



CANINE COGNITIVE ASSESSMENT SCALE

Diagnosing Cognitive Dysfunction Syndrome (CDS)



To find out more information, please contact your PURINA representative.



CANINE COGNITIVE ASSESSMENT SCALE (CCAS)

Cognitive Dysfunction Syndrome

Cognitive Dysfunction Syndrome (CDS) is an irreversible degeneration of the brain similar to Alzheimer's disease in humans, characterised by progressive cognitive impairment beyond that expected to occur with ageing.

CDS has a slow onset, can be difficult to manage and affects an estimated 14% of dogs 8 years and older.

As a result of the advances in nutrition and veterinary medicine in recent years, the life expectancy of dogs has increased considerably.

This development goes hand in hand with an increase in the incidence of some cognitive impairment symptoms, such as Cognitive Dysfunction Syndrome (CDS).

CDS is a set of symptoms that are associated with the gradual and progressive loss of cognitive capacity in old dogs.

This can manifest itself through behavioural changes such as decreased learning ability, memory loss, decreased response to stimuli and confusion, this can severely affect the quality of life of the animal and the human animal relationship.

The diagnosis of CDS is one of exclusion; that is, in order to diagnose this syndrome, in the first place, medical problems that may be the direct cause of changes in behaviour or that may aggravate them must be ruled out.

Owners of dogs with symptoms compatible with CDS don't usually consult with a veterinarian, especially if the symptoms are considered mild.

In order to increase the diagnostic rate, veterinarians should inform pet owners about the advantages of early detection and early treatment on the quality of life and well-being of patients.

Although CDS is a degenerative disease that has no cure, carrying out the relevant management strategy, enables the chance to slow the progression of the symptoms and significantly improve the quality of life of the patients. The sooner the treatment is implemented, the better the response, hence the importance of early diagnosis.

Supplements and drugs can be used to improve neurotransmission, reduce oxidative stress and decrease inflammation to help:

- Slow the progression of the disease
- Recover cognitive abilities to a level where normal behaviours can be re-established
- Recover behaviours that had been learned and lost
- Improve the quality of life of the patient

Diets and dietary supplements formulated especially for older animals exist in the market, these compounds include botanical oils, which are a source of intermediate chain triglycerides (MTC).

MTC's increase the levels of ketones in the brain, providing an alternative source of energy to aged neurons, this results in a significant improvement in cognitive ability.

The combination of dietary management and environmental enrichment provides better results in cognitive function than if these measures are used separately.

What is CCAS?

In order for a dog to be diagnosed with CDS, pet owners must observe their dog exhibiting specific behaviours. CCAS helps owners identify these behaviours, enabling veterinarians and owners to work together to assess a dog's mental activity.

CAWEC is an Organization made up of diplomates from the European College of Animal Welfare and Behavioral Medicine. CAWEC is part of the Animal Welfare group in the Veterinary School of the Universitat Autònoma de Barcelona (UAB)

CANINE COGNITIVE ASSESSMENT SCALE (CCAS)

Developed by CAWEC for Purina*

 If you've noticed changes in multiple behavioural categories, be sure to talk to your veterinarian about the health of your pet's aging brain.



Date:	
Owners's name:	Pet's name:
Age:	Gender: ☐ Male ☐ Female
	Neutered/Spayed: ☐ Yes ☐ No
Breed:	Weight:
BCS (Body Condition Score 1-9)	Current Diet:
Medications and Dosage Frequency:	

The following questionnaire is designed to evaluate the possible changes of the behaviour of your dog as a consequence of ageing. CCAS helps owners and veterinarians to identify the behaviours that indicate changes in your dog's mental activity.

Please, describe only what you have seen in the last 6 months. If you cannot answer a question for some reason, please leave it blank.

Please indicate how often your dog shows each of the following behaviours:

0	1	2	3
Never	Once a month	Once a week	Almost everyday

D

DISORIENTATION (SCORE X2)

Score

- 1 Stares intently where there is nothing visible
- 2 Does not remember its way back home
- 3 Gets stuck behind objects or furniture
- 4 Stays on the wrong side of the door
- 5 Does not respond to certain stimuli to which it used to respond (for example, doorbell)
- 6 Does not give any signal when it wants to go out

S

SLEEP-WAKE CYCLES

- 7 Walks during the night (without an obvious reason), when it did not used to do this
- 8 Vocalises (barks, whines) during the night (without an obvious reason), when it did not use to do this

*Modified from Landsberg G, Mad'ari A, Zika N 2017. Canine and Feline Dementia. Molecular basis, diagnostic and therapy. Springer International Publishing, Switzerland.

Please complete the assessment on other side.

S**SOCIAL INTERACTIONS**

Score

- 9 Does not recognise familiar people
- 10 Does not recognise familiar animals
- 11 Shows more signs of fear or aggression towards people and/or other dogs than it used to

L**LEARNING AND MEMORY**

- 12 Urinates and/or defecates in new (inappropriate) places (when it did not use to do it)
- 13 Finds it difficult to respond to previously learned commands

A**ACTIVITY LEVEL**

- 14 Is less active or playful than it used to be
- 15 Shows repetitive behaviours (chases own tail, snaps at 'invisible' flies, etc.)
- 16 Walks without obvious purpose

A**ANXIETY**

- 17 Shows more signs of anxiety when separated from its owners than before (main signs of anxiety are shaking, shivering or trembling, excessive salivation, restlessness/agitation/pacing, whining, loss of appetite)

Once this form is completed, your veterinarian will help you to interpret the results and to establish the most adequate management strategy for your dog, if needed.

TOTAL**Interpretation of the score****0 - 7**

Normal ageing

8 - 40

Mild cognitive impairment

41 - 69

Severe cognitive impairment

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