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SITS & WIGGLES

The Newsletter of the Animal Clinic of Chardon

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WHAT IS IT ABOUT CATNIP?



I recently received a package of catnip in the mail. As I usually do, I dropped it off on the coffee table with the rest of the mail and went upstairs to change. After returning downstairs to get a glass of water, I entered the living room only to walk into a disaster. The package of catnip was ripped into shreds and there was catnip scattered across the floor. It wasn't too hard to figure out what had happened: the guilty parties were rolling in the catnip with big feline grins plastered on their whiskery faces, too dazed and confused to know whether to run or to blame the dog. It looked like a catnip grenade had exploded but all I could do was to laugh and giggle. As I was cleaning up the mess, it made me think about catnip. What kind of plant is it and why does it make cats crazy?

What is catnip?

Catnip, known scientifically as *Nepeta cataria*, is a member of the Lamiaceae, or mint family. Originating from Asia, Africa and Europe, it is now found all over the world and grows as a weed. Catnip is also used as an ornamental

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CATNIP CONTINUED

plant in many gardens because it is drought tolerant, deer resistant, and repels many insects. Interestingly, in addition to appealing to cats, its essential oil nepetalactone also attracts butterflies.

Why do cats love catnip?

Nepetalactone is found in the leaves and stems of catnip. When it enters a cat's nose, it binds to receptors on sensory neurons lining the nasal cavity. These neurons project to the neurons located in the olfactory bulb, which in turn activate different areas of the brain that control emotion and behavior. The effect is that cats tend to roll in it, lick it, and even eat it. Some meow and run around wildly, while others drool or become sedate and docile. The exact response depends on the cat and the dose consumed or inhaled. Like many things, the more your kitty eats or inhales the stronger the effect. In fact, some cats that binge too much may become anxious and even a bit aggressive. Luckily, the effect wears off quickly and usually within 15 minutes most cats are back to normal. Apparently, one third of all cats are not affected by catnip but I personally have not met a cat that didn't seem to love it. Scientists believe that a cat's response to catnip is hereditary and only affects sexually mature cats 6 months and older.

Is it dangerous?

Despite the crazy effects it has on some cats, catnip is harmless to our feline friends. And although cats seem to go mad over catnip, it is not addictive. So if your cat is a recreational catnip user, no need to worry about having to send him off to a feline Betty Ford center. Just let your normally sophisticated feline let loose and let their inner goofy kitten out! Written by Dr. Ruth MacPete, DVM

DO DOGS DREAM?

Whether or not dogs dream isn't known with scientific certainty, but it sure is difficult to imagine that they don't. We've all watched our dogs demonstrate behaviors in their sleep that resemble what they do in a fully awake state. Paddling legs, whining, growling, wagging tails, chewing jowls, and twitching noses inspire us to wonder what our dogs are dreaming about.

What we know about dogs and dreams

While our knowledge on this topic is very limited, the following known information helps us believe that dogs do indeed experience dreams. According to MIT News, Matthew Wilson, a professor of

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neuroscience at MIT, and Kenway Louie, a graduate student in 2001, have studied the relationships between memory, sleep and dreams. They found that when rats were trained to run along a circular track for food rewards, their brains created a distinctive firing pattern of neurons (brain cells). The researchers repeated the brain monitoring while the rats were sleeping. Low and behold, they observed the same signature brain activity pattern associated with running whether the rats were awake or asleep. In fact, the memories played at approximately the same speed during sleep as when the rats were awake.

Can we apply this to dogs?

Can we take what is known about dreaming in rats and humans and apply the information to dogs? Wilson believes that we can. "My guess is – unless there is something special about rats and humans – that cats and dogs are doing exactly the same thing," he said, according to USA Today's website.

It is known that the hippocampus, the portion of the brain that collects and stores memories, is wired much the same way in all mammals. According to healthday.com, Professor Wilson says, "If you compared a hippocampus in a rat to a dog; in a cat to a human, they contain all of the same pieces." He believes that as dogs sleep, images of past events replay in their minds, much the same way people recall experiences while dreaming.

In people it is known that most dreams occur during REM (rapid eye movement) sleep, according to the National Institutes of Health. Dogs also experience periods of REM sleep. Psychology Today's website says that during REM their breathing becomes more irregular and shallow. There may be muscle twitching during REM and, when one looks closely, rapid eye movements behind closed eyelids can often be observed. It is during REM sleep that behaviors thought to be associated with dreaming (legs paddling, twitching, vocalizing, etc.) are most commonly observed.



What we want to believe about dog dreams

When we observe our dogs as they sleep, it's just about impossible to imagine that they are not dreaming. Just like the rats studied by Wilson and Louie, it is tempting to believe that our four-legged best buddies are reenacting their recent experiences; playing at the dog park, sniffing in the woods, chewing on a treasured bone, and chasing squirrels.

The National Institutes of Health says that Sigmund Freud theorized that dreaming was a "safety valve" for our unconscious desires. Perhaps he is correct, and, when our dogs sleep, they dream about catching the neighbor's pesky cat, continuous belly rubs in conjunction with unlimited dog treats, and stealing the Thanksgiving turkey from the dining room table. Written by Dr. Nancy Kay, DVM, DACVIM

**Q: WHY SHOULDN'T YOU SIT NEXT
TO A TURKEY AT DINNER?**

**A: BECAUSE HE WILL GOBBLE IT
UP.**

ACOC Birthdays

11/17 Michaela

