



CANNABIS SATIVA

FOR OUR DOGS?

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Within a few months, recreational cannabis will be legalized in Canada. This bill already modifies the perception of the public and the organizations involved with this plant with multiple properties. Not a day without an article in the print media or a TV report. The demands of patients suffering from various diseases that can be treated with medical cannabis are increasing dramatically. Would this law and a better knowledge of the properties of the plant also treat our pets?

If you have done some research on the net about cannabis for dogs, you are probably wondering if this product is safe and whether it really offers a benefit for a wide range of ailments – from anxiety to arthritis to cancer.

We quickly realize that there are no simple answers. Let's start from the beginning.

THE PLANT

Cultivated Hemp (*Cannabis Sativa* L.) is an annual herbaceous plant of the Cannabaceae family, now considered as the only species of the botanical genus *Cannabis*, but divided into several phenotypes that can be described as subspecies and varieties (*Example: the dog and breeds, from Chihuahua to Wolfhound*). This plant is known for its psychotropic effects under the name of "Cannabis or Marijuana" but it also has a commercial and industrial use under the name of Hemp, one of the oldest cultivated plants. Uses range from fabrics, ropes, bedding, fuels, stationery, food or feed to drugs for humans and animals. In the literature, it is called **Marijuana** when it comes to recreational cannabis, **Medical Cannabis** when it is not the euphoric effect but rather the therapy that is the property sought and **Hemp** when the plant is grown for food or industrially for other uses.

ITS CHEMICAL COMPONENTS...

Cannabis contains more than 480 active compounds, of which 80 are present exclusively in cannabis. They are called cannabinoids. Of the 80 natural cannabinoids identified in *Cannabis sativa*, the best known are **THC** (tetrahydrocannabinol) and **CBD** (Cannabidiol).

Tetrahydrocannabinol (**THC**) is the main active ingredient in Cannabis. It causes, among other things, a disruptive euphoric effect, in the person who consumes it; aka a "High".

Cannabidiol (**CBD**) is a substance that is also found in cannabis but does not have the disruptive characteristic

properties of THC. CBD has attracted significant interest from researchers in recent years because of its potential therapeutic properties that are free of psychotic effects. It is the compound that many consumers are seeking for medical purposes. CBD has a long list of medical properties that include relief of chronic pain, inflammation, migraines, arthritis, spasms, epilepsy and schizophrenia. It would also have anticancer properties, and new properties are continually being discovered as research advances.

...THEIR ACTIONS

In humans and most mammals, cannabinoids interact with millions of endocannabinoid receptors in the brain and the nervous system, as well as with the immune system. Just like the endocrine or lymphatic systems. It is by studying the mode of action of cannabinoids on humans that this system has recently been discovered.

The endocannabinoid system would be at the root cause of **homeostasis**, the regulation process that maintains the normal functioning of the body. This mechanism affects the essential functions of the human body: hunger, digestion, pain, energy, sleep, appetite, motor functions, reproductive functions, pleasure, and regulation of body temperature... To summarize, these endocannabinoids are the explanation of the good agreement between the body and the mind. The endocannabinoid system, or endogenous cannabinoid system, is therefore the basis of the action of cannabis on the human body. As its discovery is fairly recent, its understanding is not complete. It still requires a lot of research to be fully understood but would explain why cannabinoids would act on a variety of medical conditions.

It is noted that both dogs and humans have endocannabinoid receptors.

RESEARCH ON HUMANS AND DOGS

Every year since 1970 there are about 300 published articles on cannabis, and the number is increasing, reaching in 2004 the figure of 5900 publications. The studies focus on the effective therapeutic application of cannabinoids in the alleviation of pain, nausea and various diseases such as diabetes, multiple sclerosis, epilepsy, anxiety and post-traumatic stress disorder, chronic pain, arthritis and osteoarthritis, etc. These studies almost exclusively target medical cannabis for humans and very few scientific studies have focused on pets.

THC is toxic to dogs (see inset), eliminating the potential use of human medical cannabis for your dog as sold by companies approved by Health Canada. However a recent study (March 2016) conducted by the Faculty of Veterinary Medicine at CSU University in Colorado, on 30 beagles demonstrated that cannabidiol (CBD) consumption, without psychotic effects, is very well tolerated and does not pose a health risk even in case of overdose. The side effects of very high doses caused diarrhea and a higher level of enzyme in the liver but without serious consequence for dogs. This research is being written and the results are currently being peer-reviewed but the data is compelling enough to give the go-ahead to the writing of 2 other blind research protocols this time dealing with the treatment of epilepsy and osteoarthritis in dogs and the dosage of CBD appropriate for different health conditions. The scientific protocol of these researches eliminates any placebo effect that may result from the perception of dog owners.

These studies should pave the way for further research on the efficacy of CBD in the treatment of various medical conditions in animals that have already been successfully treated in humans.

THE LEGAL ASPECT OF CANNABIS

In Canada, recreational cannabis (containing THC) should be legalized in the coming months. Medical marijuana has been available for many years and Health Canada's site of the official supplier shows us a range of concentration and THC-CBD ratios for different diseases or medical conditions.

In the case of domestic animals, veterinarians are not allowed to prescribe cannabis products even though they contain only CBD. Currently, cannabis containing only CBD, therefore less than 0.3% of THC, is still considered a drug despite the fact that it produces no euphoric effect.

The same classifications and restrictions apply in the United States where the CBD is classified as a hard drug in the same way as heroin, LSD or methamphetamine.

All the regulations, procedures and permits that govern drug-related research have stymied scientific research on the potential benefits of CBD for domestic animals. In the United States, several faculties and university departments of veterinary medicine are awaiting approval to begin scientific research. Unfortunately, the federal government does not seem in a hurry to give the go-ahead, and senators from different states have been denied bills to get the CBD out of the hard drug class.

Dr. Richard Sullivan of the AVMA, recently told Congress: "We are asking for, and it is our duty to morally and ethically to address these cases. Get things moving... We need to be in the conversation."

It is only a matter of time because mentalities change quickly. We learned this week that the World Anti-Doping Agency allows sports athletes to use CBD for pain.

A document produced by the Collège des Médecins du Québec states that cannabis in the form of CBD oil, which therefore contains only cannabidiol, could be administered to children, suffering among other things from epilepsy.

CANNABIS FOR DOGS; CBD AND HEMP

The market for medicinal Hemp for pets is expanding and offers Hemp formulations with or without CBD to treat or reduce the symptoms of anxiety, arthritis, gastric problems, pain, fear of noise, inflammation, loss of appetite, nausea etc.

In Canada, companies cannot sell Hemp products containing CBD since it is still considered a drug. You can read on their sites that they are waiting for a change in the regulations to add some to their product, CBD oil or tinctures.

In the United States, veterinarians who live in states where cannabis is legal have marketed Hemp products containing CBD. Even though there are very few scientific studies specific to pets they rely on the fact that mammals have cannabinoid receptors like humans, and pending the results of scientific studies they hold account of all the reports of animal owners who testify to the improvement of the quality of life or the health condition of their animals. Even though these anecdotes have no scientific value, the ever-increasing number of successfully treated cases (several thousand) cannot be ruled out.

IF YOU WANT TO GIVE IT TO YOUR DOG

It is very understandable that people are frustrated by the ambiguity around Hemp and CBD for dogs. Veterinarians, both here in Canada and in the majority of the United States, cannot prescribe CBD to their clients because of their legal status. It often results that dog owners go with their instinct, especially if their pets are suffering and traditional medicine has not worked. If this is your case and you cannot get advice from your veterinarian, keep these few recommendations in mind:

THC can not be given to dogs

Do your research: This is especially necessary for products sold online. Avoid falling into a marketing trap where everything sounds too good. Read other users' comments, starting with the most negative ones. Do some research on the background of the company. Have they ever been the subject of legal proceedings? Are there veterinarians on the staff or do they work in collaboration with a Veterinary School?

Do not be fooled by the "Natural" label: No CBD cannabis product or Hemp that you could give to your dogs is natural. The plant itself, natural and unprocessed, **may contain more than 0.3% THC and should never be given to dogs.** All these products (oil, tinctures, treats, etc.) have been transformed in one way or another. Many of the products sold online come from the harvest of industrial Hemp. If Hemp is organic, there will be no pesticide or heavy metal residues. The plant may have grown close to home or come from far away, where the cultivation and extraction processes are less than ideal; if the company uses local and organic products, they will announce it. If they have their products tested for residues and metals, they will also say so.

CBD EXTRACTION PROCESSES: There are several extraction processes and the fastest and least expensive involves the use of solvents such as **butane and hexane** (rather than pure alcohol) which can leave toxic residues if the handling is not

neat. Butane is very toxic to dogs and cats.

DOSAGE: In the absence of a clinical study aiming to fix the dosage adapted to each medical condition, it is recommended to follow the indications of the supplier that you have chosen but remember that it is always better to start with the smallest possible dose to evaluate your dog's reaction. Continue for at least 5 days at low dose and gradually increase to the dosage indicated by the supplier or to achieve the expected result.

DOCUMENT THE TREATMENT: Make a diary of your dog's medical condition before and during treatment. To mimic a blind scientific research protocol, film your dog before and during treatment to avoid human bias in assessing progress or lack of progress. Ask friends or family if they notice a change without telling them that your dog is being treated with hemp or CBD.

BE CAREFUL: If your dog has tremors, gastrointestinal problems, if he is lethargic, disoriented or asleep, he may not be a good candidate for CBD or the dose may be too high.

If taking Hemp with or without CBD improves your dog's quality of life, talk to your veterinarian to encourage review of the legal status of the CBD and allow and promote scientific research.

THE DANGERS OF CANNABIS

Canada will surely have legalized the consumption of recreational cannabis within one year or less. Veterinarians have been alerted and better informed about the symptoms of accidental poisoning that may result.

Following the legalization of recreational cannabis in the state of Colorado, there has been an increase of over 400% in cases of Marijuana intoxication reported at both Denver University and Denver Specialty Clinic. Edible products such as cookies, brownies and other concentrates such as butter or wax are the most attractive for dogs that seem less interested in the plant itself.

SYMPTOMS OF EXPOSURE TO MARIJUANA (CONTAINING THC) IN DOGS ARE:

Difficulty walking, disturbed mental state (depression or agitation), dilated pupils, incontinence, increased sensitivity to stimuli, tremors, vomiting, excessive salivation, increased heart rate and low pressure. These clinical signs may appear 30 minutes after ingestion and last up to 72 hours. If the vital signs are good, the vet will monitor and the symptoms will go away on their own. Two dogs were reported to have died in Colorado of a significant dose of marijuana butter, and the most serious intoxication cases also involved chocolate in the preparation.

"Synthesis realize from recent information available on the net".



If you celebrate Easter, keep those Easter lilies and candy treats out of reach! Lilies can be fatal to your pet if ingested, and chocolate is toxic to cats, dogs and ferrets. Daffodils and tulips are among the plants that can be highly toxic to cats and dogs.

Open Windows without screens pose a great threat to your pets when they're open, and falls can result in a shattered jaw, punctured lungs, broken bones, or worse.

Poisonous Household Products, if you have any doubt about a particular household cleaning product or human medication being poisonous to your pets you can check this guide: <https://www.aspc.org/pet-care/animal-poison-control/poisonous-household-products>

Remember to use pet-safe fertilizers and pesticides, these products may be helpful to your garden, but they're really harmful to your pet, so stow them away when not in use and keep your pet out of the garden. Refer to the full list when thinking about starting up your spring garden. <https://www.aspc.org/pet-care/animal-poison-control/dogs-plant-list>

Spring means you might have a lot more doggy play dates in your future, so make sure your pup is up to snuff with his vaccinations so he can safely play with the other pooches.

Watch out for antifreeze, your pet might be tempted to drink from outdoor puddles in the warm weather. Dangerous substances like antifreeze could get into your buddy's system and cause some serious damage.

With the warmer months coming, bugs will be creeping around for sure. Heartworm is transmitted by mosquitos so remember flea and tick prevention. See tick removal with **peppermint oil**. <http://www.goodhousekeeping.com/health/wellness/news/a44272/tick-removal>