

Nutrition for Cats with Cognitive Dysfunction Syndrome (CDS)

What is cognitive dysfunction syndrome?

Cognitive dysfunction syndrome (CDS) has been found in both dogs and cats and is similar to human Alzheimer's disease, where cognitive decline leads to eventual dementia.

This age-related cognitive decline is present with specific behavioral changes that must be carefully evaluated to ensure that they are not due to other medical conditions.

While studies of CDS are available in dogs, studies of CDS in cats are limited and further research is needed to fully understand the impact of the disease process and progression, as well as the impact of various treatments.



Early identification of cognitive decline in cats, along with quick and appropriate steps to support cat cognitive health, is the best way to help control or slow the signs of disease and improve quality of life for both cat and owner. Twice-yearly veterinary health checks for middle-aged and senior cats are recommended, as this can help identify signs of CDS and allow a plan to be put into action sooner, which can hopefully improve your cat's brain aging process.

My cat is getting older and I've noticed some changes in their behavior. Could this be CDS? How is CDS diagnosed?

Many behavior changes in aging cats can be associated with CDS, but they may also be associated with other diseases that cats can develop as they age. CDS in dogs and cats is diagnosed by exclusion: all possible medical reasons for the behavior changes need to be ruled out before your veterinarian can be certain that your cat has CDS.

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Many older cats with CDS signs may have another disease as well, thus diagnosing and managing both diseases is essential to providing your cat with the best supportive care. You can achieve this level of care by partnering with your veterinary health care team.

What are typical signs associated with CDS that I should look for in my cat?

In the past, feline CDS signs were classified according to the standards for dogs, using the acronym DISHAA:

- Disorientation (getting stuck in familiar places, staring at walls)
- Social Interactions (altered interactions with family, visitors to the house or other animals)
- Sleep/wake cycles (pacing, restlessness, at night, excessive sleep during the day, or vocalization at night)
- House-soiling, learning and memory (decreased ability to learn new skills, lost ability to perform old skills, bathroom accidents indoors or decreased signaling the need to go out)
- Activity (decrease in exploration or play with toys, family members, or other pets; aimless wandering or pacing; and repetitive behaviors such as circling, chewing, or stargazing)
- Anxiety (increased anxiety when separated from owners, more reactive or afraid of sights and sounds, or increased fear of new places)

More recently, CDS-related behavioral changes in cats are summarized by the acronym VISHDAAL and include, but are not limited to:

- Vocalization (inappropriate vocalization, especially at night)
- Social Interaction (altered interactions with the family, especially attention-seeking)
- Sleep/wake cycle changes
- House soiling
- Disorientation (spatial and temporal; forgetting where the litterbox is or that they have been fed)
- Activity changes (wandering aimlessly)
- Anxiety
- Learning and memory deficits

If you notice changes in your cat's behavior associated with any of these categories, you should discuss these changes with your veterinarian so they can perform a more in-depth evaluation of your cat's cognitive health.

Since cognitive dysfunction can't be cured, are there steps I can take to support my cat's cognitive health and slow cognitive decline?

While it is true that there is no current cure for CDS, there are appropriate management steps that may reduce the impact of the disease and improve quality of life for both you and your cat. The cognitive signs your cat is showing will help direct your veterinarian on the plan for your cat.

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For example, if you notice changes in your cat's sleep-wake cycle, your veterinarian may recommend medication to help with anxiety (such as gabapentin) or may recommend supplements that can help manage stress or sleep, such as melatonin, Purina ProPlan Veterinary Supplements Calming Care Probiotic, Zylkene, or cat pheromone sprays or adaptors (e.g., Feliway) which can help support a happy or more calm feeling in your cat.

Sometimes, environmental adjustments are necessary, such as creating a separate room for your cat at night so that they may move around without disturbing you, or getting a timed feeder to help remind them when they have been fed. Other environmental enrichment can include providing your cat with the opportunity to perch, climb, and use hunting play.

Other adjustments might involve interaction time or scheduling. You might increase the time you spend interacting and playing with your cat so the cat is less likely to sleep during the day and may spend more of the night at rest. Or you might provide some entertainment during the day, such as leaving the television or radio turned on. Some people even provide their cats with “cat TV”, which could be a show about birds or fish, for the cat to watch while they are home alone during the day.



It is also important to ensure your cat has a home that is easily accessible and safe for them. This can be done by providing better lighting and appropriate footing in areas they like to frequent, a quiet and protected place to sleep at night, ensuring close access to a low-fronted uncovered litterbox, and maintaining consistent schedules, particularly around feeding. A strict feeding schedule provides your cat with the benefit of regular feeding, which can help prevent nutritional deficiencies, as well as a consistent pattern in their day, which can be beneficial for brain health.

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The saying “use it or lose it” is important in the management of CDS in cats. Making sure to actively engage your cat daily in activities that are stimulating and even slightly challenging will help maintain your cat's cognitive health. That can mean introducing new toys on a rotational schedule, finding new smells to introduce, having your cat chase a laser pointer, or encouraging other types of cat play: chasing and stalking, catching and batting, pouncing, bunny kicks or wrestling. Finding a positive way to engage your cat will help them keep their brain moving and help slow the progression of disease.

When should I start evaluating my cat's cognitive health?

You can start today. Consider the signs outlined above by both the DISHAA and VISHAAL acronyms and see if they apply to your cat. Studies have shown that motor performance of cats typically changes around age 10 or 11, but brain structure changes have been seen in cats as young as 6 years old. Thus, noting your cat's overall behavior and interactions is critical, and if you suspect a change, discuss it with your veterinarian at your earliest opportunity.

Are there nutritional adjustments I can make to support my cat's cognitive health?

Many commercial diets have undergone testing that measures their impact on cognitive health in dogs, although fewer of these diets exist for cats. Many such cognitive health diets include added medium-chain triglycerides (MCTs) as these have been shown to provide ketones – brain fuel for aging cats. A cat's brain prefers glucose as fuel, but as the brain ages, it becomes less able to use glucose efficiently – but can still use ketones.

Added antioxidants have also been shown to be beneficial in pets with cognitive health concerns (e.g., vitamin E, vitamin C, L-carnitine, and additional B vitamins).

Omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are known to help modulate the inflammatory process and can help a cat with CDS. EPA and DHA may be provided within a complete and balanced diet or as a supplement to fit within the 10% treat allowance. The brain is rich in DHA, so this valuable fatty acid should come from a good source of fish, fish oil, or marine algae oil.

Since oils can lose their potency and go rancid over time, ensure your Omega-3 source is fresh and has not been stored in a hot environment. While potentially more costly, buying smaller amounts of the EPA+DHA-rich sources (e.g., bags of food, bottles of fish oil) can help ensure these nutrients provide optimal nutritional benefit.



You can also adjust your feeding method. Feeding consistent meals on a regular schedule can help ensure your cat gets enough good nutrition, including energy and all the essential nutrients. The feeding interaction can also offer an opportunity for engagement with your cat, whether through active play with their food as a reward, or through an interactive cat feeder or puzzle toy that can further stimulate them throughout the day.

Many nutraceuticals or supplements have been studied for their potential impact on cognitive health as well, but these studies have mainly been in dogs. However, one study on a nutraceutical (Zylkene) based on bovine milk casein did result in some improvements in fearful behaviors of cats, thus may be of some benefit in some cats with CDS.

Probiotics in cats have also been used to help behavioral issues. Purina Pro Plan Veterinary Supplements Calming Care has been shown to help cats maintain calm behavior and promote positive behaviors like playing and engaging in social interaction.

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