The Use Of CBD In Dogs, Is This A New High?

By Kay McGuire, DVM, MS

As marijuana use laws are readily changing across the United States, there are 11 states and the District of Columbia where recreational use is lawful. As of July, 2019 there are 18 states which allow for medical use of marijuana in humans. The most common human applications of medical marijuana are uncontrolled epilepsy and chemotherapy induced nausea.

There has been a huge push of cannabidiol (CBD) products for animal treatment. There is no direct evidence for cannabis use in dogs and cats, though there is evidence of toxicity of marijuana. Dogs have increased THC receptors in the brain. There is no regulated animal use of CBD products for the veterinary professional and their use in animals is entirely experimental.

"*Cannabis sativa* has been used by humans for thousands of years for many therapeutic purposes. The discovery of cannabis-specific compounds, such as phytocannabinoids, and an endogenous cannabinoid system (ECS) have led to increasingly targeted research on the medical effects of cannabis and cannabinoids.

More specifically, you may have heard about the phytocannabinoid cannabidiol (CBD) and how it could have positive impacts on human and animal health. Many people believe CBD binds cannabinoid receptors found in the ECS, but research continues to emerge on just how CBD functions within the body. So, let's dive in to the most important question, "How does CBD work?"

Scientists have found that CBD has the ability to interact with G-protein-coupled receptors such as GPR55,

which have been shown to play a role in behavior, bone density, seizure control and pain reduction. CBD also interacts with the 5-hydroxytryptamine (5-HT) family, which can affect serotonin levels that play an important role in mood, happiness and wellbeing.

Developing a CBD product for animals is about safety first. Research still needs to be done.

There has been a double-blind, placebo controlled study of a CBD product for osteoarthritis in a small group of 22 dogs. This small group had a 27 percent dropout rate as only 16 animals finished the 10 week trial. These dogs were also allowed to use non-steroidal anti-inflammatories or neutraceuticals like chondroitin and the treatment group received CBD at 2mg/lb twice daily. The participants received a placebo or treatment for 4 weeks, allowed a two week wash out period, then the groups were reversed. Both owners and veterinarians felt the animal was less painful on the CBD treatment but the degree of lameness did not change. This study was properly formatted using a a double-blind study, a placebo, and randomization to prevent bias but the small sample size increased the risk of random error.

The one thing noted is the lack of adverse side effects in all dogs which may indicate the treatment was not active or did not properly detect side effects.

Another trial with CBD for the use in refractory epilepsy in dogs was published in 2019. This study again was a small group of dogs which met the required parameters. All participants had to be identified as idiopathic epileptic diagnosed by MRI, a cerebral spinal fluid analysis, and other diagnostics to rule out causes of seizures. The outcome revealed that dogs which had refractory seizures of 4 or more seizures per month decreased to 2.7 seizures per month. These dogs were dosed with CBD at 2.5mg/kg every 12 hours for 12 weeks.

With this study showing some evidence of that CBD might benefit seizure control activity, it has led to the Canine Health Foundation grant 02323: Efficacy of Cannabidiol for the Treatment of Canine Epilepsy. This study is being conducted at the Colorado State University under the principal investigator Stephanie McGrath, DVM, MS. The grant period ends in November, 2020; hopefully significant data will be collected.

Each state follows their own rules regarding hemp products. Be sure to consult your veterinarian on what product might be safely available, it is up to the veterinarians to know the current ruling of their State Veterinary Board.