

History of medical cannabis:

The cannabis plant is originally from Central Asia.

Cannabis has been used by mankind for medicinal purposes since at least 2500 BC where it was found in a tomb in China.

It was available in the United States until 1942.

1970 Controlled Substances Act: Cannabis is made a Schedule I drug – high addictive potential, no medical benefits.

1985 – Marinol (dronabinol) is approved by the FDA in response to AIDS/HIV epidemic for improvement of depression, pain, anorexia.

Since 1992, researchers have reached an understanding of how cannabis works in our bodies.

New Mexico 2007 – Lynn and Erin Compassionate Use Act – qualified seven diseases; Since then NM Dept of Health has added 13 more. NM first state to include PTSD.

As of 2015, 23 states have legalized the use of medical cannabis to alleviate suffering for certain diseases and conditions.

How medical cannabis works:

Our bodies communicate inside themselves in one of two ways. The first is by sending chemical messengers called hormones from one part to another by way of the blood stream. The other way is by means of the nervous system. In this system living cells communicate with each other by way of their own special molecules that are released from the upstream cell and travel across the space between the cells to make contact with the downstream cell. When contact is made, the downstream cell is activated.

The special area on the downstream nerve cell where contact is made is called a receptor. There are many different kinds of molecules that travel across the space and each has a certain special receptor that is activated by it and no other kind of molecule. Molecules that activate receptors are called neurotransmitters.

Each of these special lines of communication is called a system and each system has its own job to do. The cannabis plant produces several neurotransmitters that are active in the endocannabinoid system.

The endocannabinoid system is present in every animal from humans down to fruit flies and starfish. It has existed for at least 600 million years. Its job is to ease pain and suffering and it does it in many ways.

In the nervous system, it helps epilepsy, migraine, pain perception, spasticity, improves sleep, reduces anxiety.

In the eye, it reduces inner pressure, avoiding blindness in glaucoma.

In the lungs, it opens airways.

In muscles, joints and tendons, it reduces pain by lowering inflammation.

In the immune system, it increases the immune response against disease.

In the intestinal system, it reduces pain by lowering inflammation, reduces nausea and vomiting, increases appetite.

It inhibits tumor growth in many kinds of tumors.

It is found in mother's milk.

It works with opioid pain killers to reduce pain to the point that the opioids are sometimes no longer needed.

It can be abused, causing temporary lethargy, impaired coordination, reduced memory and focus and visual disturbances, heart irregularities, cough and wheezing.

There are three kinds of neurotransmitters in the endocannabinoid system. As a group they are called cannabinoids. The first is the two neurotransmitters that nature makes in our bodies. The second is the over 85 neurotransmitters that are made by the cannabis plant. These are called phytocannabinoids because "phyto" says that they come from a plant. They work in animals because they are built so similar to our natural endocannabinoid neurotransmitters that our receptors recognize and accept them as if they were our own. The effects are caused by the combination of actions of all of the phytocannabinoids. This is known as the "entourage effect". The third kind is synthetic cannabinoids. These are made by man in laboratories.

There are two main receptors in the endocannabinoid system. These receptors recognize our natural neurotransmitters and also the phytocannabinoid and synthetic neurotransmitters. The two receptors are called CB1 and CB2. CB1 receptors are located mainly in the brain. CB2 receptors are located mainly in areas outside of the brain. There are no endocannabinoid receptors in the base of the brain where cardiac and respiratory function are regulated, so it is impossible to die from a cannabinoid overdose, as can and does occur from an opioid overdose. The two main phytocannabinoid neurotransmitters are tetra-hydrocannabinol (THC) and cannabidiol (CBD). THC works mainly in the brain and is responsible for the psychoactive properties of cannabis. It has many other healing properties as well, including relief of migraine pain and reducing blindness in glaucoma. CBD works mainly outside the brain and has no psychoactive properties. It is responsible for helping with immune system diseases and pain that comes from inflammation, like fibromyalgia, rheumatoid arthritis and inflammatory bowel disease, with neurologic disease that cause seizures and spasms, like epilepsy and multiple sclerosis, and many others as well.

There are two kinds of cannabis plants, cannabis sativa and cannabis indica. Cannabis sativa has more THC than CBD. Cannabis indica has more CBD than THC. Cannabis sativa is a mood elevator. Cannabis indica has a calming effect. They are being bred together to create plants of predictable levels of THC and CBD.

Facts about medical cannabis:

The NM Dept. of Health has identified 20 diseases and conditions that science has shown to be relieved by medical cannabis.

23 states currently make it legal to acquire medical cannabis. In none of the states has use by high school students increased since the time of legalization.

Medical cannabis can make brain cancer disappear. **Search: Marijuana cures brain cancer**

Medical cannabis can stop or significantly reduce epilepsy in children: **Search: Charlotte's Web epilepsy**

PTSD is a physical illness. Patients have lower levels of natural endocannabinoids.

Cannabis is not a Gateway drug, it is an Exit drug. Many patients are able to stop taking some or all of other medications once they begin taking cannabis. They can ultimately spend less per month on medications when they do so. In states where medical cannabis is legal, mortality from opioid overdose is 24.8% lower than in states where it is not legal.

Percent of users of various substances who become addicted to them:

Tobacco	32%
Heroin	23%
Cocaine	17%
Alcohol	15%
Cannabis	9%

At a medical cannabis dispensary in Phoenix, the average patient age is 62.

The staff at the dispensary guides patients on getting started at a low dose, then adjusting the dose on a 3-4 day basis until achieving the relief needed.

Dispensaries carry dried plant in rolled and unrolled form, vaporizers, lozenges and lollipops, topicals like oils and salves, edibles like cookies and chocolates, capsules, drinks and in other forms.

Onset of inhaled cannabis is minutes and lasts one or two hours. Onset of edibles is one hour and lasts four to six hours. Others are in between.

Tolerance can occur over time. Treat with an “herbal holiday” during which use is stopped for a few days to allow the cannabinoid receptors to return to their functioning state.

To learn about American Medical Group medical cannabis services, go to our website at american-medical-group.com and hit the Medical Cannabis tab.

How medical cannabis is grown and harvested

Seeds or clones are placed in an incubator for two weeks where they germinate.

Once germinated, the plants are allowed to grow in soil for eight weeks.

Then they are placed under lights that alternate light/dark every twelve hours for another eight weeks.

At that time they are producing flowers (buds) that are harvested.

Plants are identified by birthdate and bar coded.

Plants are routinely inspected and male plants are removed. Plants can switch back and forth between male and female. Males are eliminated because they pollinate females resulting in conversion of usable female flowers into unusable seed.

Each plant yields about ¼ lb of dry usable flowers.

Flowers are harvested and used as dried plant for smoking.

Trim around the flowers is used for manufacturing other products like edibles, salves, oils, lozenges.

The remainder of the plant is discarded.

All products are labeled with amount of cannabis present.

In NM average consumption by medical cannabis users is a ½ - 1 gram/day. Cost at dispensaries is around \$10/gram. So monthly cost is around \$150-300.

Sources:

The Medical Cannabis Institute

Personal communications