



VETERINARIANS CAUTION: MEDICAL MARIJUANA EXPOSURE IN PETS

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Cannabis, also known as marijuana, has been prominent in pet news recently due to the rise of its medical use in people, and its upcoming legalization across Canada. It is important for you to know about these products as we approach legalization, as the likelihood of your pet becoming exposed will increase as cannabis becomes more widely available.

Studies completed decades ago demonstrated that dogs are proportionately more sensitive than people to tetrahydrocannabinol (or THC), which is the well-known psychoactive compound responsible for the 'high' related with cannabis use.

An American study in 2012 by Meola and others reported increased rates of toxicity seen in dogs living in Colorado, a state with recent legalization of cannabis. In fact a four-fold increase in toxicities was reported between 2010 and 2015. However, a more recent review of calls to the ASPCA Poison Control Center revealed that even in the US states where cannabis was not yet legalized, there are also increased calls related to THC toxicity. It has been suggested that this pattern may be a result of the general shift towards cultural acceptance of cannabis use, and the growing use of cannabis edibles (which is the leading cause of intoxication in dogs).

In dogs, excessive intake can easily result in signs of toxicity. Smaller dogs are particularly susceptible due to the lower level required to produce symptoms. Cats are not immune to toxic side effects, but are much more selective in their food intake. Cats generally avoid eating garbage, scavenging cigarette-type butts on walks around the block, or table or counter surfing. They also lack a sweet tooth, so we do not see them take in 'pot' products like dogs do.

While the most common cause of THC intoxication is inadvertent oral ingestion (or in rare cases, intentional administration), all pets are at risk of respiratory irritation from second-hand smoke, and pets can be affected by smoke inhalation, *so pet owners are encouraged to smoke cannabis outdoors or away from their pets.*

What are the most common signs of excess cannabis exposure in pets?

- Sleepiness
- Depression
- Wobbling, pacing and agitation
- Sound or light sensitivity
- Inappropriate urination
- Dilated pupils
- Vomiting
- Bloodshot eyes
- Salivation
- Fast or slow heart rates
- Low body temperature
- Vocalization

Where does cannabis come from?

Cannabis sativa L plants are the source from which both recreational and medical cannabis products are prepared. Preparation includes drying of small leaves and flowers, or in some instances, further processing to produce oils or concentrates.

Different strains of cannabis can have a range of levels of THC, as well as other compounds that combine to produce the overall effect from that plant. The term "marijuana" has historically been used to refer to plant products containing moderate to higher levels of THC, vs. "hemp" which is cannabis plant that contains negligible amounts of THC (<0.3%).

What are the differences between cannabis products?

Cannabis can be broken down into three classes:

1. Medical

These products are available for human medical use through the Access to Cannabis for Medical Purposes Regulations (ACMPR). With a supporting medical document from a health care provider (Doctor or Nurse Practitioner), people can access a range of cannabis products through a Licensed Producer. These products can range from moderate to high CBD levels with negligible THC levels to products with a more balanced THC:CBD ratios, and also products with very high THC levels (up to 30mg/g) and little-no CBD. These medicinal products are used for a range of medical conditions in people, although they have not undergone testing for effectiveness by Health Canada.

*****Medical cannabis products that contain THC can be a toxicity risk for pets that are exposed.*****

2. Non-medical/Adult-use (Recreational)

These are products that will be legally available throughout Canada on October 17, 2018, when sold through licensed retailers under the Cannabis Act. Much like the products available for medical use, they will include a range of products with different levels of THC and CBD.

Products that will be available initially include:

- a. Dried flower that can be smoked or vaporized, or used in baking and other oral preparations for people.
- b. Oils and capsules to be taken orally
- c. Fresh plant greens (sometimes used for juicing)
- d. Live plant seedlings (non-flowering) and viable seeds to be used for home cultivation

Health Canada has announced that later in 2019, additional products will be available including:

- a. Topical products
- b. Concentrates
- c. Edibles

*****Products with higher concentrations of THC, particularly those incorporated into edibles, carry the greatest risk for pet toxicity.*****

3. Hemp

Hemp is legally defined as cannabis plants that contain less than 0.3% THC in the leaves and flowers.

It has traditionally been farmed for both industrial uses (textiles, paper, biodiesel, construction materials, etc) as well as for food (hemp seeds and hemp seed oil).

As a food source, some pet hemp *seed* products are available for legal purchase in Canada because the products contain negligible amounts of THC and are derived not from the flower or leaves of the hemp plant, but from the seed.

More recently, hemp has seen a resurgence in popularity as a medicinal plant as it is a good source of the non-intoxicating cannabinoid cannabidiol (CBD). CBD has been gaining popularity as a medicinal product with a broad range of benefits and minimal reported side-effects.

Because of legal differentiation between hemp and marijuana in the US, hemp is the most common source of pet 'medical cannabis'. These products typically contain CBD with little to no THC, and are available as oils, tinctures, or powder, and fall under different legal constraints than other cannabis products in the US.

Although hemp contains very low levels of THC, and minor to moderate levels of CBD, there is currently **little research** to know thresholds for toxicity (if any), although the data that is available suggests that it is well tolerated by animals and produces few side effects.

Despite its rapidly growing popularity among pet owners, it is important to note that there is currently still very little published clinical research to support efficacy and optimal dosages.

Pet hemp products are being promoted as aids for itching, anxiety, nausea, poor appetite, seizures, cancer, digestive problems, inflammation, immune disease, and reduced mobility due to joint pain in animals. *It is important to note however, that these health claims have not been approved by the US Food and Drug Administration (FDA) and are based primarily on anecdotal evidence.*

What about CBD?

All products containing CBD (regardless of their origin) currently fall under the Controlled Drugs and Substances Act (CDSA) Schedule II listing, and available only through products approved by Health Canada. As per Health Canada, we currently have no products approved for animal use.

On October 17, 2018 CBD (as well as all cannabis products) will no longer fall under the CDSA Schedule II listing, however they will continue to be regulated under the Cannabis Act.

Health Canada and the FDA consider all plant-derived cannabinoids (including CBD and THC) as prescription drugs. As such, with the exception of those products sold through the ACMPR or the Cannabis Act, any company selling products containing CBD that have not been approved for sale as a prescription drug, can be considered to be operating outside of the current legislation, and are not approved health products.

Summary

Further research is recommended to improve our understanding of the safety and effectiveness of cannabis in veterinary medicine. For now, cannabis of any type is not approved for use in animals, and giving products to your pet may have unknown side effects and unproven effectiveness. Exposing them to THC-rich cannabis products could put them in a critical medical crisis that requires prompt and appropriate medical treatment.

It is important to note that although veterinarians are currently not legally allowed to prescribe any cannabis products to pets however, pet owners who choose to use cannabis products for their pets, are encouraged to discuss their use with their veterinarian. Although

veterinarians cannot prescribe cannabis, they can provide pet owners with information on the emerging published studies as they become available, help to avoid potential drug interactions, and provide guidance on how to recognize and reduce the risk of adverse effects and toxicity.

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