What you need to know about CBD for horses

By Karen Gellman, DVM

The CBD craze is in full swing, with big displays in every supermarket, pharmacy and feed store. What does this mean for you and your horse? Whether you’re an advocate or a skeptic, it’s worth learning more about this potentially useful herb.

Big money is being invested in cannabis worldwide, and there are plenty of unscrupulous players out there selling sub-standard products. Many CBD companies are also offering products for animals, including horses, with no veterinary knowledge or guidance. But let’s not throw out the baby with the bathwater! This mania would not exist if CBD, the principle non-psychoactive component of the cannabis plant, did not have the potential for far-reaching health benefits in both ourselves and our horses.

Since it was declared a Schedule One controlled substance in the 1970s, it has been illegal to use cannabis medicinally, or even to study it for such purposes. However, after the Farm Bill of 2018 made industrial hemp (cannabis with less than 0.3% THC content) legal in the US as an agricultural product, the door has been opened for a wide range of research and medical/veterinary applications. But there are still a lot of gray areas when it comes to CBD use — hemp extracts are being widely sold, but the FDA may yet decide that it will regulate isolated CBD as a drug. Other special

Is CBD legal?

Laws about hemp and CBD are rapidly changing and adapting to the new climate of the hemp industry’s exponential growth in the past 18 months. If you don’t like the regulations in your state, wait ten minutes! Unfortunately, the legal gray area often prevents vets from sharing their expertise on cannabinoids, and may even prevent them from learning more.
interests, like the tobacco and alcohol industries, are also eyeing cannabis as a new source of revenue, and are hoping to regulate recreational use in their own paradigms.

WILL MY HORSE GET HIGH FROM CBD?
Used medicinally for many thousands of years, the cannabis plant has two principle compounds and over 200 minor constituents. The most abundant compounds are THC (trans-Δ8-tetrahydrocannabinol) and cannabidiol. THC is the part of the cannabis plant used recreationally, and is associated with “stoner” culture. However, THC is also a powerfully effective medicine for chronic pain, psychiatric disorders, and cancer of many types. That is why almost all 50 states have medical marijuana laws. THC is psychoactive in humans and especially in dogs, who have a high number of CB1 receptors in their cerebellums, but little is known about its effect on other species. By contrast, CBD does not have profound psychoactive effects, and at low doses is very effective for soothing the nervous system without affecting cognition or balance.

HOW DO PHYTOCANNABINOIDs WORK?
The endocannabinoid system (ECS) helps the nervous and immune systems self-regulate and communicate. Acting primarily at nerve synapses, the ECS is thought to be involved in relieving pain, fighting cancer, in metabolic balance and the smooth operation of the gastro-intestinal system. Sounds like a miracle drug! Possibly this is because the receptors that bind phytocannabinoids (the cannabinoids that occur naturally in the cannabis plant) can intervene early in inflammatory cascades and prevent degenerative changes that cause health problems.

A limited amount of clinical research is available on using CBD in animals, due to the decades-long research blockade in the US. But recent studies have shown great promise for CBD in helping some very common problems in horses and dogs, like behavioral issues related to anxiety and pain from arthritis. For more serious conditions, like cancer, epilepsy and diabetes, animal caretakers should seek advice from a knowledgeable veterinarian before embarking on high-dose cannabinoid use.

The only side effect seen from using CBD in pets has been mildly-elevated liver enzymes. This side effect arose in research studies using very high doses — eight to 16 times the levels that knowledgeable vets would prescribe for dogs.

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There is a place for both in your pharmacopoeia. Full spectrum advocates appreciate the “entourage effect” of having multiple cannabinoids and terpenes, and there is some early evidence that full spectrum products may be more effective when very high doses are needed. However, very little is known about the actual benefits of many of the lesser cannabinoids, which occur in much lower amounts.

A CBD isolate product can be compounded with other oils, like MCT coconut oil or olive oil for better palatability, and can be dosed more precisely. Many people want to use the same products as their animals do, for convenience, while some need to avoid full spectrum because of possible drug testing at work, which could trigger trace amounts of THC.

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This suggests that many animals can get pain relief without the problems commonly seen with NSAID use, like GI upset or liver damage, when CBD is prescribed in proper dosages. But how does this translate to horses?

WHY SIZE MATTERS
Animals come in all sizes — from Chihuahuas to elephants! However, when it comes to medicines and supplements, doses don’t scale at the same rates as animal sizes increase. That’s because larger animals have slower metabolisms than smaller ones. A healthy cat’s heart rate can be 150 to 200 beats per minute; an adult human’s resting heart rate is only 70 to 80 beats per minute; and a typical equine heart rate is only 30 to 35 beats per minute. With his slower metabolism, a horse can operate more efficiently and use less energy to get around. This means the “by weight” dosage of many medicines can be far lower for horses than for humans, cats or dogs. For example, while the CBD dose for easing anxiety in dogs is around 0.1mg per kg body weight, research has shown that a dose of only 25mg of full-spectrum CBD oil, rubbed into the gums, helps similar issues in horses — which works out to only 0.05 mg/kg. This means that using CBD can be surprisingly affordable when helping soothe a horse’s nervous system.

CAN I USE CBD IN COMPETITION?
The answer is no. The USEF recently announced that, starting in September of this year, cannabinoids are not allowed during competition, and will be added to random drug testing programs. This ban is actually an early indicator of just how powerful CBD can be for behavioral and pain issues in horses. So if you ride competitively in shows that do drug testing, you will need to stop giving your horse CBD seven days before the event. FEI rules are following a similar pattern. Still, CBD can make a big difference for your retiree or your high-strung OTTB! Visit usef.org/media/press-releases/usef-announces-positive-tests-of-cannabinoids for more information.

The Kentucky-based Racing Medication and Testing Consortium released a bulletin in February 2019 declaring cannabidiol to be a Class 3b substance with unclear withdrawal times. They also warned about the possible risks of using untested products with unknown concentrations and contaminants.

HOW TO CHOOSE A CBD PRODUCT FOR YOUR HORSE
Don’t even consider a product that is not made using good manufacturing practices (cGMP), or does not have third party lab certificates of analysis available for every batch of oil. When choosing among “vetted” CBD products, evaluate how “user-friendly” the product and the company are. Do they have a proven track record — and do they have animal expertise? Multiple studies testing commercially-available CBD products find that many don’t offer the dosage they claim, and a surprisingly high percentage were merely hemp cooking oil. Buyer beware!

Better companies will have money-back guarantees on their products, and be able to answer your questions about the source of their biomass and the extraction process. Good products can be made using either ethanol or CO₂ extraction;
Not impressed with CBD results?

Take a closer look at your dosing method and amount.

1. **IS THE METHOD OF ADMINISTRATION CORRECT?**
   Cannabinoids are oily plant resins in their native form, and as bioactive particles, they get gobbled up by normal liver detoxification mechanisms when they pass through the GI tract. That’s why most CBD products are oils, and should be rubbed on your horse’s gums, not added to his grain. While some companies advertise water-soluble or micronized formulations for oral dosing, there are no studies yet to prove they can deliver a therapeutic dose without losing 80% to liver metabolism. For now, avoid any products that are advertised to go on top of food. In order to be effective, those products must contain five to eight times the CBD dose that has been shown to be effective with direct oral membrane administration.

2. **IS THE DOSE CORRECT?**
   High quality CBD, appropriately dosed, should take effect in five to 15 minutes, not weeks or months. Clinical trials have shown that horses seem to respond well to 20mg to 30mg for behavior/anxiety problems, and 50mg to 60mg for pain issues. There is some variability — some did fine on once-daily dosing, others better on twice a day. But the size of the horse did not seem to matter much.

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however, beware of poor quality incomplete extraction. Full spectrum CBD oil should have a light herbal aroma and flavor, and not taste like chemical residues.

For horses, look for a high potency product, between 20mg/mL and 60mg/mL. Many hemp products are sold in 1oz bottles because of the high cost. A 1oz bottle of 20mg/mL CBD contains 30mL, and will potentially give you 50 horse-sized servings if your equine partner is responsive to the low end of the dose. Higher potencies offer more scope for experimentation to find the “sweet spot” for your horse (see sidebar at left).

In a study conducted by Dr. Rob Silver, one of the leading veterinary cannabis experts in the US, it was found that a 50mg dose was more reliably effective for severe lameness, mild to moderate acute laminitis and equine metabolic syndrome. Surprisingly, although most CBD products are recommended for twice-daily dosing, some horses whose owners could only get to them once a day still responded well.

Whether miracle drug or useful supplement, CBD-rich hemp products are probably here to stay. Until more research and regulations are available, your best bet is to buy the highest quality products, and explore dosing cautiously.

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Dr. Karen Gellman holds DVM and PhD degrees from Cornell University in animal locomotion biomechanics. She has advanced training and certification in veterinary acupuncture and veterinary chiropractic, and has practiced these and other holistic modalities since 1995. She teaches about posture, biomechanics and holistic therapies to veterinarians worldwide, is research director of Maximum Horsepower Research and practices holistic veterinary medicine in New York State, and on a consulting basis. She recently took a deep dive into medical cannabis research and clinical applications as founder and chief veterinary officer of Plena Curae Botanical Solutions, which makes animal pain products sold exclusively through veterinarians.