



# YOUNG AT HEART™

## Senior Dog Health



K9 Power **Young at Heart™** is a formula designed to give your senior dog the necessary nutrients to keep their body going strong and functioning properly. With a balance of key ingredients, **Young at Heart™** promotes healthy aging with an emphasis on joint, vision, heart, ocular, digestive, and immune health.

- + Made for the Senior Dog
- + Supports and Promotes Long-Term Health
- + Helps Maintain Optimal Health
- + Supports Healthy Immune System Function

## Product Facts

**Active Ingredients per 10g scoop: 45 scoops per container. Scoop included.**

Whey protein isolate .....	2,000 mg
Proprietary Blend .....	700 mg (Blueberry fruit powder, Green tea extract, Bilberry extract, Ginkgo biloba extract, Rutin, Tart cherry powder, Turmeric)
Salmon oil powder .....	500 mg
ProbioSEB Duo™* .....	250 mg (Bacillus subtilis, Bacillus coagulans, Lactobacillus sporogenes)
Inulin (agave source) .....	200 mg
Vitamin C (as L-ascorbyl-2-polyphosphate) .....	200 mg
Choline Chloride .....	170 mg
L-leucine .....	120 mg
L-isoleucine .....	100 mg
L-valine .....	100 mg
Coenzyme Q10 .....	50 mg
L-carnitine (as hydrochloride) .....	50 mg
L-taurine .....	30 mg

\*20 billion CFU/g; contains *Bacillus subtilis* (8 billion CFU/g) and a mixture of *Bacillus coagulans* and *Lactobacillus sporogenes* (12 billion CFU/g).

**Inactive Ingredients:** Camelina meal, chicken powder, mixed tocopherols, pork liver powder, pumpkin seed powder, stabilized rice bran, whole egg powder.



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### YOUNG AT HEART™ INGREDIENT PANEL

- As the dog ages, its organ systems become less efficient in metabolizing nutrients and there often is need for functional ingredients that will maintain or enhance the health and well-being of the dog. The desire of all dog owners is for them to live a long life, but yet a quality life as free as possible from the various morbidities that can result from advancing age. Our Young at Heart™ supplement is designed to do just that.
- We start with **whey protein isolate** that contains over 90% crude protein with an excellent balance of amino acids to include high concentrations of leucine and isoleucine important for the prevention of muscle breakdown with age. It is made up of 4 different types of protein: beta-lactoglobulin (~65%), alpha-lactoglobulin (~25%); bovine serum albumin (~8%), and select immunoglobulins (2%). It has been shown to increase bone density by promoting bone growth and preventing bone breakdown. Finally, it is an immunomodulatory agent that aids in ensuring optimal immune activity. Supplemental **L-leucine**, **L-isoleucine**, and **L-valine** (branched-chain amino acids) are added to Young at Heart™ so as to enhance the activity of the **whey protein isolate**.
- Next, we have our **proprietary blend** of **blueberry powder**, **green tea extract**, **bilberry extract**, **Ginkgo biloba extract**, **rutin**, **tart cherry powder**, and **turmeric**. This mixture is a potent natural antioxidant with anti-inflammatory and antimicrobial properties. It has been shown to have positive effects on vision, immunity, cognition, renal health, skeletal health, digestive health, and cardiovascular health. It also has been shown to have anti-carcinogenic properties. Collectively, this blend is known to increase circulation of blood throughout the body by decreasing capillary fragility, thus impacting nearly every organ system in the body.
- **Salmon oil powder** is a rich source of omega-3 fatty acids, anti-inflammatory compounds that play a role in optimal health of the heart, liver, brain, and nervous system of the senior dog. The primary omega-3 fatty acids found in this ingredient are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Research has linked these two fatty acids to a variety of health benefits as they suppress the body's inflammatory response by reducing concentration of pro-inflammatory cytokines produced by the immune cells.



- **ProbioSeb Duo™** is a synbiotic containing a variety of probiotic microorganisms along with the prebiotic, short-chain fructooligosaccharides. In this case, the probiotic organisms include *Bacillus subtilis*, *Bacillus coagulans*, and *Lactobacillus sporogenes*, three microbes believed to contribute to gut and immune health. The prebiotic component serves as a readily available food supply for the probiotic microbes in the ingredient, in addition to those healthful microbial species residing in the gut. Synbiotics support and enhance the resident microbiota in the large intestine of the dog and, as a result, positively impact digestive health, immune health, and cognitive function. **Agave inulin** is a longer-chain fructooligosaccharide that complements the short-chain fructan present in this ingredient. The mixture of short-chain and long-chain fructooligosaccharides ensure optimal microbial fermentative activity throughout the length of the large intestine, allowing less pathogenic microbial activity to occur.
- **Vitamin C** is a water-soluble vitamin required for the biosynthesis of collagen (an essential component of connective tissue that plays a vital role in wound healing), L-carnitine, and certain neurotransmitters. It also is involved in protein metabolism and is an important physiological antioxidant and has been shown to regenerate other antioxidants within the body, including alpha-tocopherol. It plays an important role in immune function as well.
- **Choline** is needed to synthesize phosphatidylcholine and sphingomyelin, two major phospholipids vital for cell membranes. Therefore, animal cells need choline to preserve their structural integrity. In addition, choline is needed to produce acetylcholine, an important neurotransmitter for memory, mood, muscle control, and other brain and nervous system functions. Choline also plays important roles in modulating gene expression, cell membrane signaling, and lipid transport and metabolism.
- **CoQ<sub>10</sub>** (ubiquinone) is a vitamin-like compound produced by the body but that can become in short supply as the dog ages. Its concentration is highest in organs with the highest energy demand (heart, liver, kidneys).
- **L-carnitine hydrochloride** is a non-essential amino acid whose role is to transport long-chain fatty acids from the cytoplasm to the mitochondria of the cell, thus facilitating the production of energy.
- **L-taurine** is a conditionally essential amino acid, meaning that the dog needs more of it during periods of stress or illness. As an anti-inflammatory agent and antioxidant, it offers support for cardiac, ocular, and cognitive functions.



- While the **active ingredients** are the most important components of the next generation Young at Heart™ supplement, the **inactive ingredients**, too, contribute to its excellent nutritional value. For example, **camelina meal** is a unique source of plant-derived omega-3 fatty acids that contribute to the overall anti-inflammatory properties of the supplement. **Chicken powder** contains a well-balanced amino acid profile that supports many metabolic functions within the body. A blend of natural **mixed tocopherols** serves to neutralize free radicals formed in the body. They also provide emulsifiers and chelating agents for complete protection against rancidity, thus contributing to supplement stability. **Pork liver powder** along with **chicken powder**, contribute to the desirable taste of the supplement. **Pumpkin seed powder** and **whole egg powder** are added as additional sources of amino acids, especially leucine. **Stabilized rice bran** is responsible for providing proper texture and flow characteristics.