealt with harshly, and you could lose your freedom along with your license. In some states, the mere presence of an illegal drug is enough to determine that you were driving while intoxicated, although the federal government is pushing states toward defined limits, just like with alcohol.

In contrast, medical marijuana users may find themselves in fits of giggles while others may find themselves yawning and comfortable on the couch. Others still may feel a little anxious or uneasy.

For the majority of cannabis fans, the herb tends to make people feel pleasant, calm, and relaxed. Here are a few sensations that are common with cannabis:

- Spacing in and out again
- Altered perception of time
- Easy movements, bodily relaxation
- Joy, euphoria, contentedness, care-free attitude
- Drowsiness or increased mental energy
- Forgetfulness
- Increased sensory awareness

Unfortunately, there’s a reason many people try MMJ and turn away. The overall effects of cannabis can be quite powerful for first-time consumers. Many experienced consumers have developed a tolerance to the primary psychoactive in cannabis, tetrahydrocannabinol (THC). This tolerance enables consumers to handle

the medicine without inconvenient changes in cognition.

The cannabis "marijuana" feeling is different for each person, depending on the particular details of conditions, setting, timing, state of mind, and the variety of cannabis used. Although cannabis is generally pretty benign, nothing is always safe and fun for everyone in every situation. This includes cannabis. Comfortable surroundings and good judgment are advised.

Smoked or vaporized cannabis is felt within seconds of being inhaled. Its peak effect is from 15 minutes to a half hour in duration, followed by a steep decline that levels off and wears away in 2 to 4 hours. People can smoke it in hand-rolled cigarettes, called "joints" or "spliffs," a variety of pipes, or water pipes ("bongs"). A new technology in the form of "vaporizers" is enabling people to consume the resin containing THC through heating it short of burning the plant matter to eliminate harms that come with smoking material.

Eaten cannabis is not felt at first. It is a good idea to wait and see for an effect after a suggested dose, before eating more. In a half-hour to an hour, the initial effect is felt, and that can be abrupt and powerful. It maintains a relatively stable level and drops off in 4 to 6 hours. Intensity depends on dosage and metabolism. But if you don't know yours, be prepared to lie down and rest for a while, if necessary. Fresh air, fresh juice, and gentle reassurances are the best things if you consume too much.

The experience enhancer

Cannabis use can increase focus and concentration, making a person's moods, sensations, and experiences seem more intense. Your heart may feel like it's pounding, the music is fantastic, this is the best dessert you've ever eaten and, wow, get a load of how beautiful nature is. The problem is that if you're concentrating on something that's negative, you can intensify that feeling, as well. Fortunately, something else will come along and distract you with another thought to pursue, if you so choose. And if your fleeting idea feels like the answer to the world's problems, please write it down. Its profundity might escape you later, but it will feel good if it turns out you're right.

Memory

Marijuana does not appear to affect actual memory. You still remember your name and address, parents, childhood, and whatever you've learned along life's highways and byways. Cannabis can be a memory trigger, which means that the experience is likely to remind the user of things that s/he has associated with cannabis in the past. There is some historical evidence that it's even been helpful for some seniors to retain or recover memories and recognition.

A short-term memory interruption is common, however. A speaker may lose track of what he was saying just a moment ago. This effect is temporary while high and does not impact memory in general. It is really a fleeting distraction, and the description is misleading, because "short term memory" refers to thoughts that have not formed into memory yet. It's like the moment before you begin to type at your computer; you haven't hit the keys yet, so there is nothing to save. But if you reconstruct what led up to the idea, you will probably think of it again.

Cannabis "escapism"

Most people consider cannabis to be an experience enhancer rather than an escape device. If you feel good, it may make everything seem even better. When some people feel down or depressed, medicating may be "inappropriate" and they might get more into their problems. But, many report that it may lead to a new

understanding or perspective on a problem, helping to resolve it and lift one's mood. It has been extremely helpful to people with terminal illness, helping them shake off depression and live out their remaining time with dignity and relatively good cheer.

For some people it is definitely an escape, but whether that is good or bad depends on the way that it is used. If it allows perspective and insight - that is good; if it is an avoidance mechanism - that is not a good use of cannabis. This is where the concepts of sensible and responsible adult use apply.

Insights and Creativity

People often get a new perspective on a familiar scene or problem, a seemingly profound thought or burst of creativity. There is a sense of awe, revelation and realization. Medicated insights tend to fall into three categories:

- A deeper recognition or understanding of an already known truth or perception
- A new way of looking at something
- Playful fantasies and ideas.

It can result in uncontrollable giggling about silly ideas, or a burst of complex insights, such as when Carl Sagan solved a physics equation while "under the influence." It can draw on the appreciation of a hitherto overlooked phenomenon, or reveal profound metaphoric relationships that apply to one's own life. It can separate the user from the immediacy of life and lead to a more balanced perspective of their own situation. The possibilities are limitless because each set and setting is unique, and therefore capable of new ways of looking at things. That's spontaneous mental generation.

Judgment

Unlike alcohol intoxication, people who feel the effect of cannabis are aware of that fact and tend to moderate their behavior accordingly. For example, most people prefer not to drive when high since they know that their perceptions are somewhat altered even when not impaired. There is an effect wherein you may experience a feeling that you are simultaneously observing your own actions with an objective eye at the same time as you are doing the action, giving a new sense of perspective. At the same time, certain experiences may be infused with a new sensibility, such as "how can people go out and get drunk like that? I'm glad I chose cannabis instead." Just don't get judgmental about it. Many people report that cannabis makes them more open-minded and tolerant of diversity.

Time

Your pulse speeds up a bit, so the count of heartbeats may give you the sense that more time has elapsed than actually has. The external measurement of time appears to pass more slowly, as well. For example: you may feel like an hour has gone by but when you look at a clock it might only have been ten minutes. You may look at a clock repeatedly and still not keep track of what time it is. Events seem to unfold more slowly, allowing more detailed observations and reactions. Several ideas may occupy the same moment, or thoughts may pass so rapidly that you don't even try to keep up. Just observe the passage. Wow, is that still the same song playing as a while ago? That's one long song. And if you're driving, you might find yourself driving below the speed limit and letting everyone else pass.

Sex/Arousal

Most people who've experienced it think that cannabis makes sex better. Some even consider it a mild aphrodisiac. It tends to increase sexual pleasure as it may lower inhibitions, slow down time, induce relaxation, make people more aware of touch and senses, and help to focus on the present moment. Orgasms may not be more intense, but the experience may seem more sensual. There's a sense of deeper appreciation for the ambiance such as candlelight, visual aesthetics and music. More imaginative approaches may be explored, but that does not remove the individual's responsibility.

Physical effects

All these effects are temporary. Reddening of the eyes; slight temporary increase in the rate of heartbeat; cool fingers and toes; mouth gets dry - "cotton mouth." Cannabis and the cannabinoids are all non-toxic. Smoke itself is an irritant, and bronchial irritation can occur but any direct link to cancers are questionable. Ironically, cannabis is also a vasodilator and bronchodilator, so it can actually help some asthmatics.

There are no deaths that have been attributed to cannabis overdose, but it is possible to have a very unpleasant experience, especially due to the one-hour delay in effect when large amounts of it are eaten. That would be extremely rare, but once you've eaten too much you may need to vomit or just wait it out. That is an advantage to smoked or vaporized cannabis; because the effect is felt almost immediately, it is a simple matter to stop when the desired subjective effect is achieved.

Food

Most users get "the munchies" (a strong desire to eat) and say that food tastes exceptionally good, and chocolates or desserts taste even better. Some people say they can taste the separate ingredients in food and distinguish new subtleties in olfactory sensations. A few people experience the opposite effect: a loss of appetite and would rather postpone eating and do something else. Sometimes that is accompanied by a very strong appetite a few hours later. If it kicks in late at night when you should be getting ready for bed, that is where spontaneity vs. personal responsibility and moderation comes into play.

Thinking/Consciousness Change

Users may feel a slight euphoria, happiness, or sense of "well-being." Many mundane things suddenly seem more interesting; alive; rich in details. Problems seem less severe and pressing. Medicated thinking has been compared to the indirect move of the knight on a chessboard, as opposed to the direct linear moves of the rook or bishop; like switching between two or more frames of mind. It may take you off on tangents as you follow a train of thought. For some however, thinking may be "foggy;" less clear or focused. Then there are the times when you just get the giggles and laugh about anything, no matter how silly or ridiculous. You may realize that something that has really been bothering you is actually not such a big deal after all, or that something you overlooked before could be the key to a problem you've been trying to solve. Some people become more observant or self-conscious, and talk less. Others become more spontaneous and sociable.

A profound metaphor may reveal itself with rich implications for your life and destiny. This aspect has led to cannabis being used as a sacrament in many of the world's religions throughout history. There are a variety of Christian, Hindu, Islamic and other religious denominations that revere cannabis as a sacred plant. Bible scripture is cited to support its use.

Paranoia/Anxiety

Some people, especially novice users and people living under drug war marijuana prohibition, may feel uncomfortable with the changes they experience while medicated. They may become paranoid or self-conscious, or possibly experience a sense of panic (especially if they ate too much of the wrong strain of cannabis). This is often triggered by the sudden and often subliminal recognition that the cannabis consumer's heart is beating faster. Just reminding them that this is a normal effect will usually reduce their anxiety. Antidote: This discomfort is usually handled by changing the environment, getting some fresh air and trying to relax. Lie down, breathe slowly and drink some orange juice. A reassuring friend is also helpful. Remember: No matter what, the effect will wear off in a few hours.

Relaxation

On a physical level, cannabis helps relax muscles and reduce spasms, including those caused by spinal injury or MS. Many adults also often use cannabis to relax and unwind after work, to let go of the day's tensions and to adjust their mental attitude. Most people prefer not to medicate when they have a lot of things to get done, because using cannabis (especially indica) can sometimes make one tired, sleepy or feeling sluggish. Other people become energized or even "hyper" when they consume cannabis. Other people find that it gives them a lift and change of perspective to keep them alert.

Overdosing

No one has ever died from consuming cannabis. There is no such thing as a fatal overdose. On the other hand, one can consume more than a comfortable amount, especially when eating or drinking it. Symptoms of overindulgence usually include unpleasant physical reactions or exaggerated psychological emphasis on annoying situations that can lead to paranoia or, rarely, panic. Since the effect of smoking is almost immediate, it is relatively easy to prevent this from occurring by stopping your intake while still at a comfortable level. Any negative effects wear off in a short time and you can often simply lie down and sleep them away. Generally, there is no hangover when you wake up.

Socializing

Some people enjoy medicating and interacting with others, and feel they enjoy a special communication, bond or connection with other users while medicated. Others may sometimes become quiet, introspective, self-conscious, uncomfortable or have difficulty making conversation and prefer not to be medicated in public or a social situation.

Music

Most people say that music sounds "richer." They can hear sounds differently, more vividly and intensely. Some claim it enhances their ability to hear the distinct lines of several instruments at once and that they better grasp how the various instruments interact to produce the music.

Reading

For some, reading seems impossible while medicated as they may forget the beginning of the sentence by the time they get to the end. Medicated readers may at times find themselves reading the same paragraph over again. Users may at times find themselves reading the same paragraph over and over again. Medicated readers may find themselves reading the exact same paragraph over and over and over again and again. (Point made?) On the other hand, others can focus on it and feel reading is even more enjoyable. When reading imaginative works, being medicated can increase the sense of empathy and help one to visualize situations.

Cannabis products have varying effects

The way cannabis is consumed can have a large impact on the overall effect of the herb. After smoking, vaporizing, or dabbing, most consumers will feel the effects of the herb within 15 minutes. The overall experience can last two to three hours.

If ingesting orally via an edible, the effects can take as long as two hours to present themselves. The high from edible cannabis can last from four to six hours or longer.

When smoking, vaporizing, or dabbing, the inhaled cannabinoids are made easily accessible to your brain and respiratory system. Inhaled cannabis tends to have more of an immediate head-centered effect when compared to other consumption methods.

Edibles, in contrast, will produce a much longer and more powerful experience overall. The effects of edibles are often more strongly concentrated in the body, making them great pain management tools.

Cannabis strains

Walk into any dispensary and you may notice that products on the menu are divided into three primary categories: **sativas, indicas, and hybrids**.

Cannabis sativa is the Latin name for the marijuana plant. Cannabis sativa forma indica is a subspecies of the cannabis sativa plant.

Both of these types have distinct effects. Hybrids are crosses between the two varieties and can produce a wide range of effects. How it makes you feel largely depends on the strain and the species you select. Years of hybridization have created complex blends of cannabis strains, and every strain produces a unique experience.

Indica

Indica strains, in general terms, are thought to have more sedative, body-centered effects. Indicas are known to produce a heavy-eyelid sensation and feelings of physical relaxation. It's not uncommon for consumers to feel physically weighted or heavy after an indica strain.

Mentally, many find that indica strains produce more of a hazy or foggy mental state. However, this varies significantly from strain to strain. Indica strains can also cause you to feel sleepy, making them best to use before bed.

Some popular indicas include:

- Granddaddy Purple
- Bubba Kush
- Northern Lights

Sativa

Generally speaking, strains classified as sativas are thought to have more of an energetic and uplifting effect. All cannabis that contains psychoactive THC can encourage feelings of euphoria. However, sativa strains are blissful while providing an energy boost similar to a cup of coffee or a black tea.

Many consumers go for sativas in the morning to benefit from the herb's stimulating effects. The sativa experience is often described as "cerebral" and head-focused. Sativa strains are often great for social gatherings, setting the tone for thoughtful conversation.

In high doses, some may find that sativas produce feelings of raciness or anxiety. While many sativa strains promote focus, they don't tend to produce the deeply relaxing physical sensation of an indica.

Some popular sativas include:

- Jack Herer
- Super Silver Haze
- Sour Diesel

High-CBD

For some, psychoactive cannabis does not make for a comfortable experience. Those hoping to avoid any anxiety, sedation, or cognitive changes may prefer a high-CBD variety as most CBD dominant strains will not cause the “high” often associated with the plant.

Instead, high-CBD strains are something more akin to a strong cup of herbal tea. They are soothing and commonly used to relieve muscle spasms and pain. The CBD aspect also tends to mitigate the cerebral effects of THC.

CBD strains provide many of the benefits of cannabis without most unwanted side effects. CBD strains often make you feel like you're simply in a good mood, inspiring a positive sense of wellbeing.

High-CBD strains are great options for those who would like to consume cannabis during the day without feeling too wired or too sedated.

QUESTIONS TO ASK –

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

FAQs

OK, there used to be marijuana. But now there's cannabis and hemp too. What's cannabis, and what's hemp?

Let me start this answer with a question: Would you believe they're all the same thing?

No?

They are, at least as far as science is concerned. Law enforcement is another matter, but we'll get to that later. Cannabis, marijuana, reefer, bhang, weed, pot, grass... all different names for the same game.

Cannabis is a plant, obviously, one of the members of the Cannabaceae family of plants, a set that also includes hops. Famed biologist and namer-of-everything Carl Linnaeus identified just one species of plant under the genus cannabis in 1753: *cannabis sativa*. This is what we know as "marijuana" or all the other names, some pretty, some tawdry, some annoying.

Today, some biologists identify three distinct species in this genus—*cannabis sativa*, *cannabis indica* and *cannabis ruderalis*—although some scientists believe these to be merely subspecies or variants of the same plant, *cananbis sativa*. At the most, they are similar, but slightly different-looking and with slightly different effects.

OK. So what's hemp?

Remember a minute ago? Like I said, hemp is cannabis. Here's the difference: The marketplace, and law enforcement, use words like "marijuana" and "cannabis" to refer to plants bred or naturally high in psychoactive cannabinoids like THC.

You see, marijuana plants can be male or female. The female plants—

Male or female plants?

Botanically speaking, *yes*, there are male and female plants; we're in the realm here of basic plant reproductive morphology. The female plants are the ones with THC in them. The male plants don't produce smokable marijuana; they just produce the seeds to grow more.

These days, the female plants have been grown for their resinous flowers, which are then dried and smoked or cooked into food or made into topical applications.

Male plants with seeds are used for breeding, and "hermaphrodites"—female plants that start "throwing bananas," or turning male and producing seeds—are often discarded.

The old Mexican term, *sinsemilla*—literally, without seeds—was used to refer to only female marijuana that had been carefully kept that way and harvested, but now everything you see in a dispensary and pretty much anything you'd buy on the street meets that definition.

Hemp. I want to know about hemp.

We're getting there. When we say "hemp," in crude terms, we're talking about cannabis that's low in psychoactive cannabinoids and specifically raised for the use of its seeds or stalks for food, fiber or fuel. This use of the plant goes back to ancient times; it cultivation by patriotic farmers was encouraged by the U.S. government during World War II—evidence of which grows wild along roadsides in Middle America to this day.

In many circles, hemp is viewed as a miracle plant, and perhaps rightly so. Dr. Bronner's Soap is derived from hemp. (It's not for nothing that modern-day Bronners are among the main drivers of legalization.) Hemp is a durable fabric, hemp is high in omega fatty acids and hemp can even be made into fuel that can drive certain combustion engines. Hemp is such a big deal that Jack Herer, one of the first heroes of the modern-day legalization movement, wrote a whole book about it.

So it used to be legal?

All cannabis used to be legal—in fact, cannabis was legal for much longer than it wasn't.

Didn't it become illegal because it's bad for you?

If that were the case, tobacco, a pure killer, would be illegal and not a key cash crop. We would be saying “regulate alcohol like marijuana” rather than the other way around.

As for cannabis, it's illegal because of who used it.

The first laws outlawing the use and possession of “marihuana,” or “Mexican loco-weed” were passed in California in 1912 and directed at the state's Latino population, just as, at the same time, the state Board of Pharmacy outlawed the opium smoking favored by the Chinese.

As you can deduce, these laws were aimed at marginalizing these two particular minority communities—two communities without whom California would be unrecognizable. Similar “reefer madness” was repeated decades later by original drug czar Harry Anslinger, who spun wild tales of white women smoking “reefer” and suddenly listening to jazz music, hanging out with black men and other racist agitprop.

In case you are still unconvinced, it's good to consult the interview that Richard Nixon aide John Ehrlichman gave to a Harper's magazine reporter. He admitted that Nixon's War on Drugs, and subsequent Controlled Substances Act, targeted hippies, leftists and black people by design. Nixon, by the way, formed a government commission to study the plant—which returned a recommendation that it's mostly benign and should be decriminalized. Not the first time, nor the last, that sound, rational advice on marijuana was ignored.

Back up. I get that it was illegal. Why did people use it anyway, under penalty of prison, fines and general trouble?

They love it. People love it.

Yeah. Why?

In a sense, because we are designed to love it. Depending on who you ask, the plant has either evolved to react to our bodies, or our bodies have evolved to react to the cannabis plant.

Each of us have a network of receptors called the “endocannabinoid system,” located in our brain and throughout the nervous system. Turns out that the compounds in the cannabis plant “turn on” this system—and that our bodies produce similar compounds that also activate these receptors.

These receptors regulate mood, appetite, sleep cycles, manage pain, alter our perception... People, if you haven't noticed, seriously like to alter their reality, whether it's to eliminate pain or suffering, achieve a state of bliss, help go to sleep or just change the channel of life for a moment.

Step back again. You're telling me my body makes weed?!

Your body makes endocannabinoids, many of which serve the same or similar functions as phytocannabinoids, which are found in plants.

I'm full of THC right now??

No—unless you just took a monster dose before figuring out what it was.

Dab?

We'll get to dabs in a minute. Delta-9-tetrahydrocannabinol, or THC, is only one of the many active compounds in the cannabis plant—but you won't find any THC in a raw cannabis plant. Instead, you'll find its biosynthetic precursor, THC-A, or tetrahydrocannabinolic acid. THC-A has impact as well, but not the psychoactivity of THC. In order for marijuana's psychoactive properties to be unlocked, you must apply heat to THC-A.

Uhhh....

OK, too much detail, but the overarching point is important to know: Raw cannabis has no psychoactive properties without the application of heat.

All you need to know is that your body produces compounds that activate the same receptors activated by the cannabinoids found in the cannabis plant once they are heated up. Cannabinoids in the body are endocannabinoids; cannabinoids found in plants are phytocannabinoids.

How many different cannabinoids are there?

More than 80. The two you've probably heard of are THC and CBD.

THC was first isolated in the 1960s, and for a long time we thought it was “the” active ingredient in cannabis. It's the bit that makes you high, it gives you euphoria, inattentiveness, daydreaming, the munchies. But it turns out, when you just take THC by itself, the effect is different from when you consume the entire plant. Scientists have figured out there are many more cannabinoids, like the anti-anxiety, anti-inflammatory, non-getting-you-high CBD. We have CNN medical correspondent Sanjay Gupta to thank for giving CBD its worldwide PR debut in his 2013 television special, *Weed*, though people in cannabis knew about it for years before then.

Are they in the leaves or the stalk, or where?

The cannabis plant's “active ingredients” are concentrated in the flowers, in tiny “hairs” or outgrowths called “trichomes.” These produce resin, and, as Michael Backes writes in *Cannabis Pharmacy*, “The medicine [is] in the resin.” That's where the action is.

So all this over some goop in a plant that grows wild all over the world.

Yep.

Is this a new thing?

Hardly. In fact, this is one of the oldest things there is. Again, cannabis has been used medicinally (marijuana) and for clothing fiber and for food (hemp) for more than ten thousand years.

You may recall the 2,500-year-old tomb in China in which 2,500-year-old cannabis flower was found. That, friend, was for smoking—but the story begins much, much longer ago than that. One researcher found 27,000-year-old hemp fibers in a European tomb. You hear a lot about a tract dating from ancient China extolling the plant attributed to the Emperor Shen Nung, but most researchers agree Shen Nung was a mythical figure and his treatise was written much later.

Whoever was first doesn't really matter—what's interesting is that cannabis use caught on all over the world, pretty much wherever the plant ended up—everywhere except northern Europe, really.

There's a reference to marijuana in the Atharva Veda, a religious text from ancient India, and the Greek scholar and historian Herodotus has an account of the Scythians, a warlike tribe in the ancient Grecian world, having regular sessions.

“The Scythians then take this seed of hemp and, creeping under the mats, they throw it on the red-hot stones; and, being so thrown, it smolders and sends forth so much steam that no Greek vapour bath could surpass it. The Scythians howl in their joy at the vapor bath.”

When did people start smoking it like tobacco?

Don't mix your hemispheres. Tobacco is indigenous to the Western Hemisphere—it was one of the reasons why what's now the U.S. was colonized. Though tobacco was probably smoked a little bit earlier, the two substances became constant human companions around the same time.

Cannabis appears indigenous to Central Asia, either the steppes or the foothills of the Himalayan mountains, though the plant advanced all over the globe within a few thousand years, appearing in Thailand, Korea, India, Brazil, Jamaica, Africa and points in between. Again, notice how cold northern Europe is left out, though the people there certainly knew about hemp as a fiber for rope and clothes.

But back to the beginning: People started smoking it at least as early as 2,500 BC, as the dried flowers in the tomb discovered in the Gobi desert were female flower buds, with resinous trichomes, just like what we buy in dispensaries today.

Heh-heh. He said “generative apparatus.”

Very funny. He thought it was legit. And soon enough, it ended up in Western medicine... for a bit.

Marijuana landed in the United States sometime after the Civil War... or perhaps during. There are ads in San Francisco newspapers in the 1860s advertising “hasheesh” candies, and Mark Twain famously wrote about a night stoned out of his gourd in North Africa. In the late 1800s through the early part of the 20th century, you could buy medicines at drugstores and pharmacies containing cannabis.

Anyway, people have used it and loved it for millennia, so to act as if they’ll stop now just because it’s illegal was clearly a foolish notion. You could make the argument that the wave of legalization sweeping the nation is conservative in nature—we’re just returning to the way it was.

It was always medicine?

Yep, and science is beginning to corroborate folk knowledge—and to explain why and how it happens. This ties back to the endocannabinoid system—different cannabinoids will activate different receptors. Knowing which ones do what is what the research is all about, but since the plant has been illegal in the U.S. for so long, research has been stunted.

Really?

Yes, it doesn’t get talked about much in all the legalization coverage, but along with all the other federal hostility to marijuana, university study of the plant has been stuck in a draconian Catch-22. For decades, the only institution allowed to grow any cannabis for study has been the University of Mississippi. Ole Miss is the only place with a license from the National Institutes on Drug Abuse (NIDA) to grow research-grade cannabis.

And coincidentally, if you’re doing research on the plant in the U.S., one of the only sources of research funding is NIDA. Oddly enough, NIDA tends to like to fund studies that make marijuana look bad. Some other research is ongoing outside of this negative feedback loop, but not enough to please the bureaucrats at the DEA, FDA, NIDA and elsewhere.

In August 2015, the federal government announced that other universities would be allowed to apply to grow an alternate supply, but it’s not clear how many licenses they’ll dole out or who will get them. If marijuana is reclassified from Schedule I of the Controlled Substances Act to Schedule II or lower, it’ll be even easier, but until then, this is the reality we’re dealing with.

Among other absurdities, you’ll continue to have researchers in universities in states where marijuana is legal having to treat the stuff like plutonium in the lab, even while it’s available for public sale down the street.

Anyway, this all took a while, but we know now that an oil low in THC and high in CBD will aid seizures; a cannabis plant of roughly equal levels THC and CBD will be great for pain and PTSD; and a cannabis-derived mixture that’s high in THC will be good for cancer treatment.

You’re telling me it treats cancer now?

Don’t take my word for it. Take a look at what’s been dug up by GW Pharmaceuticals, the British drug company blowing up the NASDAQ after its cannabis-derived drug had success treating kids with epilepsy. Not marijuana smoking, mind you, but doses of highly concentrated cannabis oil have, anecdotally at least, helped cancer patients also pursuing a modern Western treatment heal more quickly.

But why do doctors and law enforcement say marijuana is bad?

Smoking is probably the worst thing about cannabis, since it can damage the lungs. But even that damage is supposed to be reversible and is not linked to major, long-lasting respiratory illnesses like COPD or lung cancer the way cigarette smoking is. That said, scientists insist that marijuana smoke does do harm, and if you’re smoking 10 joints a day, you’re probably hurting something.

Right now, there’s little science as to the long-term effects of heavy use of cannabis concentrates.

So is it actually bad for you at all?

It can be! About 5 percent of people who use cannabis will become dependent. If you're a heavy overuser, you might develop respiratory problems like we just mentioned. Most medium-to-long term cannabis issues go away once you stop using, though there is a body of science that suggests cannabis is not good for developing brains—i.e. adolescents and teens—and may exacerbate mental-health issues in people already suffering from or prone to issues like schizophrenia.

Let's not minimize the potential dangers at all. That said, however, let's remember that there are a number of legal things that *are* bad for you, and a lot more that *can* be bad for you. And ditto for things that are legal and widely available that kids should stay away from. In that contest, marijuana is an also-ran.

What about a “bad trip”?

Please.... This isn't acid. Some negative short-term effects of cannabis include rapid heartbeat, lightheadedness or dizziness, and dry mouth. Have a glass of water, take a seat and you'll be fine. Even the DEA concedes that there's no record of anyone dying from marijuana by itself.

So what's this I see on a dispensary menu? Flower?

Weed. Whenever you see little green buds in bags or jars or rolled up into a joint, you're looking at cannabis *flower*. Most dispensary menus refer to it as such. A “flower roll” or “flower pre-roll” is what is also known as a joint.

I hear it's stronger than it ever was before—they call it “kush” now?

You're half-right. Most dispensary cannabis you see does have higher THC content than the cannabis seen in the 1960s and 1970s, mostly because it's been bred to be more powerful and less mellow, thanks to it being illegal. THC content in flower can run from 10 to 12 percent on the low-end and up to 25 percent or higher.

That sounds... strong.

It is. Take too much, and it could knock you out. Best to go slow.

This menu has indoor and outdoor cannabis. What's the difference?

One was grown under the sun, the other was grown in a controlled environment using grow lights. You may also see greenhouse-grown cannabis, which was grown in a –

Greenhouse.

You're catching on.

Which is best?

Depends who you ask. For a long time, indoor was king because breeders were able to more easily coax huge flavors and big loads of THC in a controlled environment, but now many connoisseurs prefer outdoor. It's more natural, it has different flavors—and they even like the high better.

So what's hash, then?

Remember our little talk about trichomes earlier? Hash is cannabis flower that's gone through a mechanical process to separate the plant material from the resinous bits that contain all the medicine and the active compounds.

The process can be as simple as running the flowers through a sieve, or washing them in water to remove the plant material before running it through other filters. You can also buy home machines—literally, repurposed lingerie washing-machines—and do it yourself that way. Either way, the end result—a fine, sand-like material—that's mostly trichomes. Hash can also be rolled into balls.

The umbrella term for hash in dispensaries these days is “concentrates.” Hash is the most ancient form of “concentrated cannabis.” People in mountain valleys in Pakistan, Afghanistan, India, Nepal and North Africa have been consuming cannabis in this form for thousands of years. You could even buy weed in this form in India up until the 1980s—when America bullied them out of their ancient mystical rite.

So what are “dabs”?

Dabs are concentrates, too. So are wax, budder, shatter, butane honey oil, butane hash oil, honeycomb and myriad of other names. The names usually have something to do with the finished product’s consistency.

So dabs—the same idea, much different way of getting there. Instead of a solely mechanical process, a chemical solvent that’s not water is used to separate the plant material from the cannabinoids. It’s usually a hydrocarbon like butane.

Butane?! You smoke that?

Well, you don’t exactly smoke it. When you consume concentrated cannabis you typically vaporize it, or vape it, through one of those “vape pens” you’ve heard about. You can also place a small amount on a superheated surface on a device that resembles a bong and inhale the resultant plume of vapor. That’s why you see kids in hoodies carrying blowtorches around.

But back to the butane—that’s supposed to be removed from the finished product using vacuum ovens. If your dab is overly shiny and oily, glistening and viscous, it may not have been purged properly. In some areas, regulations will require the end-product to be fully purged, but not everywhere.

Great—but look at this menu! It’s worse than a wine list.

What do you mean?

“OG Kush,” “Sour Diesel,” “Humboldt Royal Kush.” What are all these things, and what’s this all about?

Oh, I get it, you’re looking at a sheet of available product at your local dispensary. Those are all the different strains the store has to sell.

Strains?

The wine list is not a bad analogy. Like grapes of different varieties grown in different areas under different conditions, different cannabis plants will look, smell and taste different. Different strains will have different effects, some of which are bred in or bred out of them over multiple generations of breeding by the grower.

Which ones are the best?

That’s one of the amazing things about the Brave New World of Cannabis. It’s not really what’s best—it’s what’s *best for you*. It all depends on what you want out of the cannabis. If you want a sleep aid, you’ll want a different strain than if you want to be the energetic, loquacious life of the party at your next afternoon barbecue.

How do I tell which one is which?

That’s what the names are for. They also smell differently.

What? Why and how?

Along with different levels of cannabinoids, different strains have different terpenes, at different levels. Before you ask: terpenes are organic compounds found in every plant that has a smell. Lemons, pine trees, grapes—some of the same terpenes found in these common plants appear in cannabis, and research (as well as trial and error) seems to indicate that the net effect on the brain and body is tied at some level to the terpene composition.

Most dispensaries are highly attuned to the new user. They have a friendly and knowledgeable staff who are there to help you find the strains that do what you want them to do. If your dispensary isn’t helping you, go to another one that will.

I heard that sativa was for partying and daytime use and indica was for sleepytime.

That’s somewhat true. Back in the day, tropical-grown sativas were known for clear-headed, buzzy highs, and mountainous, cold weather-borne indicas were known for heavy, sedative effects.

But hybridization makes that dichotomy hazier and hazier. OG Kush, one of the most popular strains, is a hybrid. And there are dozens of OG Kush varieties—Skywalker, Tahoe, San Fernando Valley—that might be advertised as an indica, a hybrid, or sativa-dominant.

These days, you want to pay attention to the terpenes and might even want to ask about the parentage of some strains to get an idea of what it'll do to you.

What about edibles? I hear Maureen Dowd nearly died after eating a candy bar in Denver. Will that happen to me?

First of all, she did not die. Poor Maureen—we're talking about the New York Times columnist—ate too much of a marijuana candy bar, got uncomfortably high and then wrote a column raving about how people who smoke marijuana kill their spouses. She did this despite fairly detailed labeling in Colorado product, and according to the people who took her around Denver, being warned about this specific possibility.

Her evening sounded like anguish and we do not care to experience it, ever—and neither will you, not if you're careful and not a dummy. She ultimately made the valid point that in this brave new world, we might err on the side of “conservative cautions.”

The strength of what's in an edible is, in most places these days, printed on the packaging. Look for a number indicating how many milligrams of THC is in the edible. A good rule of thumb is to try 10 milligrams, wait two hours and then try more if it's not working out for you.

This says 100 milligrams. Should I eat the whole thing?

Sure, if you have nothing to do for the next 12 hours or longer.

One hundred milligrams is a powerful dose—probably a quadruple dose for experience stoners and *10 times too strong* for most people. In other words, you are about to go to the Dowd zone if you eat that.

Start with 10 milligrams, wait a little while to see how you're doing and then ramp up from there if it's not too much.

Shouldn't these things be labeled better?

Yes and no. There's no uniform dose, just as there isn't one for alcohol. Look at how hard liquor is sold—in big bottles and labeled inscrutably in terms of “proof,” which you might or might not know is based on a non-intuitive scale of 200. (“100 proof” equals 50 percent alcohol.) You don't see people up in arms about that.

In Oregon, edibles are labeled according to strict, detailed rules that result in something akin to a combination of a prescription label on a pill bottle and the nutrition facts on a cereal box. The cannabinoid content as well as the dose per piece of cookie or candy or whatever—as well as some rudimentary directions for how much to take and how long to wait to take some more—are all there for you. Right now, with so many new users, maybe it's not a bad thing.

What are these little pens with what looks like oil on the ends for?

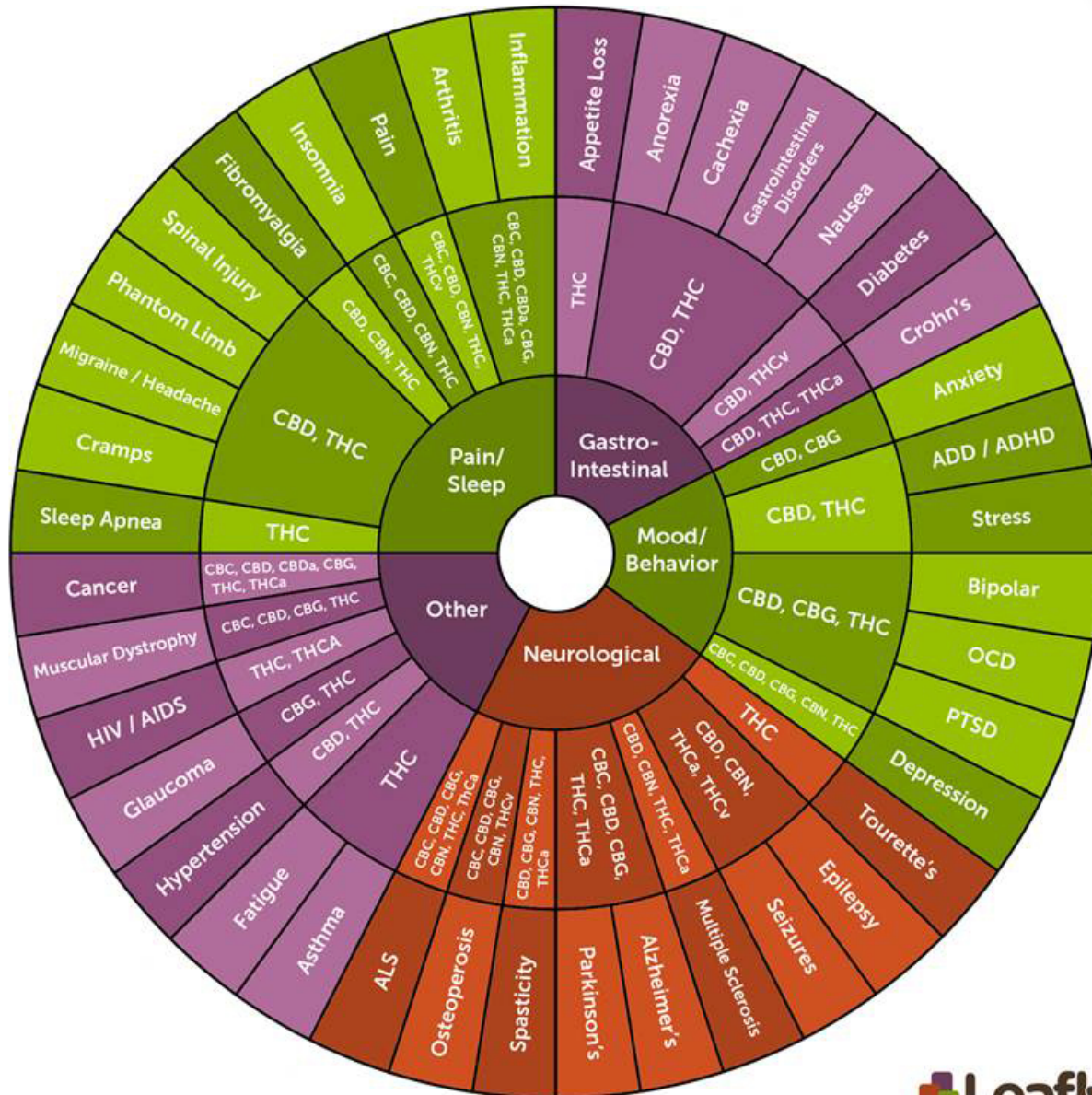
Those are vaporizer pens that take cartridges of cannabis oil. Lots of people like them because they are easy, not messy, and very portable, but other people think they taste funny and that the producers use B-grade cannabis to make them.

How can you tell if it's bad or good?

Most states now require cannabis sold in stores to be lab-tested, for impurities and possible adulterants, as well as THC and CBD content.

Interesting.

Very. Hope this all helped.



QUESTIONS TO ASK –

GLOSSARY OF MEDICAL CANNABIS TERMS

Cannabinoids

Cannabinoids are the chemical compounds unique to cannabis that act upon the human body's cannabinoid receptors, producing various effects which may benefit patients. Cannabis' primary cannabinoid is tetrahydrocannabinol (THC), which is responsible for the psychoactive effects (or the high). There are over 85 known cannabinoids with varying effects.

Cannabis

Cannabis is a plant genus that produces three species of flowering plants: Cannabis sativa, Cannabis indica and Cannabis ruderalis. All three species are used to produce medical cannabis.

CBD

CBD is the abbreviation of cannabidiol, one of at least 85 cannabinoids found in cannabis, and is the second most prevalent cannabinoid after THC. Research has shown that CBD produces a physical effect without the psychoactive effects (the high) associated with THC.

Concentrates

Concentrates are a potent consolidation of cannabinoids made by dissolving cannabis in its plant form into a solvent. Referred to by a variety of slang terms, the classification of concentrates is often dependent on the manufacturing method and the consistency of the final product.

Edibles/Medibles

Edibles and medibles are edible goods that have been infused with cannabis extracts. They are commonly baked goods such as cookies and brownies, but can also be flavoured drinks, breads, candies and more. Edibles have a slower effect than other delivery methods since the cannabinoids first must be absorbed through the digestive system.

Flowers

Cannabis flowers are the hairy, sticky, crystal-covered bits that are harvested and dried to be used as medication. When they are allowed to be fertilized by male plants, these flowers will produce cannabis seeds. If not, they will continue to produce the resin that contains active cannabinoids until they are harvested or begin to die.

Hemp

Hemp is a fibrous product that can be produced from the male cannabis plant and can be used in the manufacture of rope, paper, beauty products and more. Commercial production (including cultivation) of industrial hemp has been permitted in Canada since 1998 under licenses and authorization issued by Health Canada.

Hybrid

Hybrid cannabis plants are a genetic cross between two or more separate strains of cannabis. Hybrids can happen unintentionally, but they are usually bred specifically to combine desired traits of the original plants. Most cannabis available today is some form of hybrid.

Indica

Indica is used to refer to the Cannabis indica species of cannabis. Generally these plants originated in the Middle East and Asia. Compared to their Sativa counterparts, Indica plants are shorter and bushier, and have more compact flower structure.

Limonene

A terpene.

Linalool

A terpene alcohol.

Marijuana/Marihuana

Marijuana is the general term for female cannabis plants or their dried flowers. Females are distinct from male plants in that they produce flowers containing a high percentage of cannabinoids.

Pinene

A bicyclic monoterpene.

Sativa

Sativa refers to the Cannabis sativa species of cannabis plant. In general, these plants originated outside of the Middle East and Asia and include strains from South America, the Caribbean, Africa and Thailand. These strains tend to grow taller than indicas, are lighter in colour and take longer to flower.

Strain

A strain is a specific variety of a plant species. Cannabis strains are developed to produce distinct desired traits. Cannabis strain names often reflect the plant's appearance, effects or place of origin.

Terpenes

Terpenes modify the effects of THC and other cannabinoids, augmenting a strain's medicinal properties. Cannabis strains can be distinguished by the variety of terpenes they produce.

THC

THC is an abbreviation for tetrahydrocannabinol. THC is the most well-known and most abundantly available cannabinoid in cannabis plants. THC is also the component in cannabis that is responsible for the psychoactive effects or high. Research has shown THC to be an effective medical treatment for a range of conditions.

Tincture

A tincture is a liquid cannabis extract, usually made with alcohol or glycerol, that is often administered with a dropper. Tinctures can be flavored and are usually placed under the tongue, where they are absorbed quickly.

Topical

A topical is a cannabis product where the active properties of the flowers have been extracted and added to a product such as a lotion or a cream that is applied to the skin.

Trichomes

Trichomes are the resin production glands of the cannabis plant. THC, CBD and other cannabinoids are produced in these glands.

Vaporizer

A vaporizer is a device used to consume cannabis. It heats either flowers or cannabis-infused oils to a temperature that produces a cannabinoid-laced vapor to inhale. Vaporizing is healthier than smoking since there is no smoke to ingest, but this method still produces almost instantaneous effects.

Wax

Wax is a form of concentrate.

Weed

Weed is a slang term for cannabis.

QUESTIONS TO ASK –
