



BEHAVIORAL MEDICINE

The term "behavior" is such a commonly used term with many different rather vague meanings. In veterinary medicine, you most often hear the term behavior in reference to how an animal acts - either socially acceptable or socially unacceptable. This is also often the way people generally think of behavior. However, ...

Behavioral medicine takes a very different perspective. **Behavioral medicine considers the physical behavior of the client/owner or patient and uses changes in this behavior to help treat the patient.**

Examples

1. *Patient*: A cat that is urinating outside the box (with all medical causes ruled out),

- Adding one more litter box than number of cats in the house
- If the cat has normal mobility, adding a cover to one or more of the litter boxes may help provide privacy if the individual cat is in a busy household.
- If the cat has mobility issues, using a litter box with low or no edge so the cat does not have to climb up over the edge to get into the litter box.

2. *Patient*: A dog diagnosed with mega-esophagus.

- Feeding small meatball size portions (3-4 meatballs at each meal), feeding small amounts more frequently throughout the day
- Feeding while the dog is sitting upright or standing (e.g., Bailey chair), so that food travels down the esophagus, facilitated by gravity, since the esophageal muscles do not function properly in mega-esophagus, to move the food down.

These examples are very basic examples of *Behavioral Medicine* in the veterinary field. But for the **K9FV** concept, it does not end there.



How does K9FV optimize the use of Behavioral Medicine?

1. Behavioral Diagnostics

To use behavior as a diagnostic tool, the clinician must understand the etiology (where it comes from) of behavior. Veterinarians are taught very simple concepts of brain function, behavior and its etiology. Essentially veterinary medicine limits the use of behavior as a diagnostic tool to helping to define disorders or disease that might involve the brain (e.g., rabies, West Nile Virus, seizure, dementia).

Because **K9FV is uniquely trained in neuroscience and psychology**, particularly in cognition and behavioral changes related to a wide range of central nervous system (CNS, Brain & Spinal Cord) abnormalities (e.g., trauma, repeated mild trauma, chemical injury, disease), **K9FV evaluates elements of behavior traditional veterinary medicine does not**. These include, but are not limited to the following.

- Species typical behavior
- Breed-dependent & breed-independent behaviors and personality traits
- Higher order cognitive function (e.g., visuo-spatial orientation, planning, execution, learning/memory)
 - Hippocampal dependent
 - Frontal and temporal lobe dependent
 - Working dog cognitive performance
 - Athlete competitive performance
- Complex v simple learning/memory
- Innate v learned behavioral traits (Nature v Nurture)
- Emotional maturity
- Attachment style
- Amygdala dis-inhibition
- Cortical, sub-cortical & cerebellar related movement
- Circadian rhythm
- Behavioral genetics
- Embryonic tissue lines (e.g., skin conditions that may related to neurological conditions)

Careful behavioral diagnostics are essential for devising an effect treatment plan.

2. Behavioral Medicine

As stated above, Behavioral medicine involves action-based treatment protocols. This can be in place of or in combination with other therapies (e.g., pharmaceuticals, nutraceuticals). **K9FV reaches beyond the traditional veterinary medicine uses of Behavioral medicine. a - K9FV begins the practice of Behavioral medicine by educating clients/owners and patients on understanding the etiology of altered behavior revealed in Behavioral Diagnostics.** Our unique and extensive training in this field allows us to share with our clients/owners, and on some level our patients, a level of knowledge and understanding not provided in the veterinary field. **b - K9FV extends the use of behavioral medicine to knowing when to increase certain patient actions and when to decrease them.** For example, German Shepherd Dogs (GSDs) are prone to degenerative myelopathy (DM), a neuro-muscular disorder that causes them to



"sink" in the hind limbs and gradually progresses throughout the body. DM has often been compared to Lou Gehrig's disease/Amyotrophic lateral sclerosis (ALS). This disease is often an unfortunate reason for humane euthanasia of GSDs. We are finding that acupuncture is one of the most effective treatments for DM in GSDs. *However* as small improvements are made, clients/owners (and even patients) latch on to doing more as they are able to do more. Neural injury/disease requires a great deal of metabolism/energy to recover. In fact, increased caloric intake (healthy nutrition, even specific amino acids) can be helpful during times of nerve recovery. At the same time, unlike muscle tissue, it is important not to push the injured nervous system. More exercise as patients improve, is not necessarily better. Understanding when it is helpful to increase activity and when it is not is an important behavioral medicine concept when treating neural disease like DM. Again, this is not a level of knowledge traditional veterinary medicine understands, let alone practices. **c - K9FV considers Behavioral Medicine techniques for every patient, appropriately.** Traditional veterinary medicine typically resorts to behavioral medicine when nothing else is working. *Because K9FV strives to minimize invasive medicine (e.g., anything entering the body), Behavioral Medicine is considered as part of any therapy where appropriate.*

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