

MEDICAL MARIJUANA AND YOUR PET

What every pet parent needs to know about this emerging therapeutic.

Robert J. Silver, DVM, MS, CVA

President-elect, Veterinary Botanical Medical Association

www.VBMA.org

The use of medical marijuana is becoming more widespread throughout the US and Canada. The legal constraints of the last 70 years are gradually being loosened. As a result, many pet parents are asking the question: "Is this something that can help my pet?" This brief white paper will help to answer these questions and help you decide if, in fact, medical marijuana is right for your pet.

What is Medical Marijuana?

Medical marijuana comes from the Cannabis sativa plant. Scientists have discovered hundreds of valuable plant chemicals called "phytochemicals" in the cannabis plant. The most important of these phytochemicals in cannabis are the cannabinoids and terpenes.

One cannabinoid that most people know about is "THC", or more precisely: Δ -9-tetrahydrocannabinol. This is the one component of the marijuana plant that is psychotropic, meaning it gets you "high".

Cannabis plants with a high THC content and low fiber are called "Marijuana" and plants with a low THC content and high fiber are called "Hemp". There is so little THC in hemp that it is not psychotropic and is considered legal in most countries.

The second main cannabinoid after THC is called "CBD" or cannabidiol. Cannabidiol is not psychotropic, but has been found to possess potentially more valuable medicinal properties than THC.

CBDs help to reduce the psychotropic affects of THC and can be mildly sedative at higher doses. Cannabidiol (CBD) is found in smaller amounts in marijuana and in higher amounts in hemp.

Is Medical Marijuana Legal to Give to My Pet?

As of the Summer of 2015, 23 states and the District of Columbia have passed laws allowing for the use of medical marijuana on prescription by a medical doctor. The laws do not allow for the use of medical marijuana under the prescription of a veterinarian. In fact, for a veterinarian to prescribe, and in some cases just to mention medical marijuana as a option, could result in legal action against that veterinarian.

Additionally, in some communities, the administration of medical marijuana to a pet by their owner, no matter how much it is suffering, could result in the pet parent being brought up on criminal charges of animal abuse or violation of the Controlled Substances Act.

Over time, and with lobbying by pet owners and veterinarians, I think these laws will change, which will allow pet guardians the option of considering medical marijuana for their serious diseases. These laws only apply to high THC cannabis, or marijuana. The prescription or use of hemp extracts in pet animals is not against the law for veterinarians or pet guardians.

Is Medical Marijuana Safe to Give to My Pet?

Studies conducted in the 1970's found that dogs have the highest number of THC receptors in their brains, more than any other animal studied, including humans. A lot of these receptors are located in the area of the brain that governs coordination. A dog who gets too much THC will have an initial and brief period of excitement, then act very disoriented, may drool, may urinate on itself and will stand in one place rocking back and forth unable to move forward. They may fall over onto their side. We call this neurologic reaction: "Static Ataxia", and it is unique to the dog

For this reason, dogs are very sensitive to cannabis products that contain THC, and pet guardians need to be very careful about giving THC to their dogs, so as to not create this adverse neurologic reaction.

There have been two deaths recorded in Colorado from the use of "edibles", which are treats containing THC that can be purchased at dispensaries or cooked up in your kitchen. These two fatalities also involved very large amounts of chocolate in the brownies and cookies, and chocolate is much more toxic than THC to dogs. When used together, they create a co-toxicity than can be fatal with high doses of both.

Very low THC cannabis, also known as "hemp" does not contain enough THC to create these adverse reactions. They are a better bet for pets, due to their increased safety. Some experts believe that THC is important to give along with CBD to address certain difficult to treat conditions such as cancer. With further research we will learn more about whether this is true. Hemp-based CBD extracts have been anecdotally reported to help dogs with epilepsy. For treating cancer, it is still unknown whether CBDs can work effectively as a single therapy without THC or other anti-cancer drugs. The research to objectively determine this is pending. Certainly the use of CBDs for the side-effects of cancer therapies and the improvement of quality of life in these patients has more evidence to support those applications.

Effective Dosages for THC and CBD in Pets

Scientists have not worked out effective dosages for the wide range of clinical applications that have been suggested for cannabis products. Many pet guardians, though, have given their pets cannabis products and have reported success. Some pet owners say the cannabis products didn't work for them. When the dosages that have been reported to be used by pet parents with existing commercially-available products are compared to dosages published in the scientific literature, the effective dosages used by these pet parents were much lower.

Dosing by THC Content

My suggestion for dosing, if the product contains THC and you know the concentration, is to start with a dose of 0.1-0.25 mg/kg THC orally, once to twice daily. This dose should allow you to avoid the consequences of static ataxia from the THC. Be warned though, the occasional pet may have what we call an idiosyncratic reaction to that low dose of THC, and still develop Static Ataxia. Once your dog has had about 5 administrations of this small amount over 1-2 weeks, it should develop some degree of tolerance to the adverse neurologic effects of the THC, and you should be able to increase the dosage gradually to gain the clinical effect you are looking for.

Dosing by CBD Content

If you are using a hemp-based product that does not contain substantial THC, you can dose by the content of CBD present, as listed on the product label. Although we haven't as yet determined these effective CBD doses either, as with THC, several low-potency products in the market-place that are available over the internet, use doses as low as 0.025-0.05 mg/kg/day with reports of benefit to the dog or cat. At this point in time, in the absence of studies giving us precise CBD dosages in our companion animals, the upper limit of dosage for CBDs should be around 1 mg/kg/day. Doses of 5 mg/kg/day have been reported to cause sedation, although lower doses than that seem to effective for anxiety.

Dosing with Cannabis of Undetermined Potency

In many states where medical marijuana is legal, growing your own is also legal. In these states you can also buy the dried herb and make your own extracts, or just put the herb into capsules to administer. Medical marijuana products can be quite costly, so growing your own can be a cost-effective alternative. The best thing you could do to help guide safer dosing for your pet is to have your cannabis analyzed at a laboratory. Check with your state's regulations to see if you can use a laboratory for analysis.

Start with a very small amount (depending on your pet's weight and the potency of what you are using, this could be as low as 1/16 of a teaspoon, or as high as 1/4 teaspoon) of the plant material or extract if you are unable to get an analysis. Observe for "loopy" behavior in your pet. If you see loopy behavior your starting dose was too high. Wait until the loopy behavior subsides, or until the next day, and try 1/2 the amount that you had tried the first time.

This approach is potentially a bit more risky than using an analysis to guide your starting dosage. If your pet does OK with that small amount, then you should stick with that initial amount for 5 days to help establish tolerance. Once you've established tolerance, then you can gradually increase the dose to achieve clinical results.

IMPORTANT

It is best to speak with your veterinarian, or to find a veterinarian who is knowledgeable about cannabinoid therapies to help you with this, versus trying to do this on your own.

Potential Clinical Applications for Cannabis in Pets

We need more research to better determine which conditions respond the best to which cannabis fractions and what dosages. Anecdotal reports and research studies in animals other than pets have given us a fairly long list of potential clinical applications :

- Anxiety
- Behavioral modification
 - Thunderphobia
 - Separation Anxiety
- Epilepsy
- Neuroprotection
- Neurodegenerative diseases
- Cerebral ischemia (reduced blood and oxygen supply to the brain)
- Myocardial ischemia (reduced blood and oxygen supply to the heart muscle)
- Inflammation
- Psoriasis

- Skin problems
- Intestinal inflammation
 - Inflammatory Bowel Disease
- Arthritic inflammation
- Pain
- Immunosuppression of T-cell activity reducing pro-inflammatory cytokines
- Vomiting
 - Chemotherapy-induced vomiting
 - Motion sickness
- Type 1 diabetes and diabetic complications such as retinopathy
- Bone formation and fracture healing
- Cancer
 - Induces apoptosis (cancer cell death)
 - Reduces cancer growth
 - Anti-metastatic (reduces the spread of the primary cancer)
 - Renal protective from cisplatin chemotherapy, which is very toxic to the kidneys
- Anti-microbial (reduces the growth or kills bacteria and fungus; has even been found effective for MRSA, which are antibiotic resistance strains of pathogenic bacteria)

Resources

To Find out about your states' regulations regarding medical marijuana, there are two websites that provide current information about this in a state-by-state format:

<http://medicalmarijuana.procon.org/view.resource.php?resourceID=000881>
<http://norml.org/legal/medical-marijuana-2>

For more information about medical marijuana and its uses, these website are very informative:

https://en.wikipedia.org/wiki/Medical_cannabis
<http://www.projectcbd.org>

To find a veterinarian who is also an herbalist:

<http://www.vbma.org/us-members.html>
<http://www.vbma.org/international-members.html>
<http://www.ahvma.org/find-a-holistic-veterinarian/>

NOTES: