

Canine Geriatric Basics

For maintaining a good quality of life in the older dog

ThorneVet's Canine Geriatric Basics provides 22 essential vitamins and minerals that are needed to help maintain the foundational health of the older dog, as well as 14 additional synergistic nutrients – amino acids, botanical extracts, and powerful antioxidants like Coenzyme Q10 – that enhance multiple bodily processes and functions of the senior dog.

Key Nutritional Support Features

- Support for all aspects of healthy aging, especially immune, thyroid, and vision function
- Multiple nutrients that provide powerful antioxidant activity to minimize oxidative damage
- Amino acids that support neurological, cardiovascular, musculoskeletal, and GI health
- Nutrients that enhance cellular energy production and optimal adrenal gland function



Canine Geriatric Basics - Special Nutrients

Foundational Support - Vitamins

Canine Geriatric Basics contains the active forms of all eight B vitamins: Thiamin (vitamin B1), Riboflavin 5'-Phosphate (active vitamin B2), Niacin and Niacinamide (two forms of vitamin B3), Pantothenic Acid (vitamin B5), Pyridoxal 5'-Phosphate (active vitamin B6), Methylcobalamin (active vitamin B12), 5-MTHF (active folate), plus the B vitamin-like Biotin (used by multiple enzymes to break down carbohydrates and fats, and for skin and coat health) and Choline (for magnesium absorption). Both individually and together, these 10 vitamins promote cellular energy production and support healthy cardiovascular and neurological function. In addition to the B vitamin complex, Vitamin A (for eye health), Vitamin C (for immune function), Vitamin E (for its antioxidant activity), Vitamin D3 (for bone and muscle health), and Vitamin K (for blood vessel health) contribute well-known and important nutritional support to the senior dog.

Foundational Support – Minerals

The five minerals in Canine Geriatric Basics contribute well-known and essential nutritional support for multiple structures and functions of the senior dog: Magnesium (for heart and muscle health), Zinc (for immune health and antioxidant activity), Iron (for red blood cell formation), Potassium (for kidney and urinary tract health), Chromium (for blood sugar metabolism), Copper (for bone and cardiovascular health), and Iodine (for optimal thyroid gland function, especially for the older dog with low energy).

Amino Acids

The five amino acids in **Canine Geriatric Basics** support a senior dog's neurological, cardiovascular, musculoskeletal, and gastrointestinal functions. **L-Tyrosine** supports neurological health by increasing the production of the neurotransmitters dopamine, epinephrine, and norepinephrine. **DL-Phenylalanine** helps relieve pain by increasing the endorphin and enkephalin levels in the central nervous system. **Acetyl-L-Carnitine** helps the body produce energy by enabling the dog's body to turn fat into energy, as well as supporting heart and brain function and muscle movement.

L-Methionine, a sulfur-containing amino acid, contributes to the repair of body tissues, supports the growth of new blood vessels, improves the skin's tone and elasticity, and promotes a healthy coat. **L-Methionine** is also a substrate for other amino acids (such as cysteine and taurine), for versatile compounds such as SAM-e, and for the important antioxidant Glutathione. Although **L-Glutamine** supports wound healing and helps maintain immune health, it is found in the highest concentration in the GI tract, where it is used the most. Various stress factors, including aging, can adversely affect nutrient absorption in the GI tract, which can lead to food allergies. In numerous animal studies, **L-Glutamine** improved nutrient absorption and immune function in the GI tract.

Botanical Extracts

Older animals are affected much more than we think by stress – like changes in their environment, diet, and the coming and going of their human companions. Botanical extracts that are categorized as "adaptogens" help a senior dog's body adapt to physical and emotional stress by supporting the normal function of the animal's adrenal glands. Ashwagandha extract and Eleuthero extract (also known as Siberian ginseng) are recognized as premier adaptogenic botanicals. Bilberry extract, an extensively studied botanical, promotes eye health because it supports the connective tissues in the retina and cornea.

Other Supportive Nutrients - Including Antioxidants

Coenzyme Q10 (also known as CoQ10) helps generate cellular energy. Although a dog's body produces CoQ10 naturally, CoQ10 production decreases as the dog ages. CoQ10 is stored in the mitochondria, which produce the body's energy, so sufficient CoQ10 is important. Becasue CoQ10 is also a powerful antioxidant, its presence protects the mitochondria from oxidative damage. Although CoQ10 is present in every cell of a dog's body, its highest concentrations are found where energy demands are the greatest, such as in the heart, kidneys, lungs, and liver, the proper functioning of which is always important in an older dog.

Although Phosphatidylserine, a fatty substance produced naturally in the body, covers and protects every cell in the body, it is particularly vital for the proper functioning of nerve cells in the brain, where it acts as a neurotransmitter to transmit messages between brain cells. Animal studies indicate that Phosphatidylserine levels in the brain decrease with age.

Mixed Bioflavonoids are included for their antioxidant activity, as well as their action in enhancing the transport and activity of more powerful antioxidants like Vitamin C, particularly Vitamin C's ability to be absorbed and utilized.

Beta-Carotene converts in the body to Vitamin A. Older dogs utilize Vitamin A for vision and eye health, for a strong immune system, for healthy skin and mucous membranes, and for its antioxidant activity.

Although often referred to as **Vitamin B8**, **Inositol** is not a vitamin at all, but a type of sugar that has several important functions, such as being a structural component of cell membranes, enhancing insulin's effects on blood sugar, and balancing serotonin and dopamine levels in the brain.

Alpha-Lipoic Acid, a powerful antioxidant, prevents cell damage throughout the body. The antioxidant properties of Alpha-Lipoic Acid are linked to maintaining normal blood sugar levels, reducing inflammation, slowing skin aging, and improving nerve function. Alpha-Lipoic Acid also enables several enzymes to turn carbohydrates into energy.



Canine Geriatric Basics Maintains a Good Quality of Life in Older Dogs

1 scoop per 25 pounds of body weight daily

450
GLUTEN FREE

Active Ingredients per 2-cc scoop:		Phosphatidylserine Isolate	6.2 mg	Biotin	10 mcg
Ascorbic Acid (Vitamin C)	62 mg	Alpha Lipoic Acid	5 mg	Copper (Picolinate)	10 mcg
d-Alpha Tocopheryl (Vitamin E) (50 IU)	41.3 mg	Eleuthero extract (root)		Folate (L-5-Methyltetrahydrofolic Acid,	
Ashwagandha extract (KSM-66®)†		(Eleutherococcus senticosus)	5 mg	Glucosamine Salt)	10 mcg
(root) (Withania somnifera)	25 mg	Choline Citrate	5 mg	lodine (Potassium lodide)	10 mcg
DL-Phenylalanine	25 mg	Niacin	3 mg	Methylcobalamin (Vitamin B12)	10 mcg
L-Glutamine	25 mg	L-Methionine	2 mg	Vitamin K1	5 mcg
L-Tyrosine	25 mg	Inositol	1 mg	Vitamin D3 (75 IU)	1.9 mcg
Bilberry extract (fruit) (Vaccinium myrtillus)	15 mg	Beta Carotene (1,000 IU)	600 mcg	Inactive ingredients:	
Coenzyme Q10	15 mg	Magnesium (as Albion®		Flaxseed, silicon dioxide.	
Calcium Pantothenate (Vitamin B5)	10 mg	DiMagnesium Malate)††	500 mcg	riaxseeu, silicon dioxide.	
Mixed Bioflavonoids	10 mg	Zinc (Picolinate)	500 mcg		
Niacinamide	10 mg	Iron (as Ferrochel® Ferrous			
Riboflavin 5'-Phosphate (Vitamin B2)	10 mg	Bisglycinate Chelate)†††	250 mcg		
Thiamin (Thiamin HCI)	10 mg	Vitamin A (Palmitate) (750 IU)	225 mcg		
Pyridoxal 5'-Phosphate (Vitamin B6)	7 mg	Potassium (Citrate)	100 mcg		
Acetyl-L-Carnitine		Chromium (as TRAACS® Chromium			
(Acetyl-L-Carnitine Chloride)	6.2 mg	Nicotinate Glycinate Chelate)††††	20 mcg		

V937-P / 90 Scoops