



Botanical Pain Solutions for Pets and Horses

Endocannabinoid Support Formulas. 900 & 1800

The endo-cannabinoid system (ECS) is found in most animals, helping the nervous system and the immune system communicate to keep the body functioning normally. Research suggests that the ECS is involved with mood regulation, relieving pain, fighting cancer, metabolic balance and GI motility. Plant-based cannabinoids from hemp and other cannabis species can interact with the ECS, providing pain relief, soothing the nervous system and reducing inflammation. While most people know about THC from cannabis, they are less familiar with cannabidiol (CBD), a plant cannabinoid that has no psycho-active properties but has similar health benefits to THC. Industrial hemp is defined as a cannabis plant with less than 0.3% THC present. Hemp is legal to grow, use and sell in the USA. The principle cannabinoid found in industrial hemp, CBD, will not get a person or a dog "high", but will help with anxiety, pain, mobility, inflammation and seizure regulation.

How to dose CBD

Plant cannabinoids come from the oily, resinous parts of the hemp plant, and are usually delivered in an oil base. CBD oil is easily absorbed through the mucus membranes of the mouth, tongue and gums. However, oil put onto food, "edibles", and CBD treats are far less bioavailable, because absorbed from the GI tract, they must pass through the liver, whose job is to break down chemicals. Liver metabolism is thought to eliminate 80-90% of cannabinoids delivered in food. So, for best results, give CBD oil directly in the mouth, not in a treat or on your dog's food. Twice a day dosing works best for most animals, but that can vary by individual or disease. Recent toxicity studies have shown that CBD is very safe, even at high doses.

Why use CBD?

Many health problems in humans and animals are related to nervous system and immune system regulation. Scientists now speculate that some neuro-degenerative diseases may be caused by ECS dysfunction. CBD is most commonly used for reducing anxiety and phobias, helping arthritis pain and inflammation, helping regulating seizures and diabetes, and soothing nerve pain.*

Though each individual animal's response may vary, generally four levels of CBD dosing are used in pets:

Dose (per kg body weight)	Indications
Low (0.1 mg/kg)	Anxiety, fear, stress, behavioral issues, mild pain, muscle tension
Medium (0.2-0.5 mg/kg)	Osteoarthritis, moderate pain, muscle spasms
High (0.5-1.0 mg/kg)	Moderate to severe pain, neurogenic pain, degenerative myelopathy, tremors, idiopathic epilepsy, diabetes regulation, IBD
Ultra (1.0-5.0 mg/kg)	Refractory epilepsy, anti-neoplastic, refractory pain, hospice care

These doses represent a good starting point, but there can be individual variation. Dosage may need to be modified up or down to achieve best results.

Preliminary trials in horses suggest that pain and anxiety reduction can be achieved with as little as 20-25 mg CBD oil administered, rubbed onto the gums, once or twice a day.

How to calculate your pet's CBD dose

Start with the weight in pounds (W_{lb}). Divide by 2.2 to get weight in kilograms (W_{kg}). Multiply the W_{kg} by the desired dosage level for the problems listed in the chart above.

For example: Your 65 lb Lab is 12 years old, and can no longer jump into the car, hesitates on stairs. But still is active and tries to play.

Dosage level: Medium, start with 0.25 mg/kg

66 lb divided by 2.2 lb/kg = 30 kg.

$W_{kg} \times 0.25 \text{ mg/kg} = 7.5 \text{ mg}$

Using ECS900 (30 mg/ml), the dose given twice a day should be 8 drops or 1/4 ml.

Using ECS1800 (60 mg/ml), the dose given twice daily should be 4 drops.

Evaluate response after 3 days. If no relief of symptoms, increase dose by 25% until change is seen. Some rare individuals may experience a disinhibition effect, and show unwanted behaviors, like house soiling or aggression. Reduce dose by 25% until behaviors stop.

Plena Curae products are always 3rd party lab tested, 100% THC-free, and made in a GMP facility.

**These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.*