

## Cognitive Dysfunction in Senior Pets

Cognitive dysfunction, or CD, can be compared to Alzheimer's disease in humans. CD causes behaviour and mental changes in geriatric dogs and cats. Currently there are no diagnostic tests for CD. Instead, veterinarians must rely on owner observations of changes in mood and behaviour to rule out other possible causes for these changes. Changes in behaviour may occur suddenly but are usually gradual in onset. They usually fall into several types of broad categories, which include changes in sleep, activity, appetite, and social interaction. Also, the pet may exhibit disorientation and loss of previous learning, such as house training and obedience commands, which could result in elimination in the house, and lack of response to verbal cues they had once obeyed such as "sit," "down," or "stay."

Most adult pets that live in stable family situations develop a routine. They get up at around the same time each day, usually in response to the family waking up, then continue to eat, play, rest, and exercise with a fair amount of predictability. Owners of a geriatric pet with CD may notice alterations in their pet's routine. Their pet may play less, or alternatively, begin spending a significant amount of time pacing or wandering the house. While a pet's total sleep will increase, nighttime wakefulness may become an issue, with the pet wandering around, vocalizing and disrupting the household's sleep patterns. The pet's interest in food may increase or decrease, or they may start to avoid foods they once liked and eat foods they had disliked. Changes in eating behaviour can also include pica (the eating of non-food items).

The first changes owners often notice are changes in social interactions and learning. A pet that had given a warm friendly greeting when someone returned home could now seem oblivious to the comings and goings of family members. Also, failing to recognize family members, a pet may become aggressive upon their return, treating them as a stranger intruding in their home. They also may show lack of interest when their owner or another pet initiates play. Sometimes it is incorrectly assumed that the pet is simply tired or "slowing down" due to old age. In other cases family members may think something is wrong but cannot specifically identify anything. Because most dog owners have carried out some obedience training with their pet, whereas many cat owners do not, dog owners are more likely to notice the changes consistent with CD. Cat owners who have not trained their pet to respond to verbal cues are more likely to notice changes in social interaction or elimination habits.

### Treatment

Treatment for CD, once diagnosed, is multi-pronged. Owners who are frustrated or angry with behavioural changes must first understand why they are happening.

#### Medication:

Medication may be prescribed to dogs in certain instances, but unfortunately there are currently no medications to treat cats.

#### Diet:

Diet is also important in slowing the progression of CD. A diet that is rich in antioxidants can help to increase alertness and learning ability and be very beneficial for aging pets. Although senior pets tend to sleep more and move less, it is important for them to maintain a modest level of exercise.

## Environment & Behaviour Modification & Enrichment

Environmental and behaviour modification can help with the quality of life of both pet owner and pet. Cats that are eliminating in inappropriate places because they don't remember where the litter box is may benefit from being taken to the litter box regularly. Geriatric cats can also benefit from adding litter boxes to every floor of the house, or moving the litter box next to where the cat spends most of its time so that the boxes are easily accessible. Treating senior dogs that are eliminating in the house as if they were puppies can be a useful approach. They should be taken outside frequently and praised profusely when they eliminate outside. Owners should avoid making major changes in the senior pet's home environment if possible. Mental stimulation is also important, owners should provide a stimulating environment with new toys or games, or training. Regular training, positive reinforcement of desired behaviour and ignoring undesired responses, stimulates mental activity.



In addition to specifically addressing issues of memory and learning, owners of geriatric pets should consider how to accommodate other changes that are likely to be occurring in the health of their pet. If the pet has trouble walking due to arthritis or other conditions, the owner may want to provide nonskid surfaces for walking and ramps for going in and out of the house. While small animals could be carried up and down stairs, a large dog that has difficulty negotiating stairs may need to have their routine modified to keep them to one level of the house. If the dog's sleeping area, including its bed, has historically been in the owners bedroom, it can be useful to move the bed downstairs and develop a routine of "putting the dog to bed" there, then waiting until it has fallen asleep before going upstairs.

In all cases, the family's routines and living situation, as well as the pet's needs, must be considered when making a plan to modify living arrangements for aging pets.