

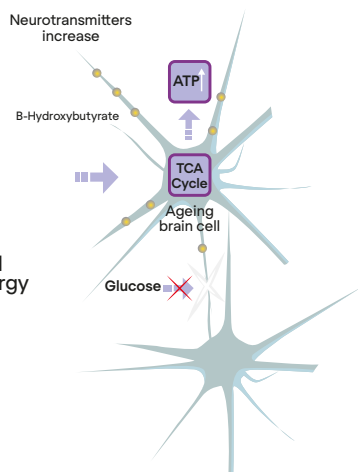
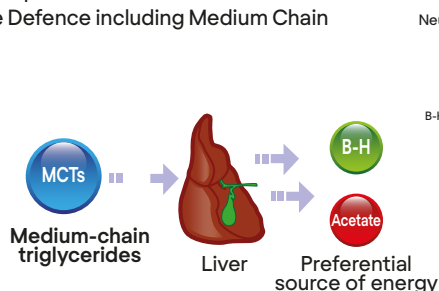
AGE DEFENCE: A NUTRITIONAL SOLUTION FOR SENIOR DOGS

Dogs over seven years have significant but often sub-clinical changes in brain function. Research has shown that typically, from seven years of age, canine neurones gradually lose the ability to use glucose as an energy source leading to neuronal apoptosis and ultimately brain dysfunction¹.

Nestlé PURINA® Research and Development teams have proven that a patented* blend of nutrients in Age Defence including Medium Chain

Triglycerides (MCTs) can dramatically improve cognitive function in older dogs², help restore declining brain function and help slow further deterioration.

MCTs are converted into aceto-acetate and beta-hydroxybutyrate by the liver; these ketone metabolites are then effectively (and preferentially in the older dog) used by brain neurones as an alternative energy source for cellular function.

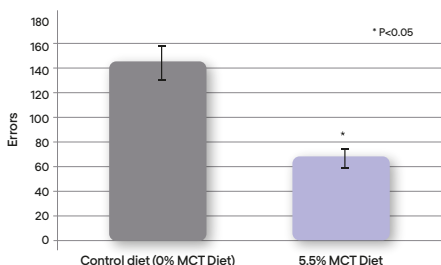


MCTs have been demonstrated to help improve cognitive function and mental alertness in senior dogs and have been incorporated at scientifically proven effective levels in the PURINA® PRO PLAN® Small & Mini Adult 9+ and PURINA® PRO PLAN® Medium & Large Adult 7+ products.

A study from Nestlé PURINA® has proven that the Age Defence blend²:

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

DOGS FED MCTs HAD IMPROVED COGNITIVE FUNCTION AS MEASURED DURING MEMORY AND LEARNING TASKS



1. London *et al.* (1983) Regional cerebral metabolic rate for glucose in Beagle dogs of different ages. *Neurobiol Aging*, **4**(2):121-126.
 2. Pan Y, *et al.* (2010) Dietary supplementation with medium-chain TAG has long-lasting cognition-enhancing effects in aged dog. *Brit J Nutr*, **103**: 1746-1754.
 * Patent pending in Europe.

SMALL & MINI ADULT 9+ AGE DEFENCE

Complete pet food for small & mini size dogs
aged from 9 onwards.



Proven to help support brain function in ageing dogs



3 kg

KEY BENEFITS

✓ Maintenance diet for senior dogs < 10 kg



Improves curiosity and responsiveness by supporting cognitive function. Visible results possible in 30 days



Proven to help support brain function and helping to promote interaction with the family.

Medium chain triglycerides from botanical oils provide a readily available source of energy for dogs' ageing brain cells.



Maintains healthy mobility and helps support joint health thanks to EPA, an omega-3 fatty acid, and glucosamine



Formulated to help reduce tartar build-up and total dental care

Contains a calcium chelator proven to reduce tartar accumulation by 36%

COMPOSITION & KEY NUTRIENTS

COMPOSITION

High quality chicken (including back and chest) (15%), dried poultry protein, wheat, rice (12%), corn, corn protein meal, vegetable oil fractions (5.5%), dried beet pulp, wheat gluten, soya meal, minerals, animal fats, fish oil, digest, yeast.

KEY NUTRIENT VALUES*

Moisture	8.0%	Calcium	1.28%
Protein	29.0%	Phosphorus	0.93%
Fat	15.0%	Vitamin A	26262 IU/kg
- Omega-6 fatty acids	1.5%	Vitamin D ₃	1226 IU/kg
- Omega-3 fatty acids	0.3%	Vitamin E	561 IU/kg
- EPA	0.1%	Vitamin C	83 mg/kg
Carbohydrate	38.5%	Glucosamine	400 mg/kg
Crude fibre	2.0%	Metabolisable energy (ME) ¹	386kcal/100g

* Typical analysis in the final product as fed. ¹ Calculated following NRC 2006 equations.

FEEDING GUIDELINES

DAILY FEEDING QUANTITY (ADULT MAINTENANCE FOR DOGS AGED FROM 9 ONWARDS)

Body weight (kg)	< 1 h activity (g/day)	1 to 3 h activity (g/day)
1	30	35
5	90	105
10	145	170

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