



Cognitive dysfunction in dogs and cats

Cognitive dysfunction is the loss of neurons and neuroaxonal degeneration. It has similar characteristics to the human disease, Alzheimer's. It is most commonly seen in geriatric dogs and cats. Signs are often progressive, where early signs are often not recognized until they are more chronic or have worsened.

Signs of cognitive dysfunction

- Alteration of sleep/wake cycles
- House soiling when previously house trained
- Panting
- Pacing
- Drooling
- Appearing lost or seeming stuck in corners
- Anxiety, fear or agitation
- Seemingly not recognizing family members, changes in social interactions
- Disorientation
- Memory loss
- Increased vocalization or barking



Diagnosis

A thorough physical exam and history is the first step to a diagnosis. As many of these clinical signs can also be seen with other medical conditions, diagnostic tests such as complete blood count, chemistry and electrolyte panel, thyroid levels and urinalysis should be performed to rule out other conditions. A diagnosis of cognitive dysfunction is often made after ruling out other conditions.

Pain control

As many geriatric pets are also afflicted with degenerative joint disease or other conditions that may cause discomfort, it is important to ensure good pain control. This will also ensure that clinical signs such as pacing or panting are not secondary to discomfort.

Treatment of cognitive dysfunction

The use of medications, nutraceuticals, supportive care and therapeutic diets can be helpful in the treatment of cognitive dysfunction.

1. Medications

- a. Anypril (selegiline) is an approved medication used for the treatment of cognitive dysfunction in dogs. It is a once daily oral medication. It will often take 6-8 weeks to show maximal improvement in signs. Occasionally gastrointestinal upset or restlessness can be seen.





- b. Other types of medications may be used in addition to help with clinical signs such as anxiety or waking in the night.

2. Nutraceuticals and supportive care

- a. Zylkene is a nutraceutical formulated with casein from milk. This has been used to alleviate signs of anxiety that are seen with cognitive dysfunction.
- b. Antioxidants such as vitamin E and vitamin B can be supplemented to help reduce oxidative damage done to proteins and lipids in the brain. This oxidative damage is thought to contribute to cognitive dysfunction.
- c. S-adenosyl-L-methionine (S-AMe) is thought to help with cell membrane maintenance and cell function. S-AMe containing supplements can be used to help improve cognitive dysfunction, best started when early signs of cognitive dysfunction are noticed.



3. Therapeutic diets

There are two diets currently available for the support of cognitive dysfunction. Hill's canine b/d and Purina Pro Plan Veterinary Diets NeuroCare have supplemented antioxidants, omega fatty acids or long chain triglycerides for assisting with neural and brain health.

Where to begin

After ruling out any other medical conditions that may be affecting a geriatric pet and ensuing pain is not a contributing factor, a supplement, supportive care and medication plan can be formulated. A customized treatment plan will be created for you and your pet, focusing on the most pertinent signs. A 6-8-week course is needed to assess how well treatment is working at which time adjustments to the plan can be made to address the clinical signs that may still be observed. A plan focusing on environmental factors and learning is discussed as hand signals and training can often be used to stimulate dogs with cognitive dysfunction.

What to expect

It can be scary to learn of a diagnosis of cognitive dysfunction in a loved pet. Your veterinary team at Nanaimo Veterinary Hospital is here to support you and we want to work with you to help improve your pet's quality of life. We want to work together to help you maintain the bond you have with your pet as they age. Please contact us with any questions that you may have at 250-758-3985 or by email at nveth@shaw.ca

Additional readings

Senility in dogs (Veterinary Partners)

<https://www.vin.com/veterinarypartner/default.aspx?pid=19239&id=4952637>

Canine Cognitive Disorder (Pet Health Network)

<http://www.pethealthnetwork.com/dog-health/dog-diseases-conditions-a-z/canine-cognitive-disorder>