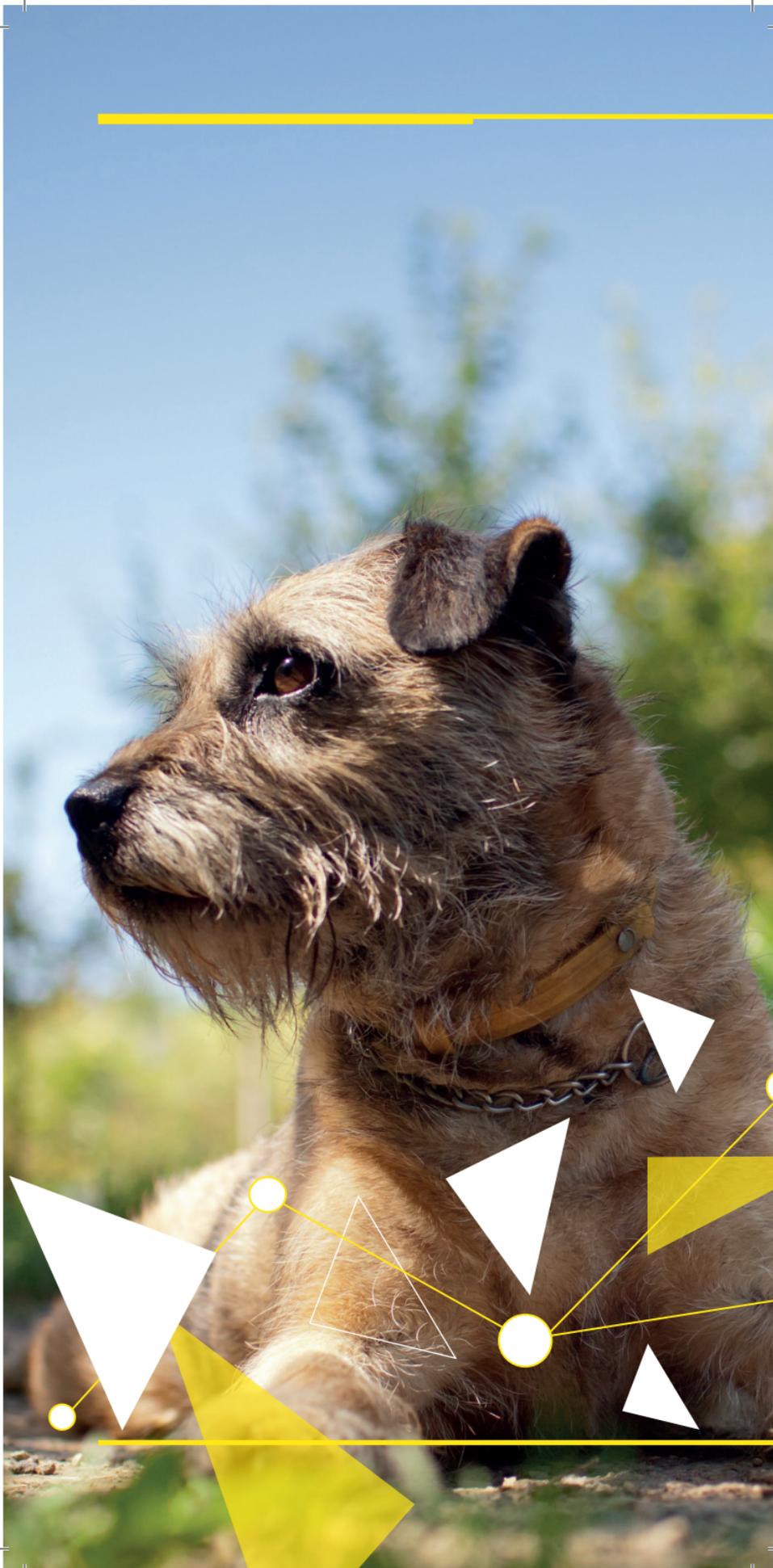


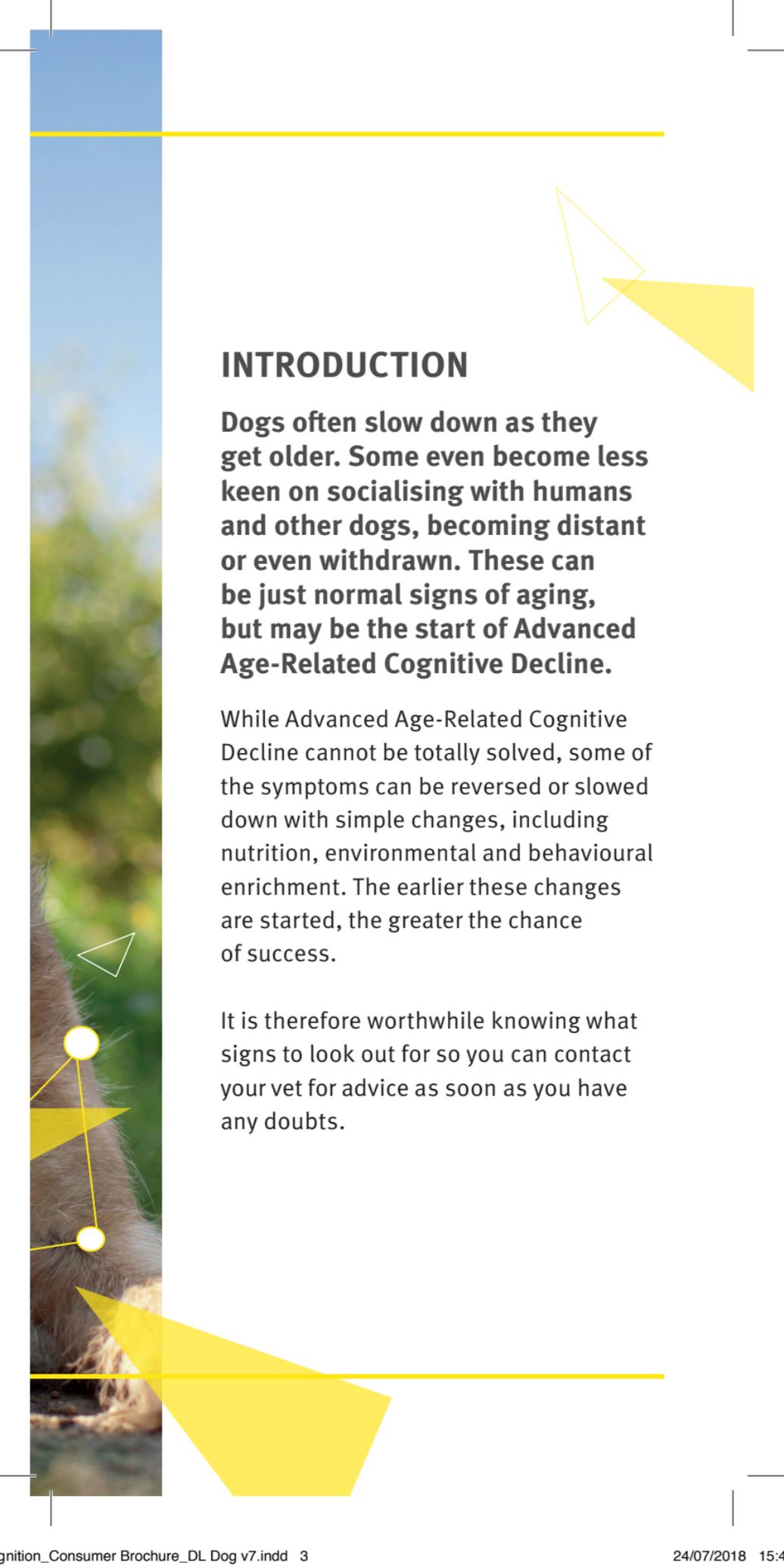


 PURINA[®]
PRO PLAN[®]

RECOGNISING THE SIGNS OF ADVANCED AGE-RELATED COGNITIVE DECLINE

A guide for dog owners from Nestlé Purina





INTRODUCTION

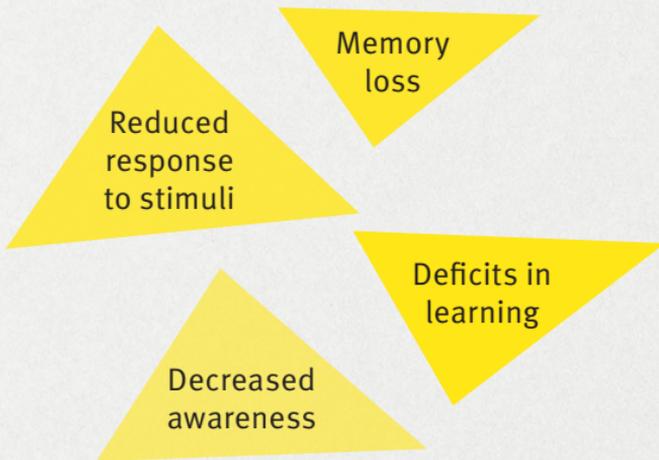
Dogs often slow down as they get older. Some even become less keen on socialising with humans and other dogs, becoming distant or even withdrawn. These can be just normal signs of aging, but may be the start of Advanced Age-Related Cognitive Decline.

While Advanced Age-Related Cognitive Decline cannot be totally solved, some of the symptoms can be reversed or slowed down with simple changes, including nutrition, environmental and behavioural enrichment. The earlier these changes are started, the greater the chance of success.

It is therefore worthwhile knowing what signs to look out for so you can contact your vet for advice as soon as you have any doubts.

WHAT IS ADVANCED AGE-RELATED COGNITIVE DECLINE?

Advanced Age-Related Cognitive Decline affects the brain of ageing dogs. Over time it leads to a number of changes, including:



Without support, the symptoms gradually worsen leading to increased “cognitive decline”.

HOW COMMON IS ADVANCED AGE-RELATED COGNITIVE DECLINE?

Cognitive decline is probably under-diagnosed. Many dog owners do not mention the signs to the vet, either assuming nothing can be done about them or believing they are just normal signs of ageing. What we do know is that (as in humans) as a dog gets older, the likelihood of developing more significant memory loss increases, as well as the signs of cognitive decline.

HOW IS ADVANCED AGE-RELATED COGNITIVE DECLINE IDENTIFIED?

Advanced Age-Related Cognitive Decline is complicated to identify. Vets use their expertise in canine geriatric health to identify dogs in this situation based on specific signs they are displaying – and by ruling out other potential causes (such as separation anxiety, aggression caused by pain and poor house-training).

Vets often use a questionnaire about the dog's behaviour to assess if Advanced Age-Related Cognitive Decline is likely.



WHAT SIGNS DO I NEED TO LOOK OUT FOR IN MY DOG?

Identifying Advanced Age-Related Cognitive Decline requires a detailed conversation and consultation with your veterinary surgeon. However, you are usually the first to notice subtle changes in your dog's health and behaviour.

The following questionnaire has been designed by dog behaviour experts at CAWEC for Purina, to evaluate the possible changes of the behaviour of your dog as a consequence of ageing. It helps owners and veterinarians to identify the behaviours that indicate changes in your dog's mental activity.

To assess if he may have Advanced Age-Related Cognitive Decline, answer the following questions. If you answer yes to 1 of the first 6 questions or to 3 questions of the general test, it's time to make an appointment with your vet to get a thorough assessment and discuss if any changes are necessary.

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.

D

DISORIENTATION

- 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

Developed by CAWEC for Purina



CAWEC

COMPANION ANIMAL
WELFARE
EDUCATION CENTRE

S

SOCIAL INTERACTIONS

- 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)

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

IF MY DOG DOES HAVE ADVANCED AGE-RELATED COGNITIVE DECLINE, WHAT CAN MY VET DO?

If your dog is identified as suffering from Advanced Age-Related Cognitive Decline, there are a number of management changes that may help.

These changes can help improve your pet's situation or slow the progression.

They have been shown to really make a big difference to the quality of life of affected dogs – and their owners.

The management strategies fall into 2 categories:

1

BEHAVIOURAL / ENVIRONMENTAL CHANGES

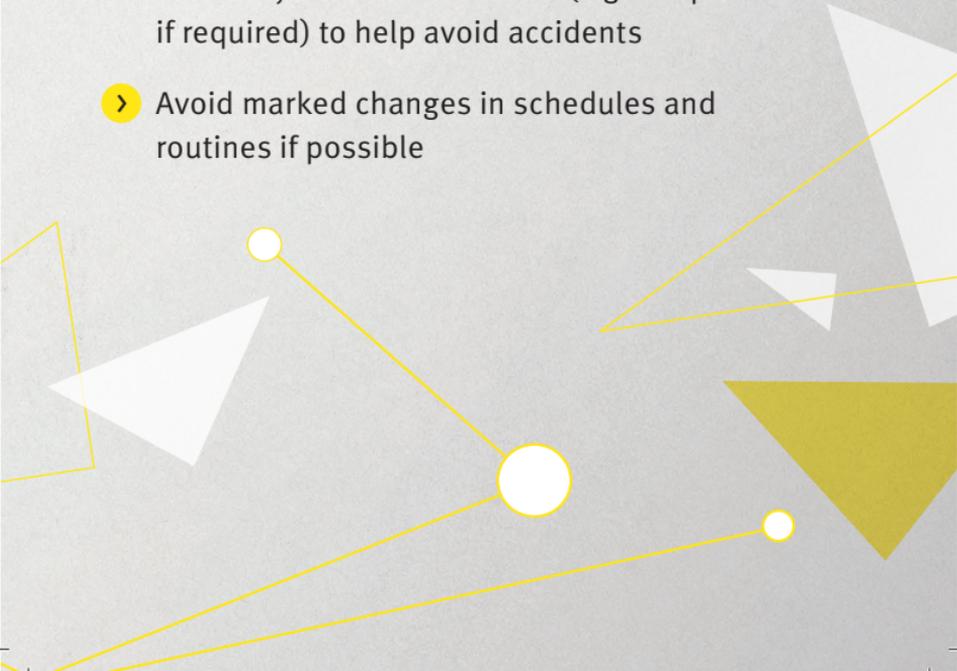
2

NUTRITIONAL SUPPORT



1**BEHAVIOURAL / ENVIRONMENTAL
CHANGES**

Dogs with Advanced Age-Related Cognitive Decline can benefit from alterations to their environment and the way owners interact with them. Your vet will make recommendations designed to help your dog's specific symptoms, but some ideas are:

- › Try to maintain daylight during the day (curtains opened) to increase day-time interaction and encourage night-time sleeping
 - › Increase physical and mental stimulation – consistent play and exercise routines help promote cognitive health
 - › Provide frequent opportunities for toileting with easy access to outdoors (e.g. ramps if required) to help avoid accidents
 - › Avoid marked changes in schedules and routines if possible
- 



**Nutritional
support**
can help promote
cognitive health

IF MY DOG DOES HAVE ADVANCED AGE-RELATED COGNITIVE DECLINE, WHAT CAN MY VET DO?

2 > NUTRITIONAL SUPPORT

It has long been known that the human brain can be helped by eating a healthy, complete and balanced diet containing plenty of fruit and vegetables. Likewise, feeding an optimal diet to dogs with Advanced Age-Related Cognitive Decline can make a big difference.

Nutritional support is designed to help reduce oxidative stress to the brain and help address the decline in glucose metabolism which is associated with cognitive decline. Nutrients which are particularly interesting include:

- > **MCT** (medium chain triglyceride) oil which provides an alternative source of energy for the brain
- > **Antioxidants** to reduce oxidative stress to the brain
- > **Omega-3 fatty acids** to help reduce inflammation and support the brain's structure

PURINA® PRO PLAN® has developed 2 nutritional solutions which contain a unique combination of nutrients.

FOR ADVANCED AGE-RELATED COGNITIVE DECLINE

CLINICALLY PROVEN EFFICACY

HIGH QUALITY IN

PURINA® PRO PLAN® CANINE NC NEUROCARE



NEUROCARE

A complete dry food for adult and senior dogs. Specially formulated with MCT (medium-chain tryglicerides) and neuroprotective nutrients, clinically proven to help enhance brain function and help manage age-related cognitive decline.

* Based on declared amount of MCT in the ingredient list

NEUROCARE – The advanced nutritional solution from PURINA® PRO PLAN®

TY INGREDIENTS

HIGHLY PALATABLE

KEY BENEFITS

BRAIN FUNCTION



BRAIN FUNCTION

Formulated with MCT and neuroprotective nutrients clinically proven to help enhance canine brain function

COGNITIVE FUNCTION



COGNITIVE FUNCTION

Specially formulated to help support cognitive function in senior dogs. Visible results in 30 days

MCT



MCT

Ketogenic diet that provides an alternative source of energy for the brain



FOR NORMAL AGEING CHANGES

HIGH QUALITY INGREDIENTS

SUCCESSFULLY TEST

**PURINA® PRO PLAN®
SMALL & MINI
ADULT 9+ WITH
OPTIAGE**



**PURINA® PRO PLAN®
MEDIUM & LARGE
ADULT 7+ WITH
OPTIAGE**



Clinically proven
to enhance brain
function in
ageing dogs

Visible results in 30 days

OPTIAGE™

OPTIAGE™ is proven to improve cognitive function and mental alertness in senior dogs and has been included in Purina® PRO PLAN® Small and Mini Adult 9+ and Medium and Large Adult 7+

A study from Nestlé PURINA has proven that the OPTIAGE™ blend:

- Improves memory and interactivity in older dogs
- Helps increase the ability of a senior dog to adapt and cope with changes
- Increases a senior dog's attention span and alertness

17. Pan Y, Larson BT, et al. Brit J Nutr (2010): Dietary supplementation with medium-chain TAG has long-lasting cognition-enhancing effects in aged dog.

OPTIAGE – Specially formulated to support cognitive function in senior dogs

TESTED FORMULAS

HIGHLY PALATABLE

Key Benefits Small & Mini Adult 9+



SUPPORTS COGNITIVE FUNCTION

With an alternative brain energy source fractionated from botanical oils resulting in a more curious and responsive dog



SUPPORTS BETTER SOCIAL INTERACTION

Helps maintain interaction with his family thanks to improved brain function



TOTAL ORAL CARE

The small crunchy kibble has a natural brushing effect on teeth and the extra special minerals added reduce tartar build up

Key Benefits Medium & Large Adult 7+



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Helps maintain interaction with his family thanks to improved brain function



MAINTAINS HEALTHY MOBILITY

It contains EPA, an omega-3 fatty acid, and glucosamine to help support joint health and mobility

 **PURINA**
PRO PLAN

For more information about the PURINA® PRO PLAN® cognition range, ask your vet or contact Nestlé Purina at xxxx

 **PURINA** Your Pet, Our Passion.®