

WHOLESOME BLEND® PEA FREE

GRAIN-FREE TURKEY & PUMPKIN · GRAIN-FREE COD & PUMPKIN
ALL LIFE STAGES DOG & ALL LIFE STAGES LARGE BREED DOG



WHY PEA FREE?

Trouw Nutrition believes in providing pet owners with options when it comes to their pet's nutrition. This includes high-quality, grain-free products for dogs that have sensitivities, but that also address concerns from pet owners who believe eliminating grains is biologically appropriate or healthier for their dog. With recent advisories suggesting a possible link between grain-free diets and the heart disease, dilated cardiomyopathy (DCM), we want to provide our customers products that are both grain-free and without the ingredients (lentils, potatoes, pulses) the Food and Drug Administration has suggested could be linked to DCM. While the science surrounding grain-free diets and DCM is still in its infancy and the opinions regarding these products continue to be dynamic, we want to provide pet owners the freedom to choose what is best for their dog.

LOCALLY SOURCED INGREDIENTS

There has never been a more important time to support our Canadian economy and local businesses; whenever possible we source our ingredients from Canada, including our fresh cod, fresh turkey and our black soldier fly insect protein meal used in our pea-free diets.

NO GRAINS, LENTILS, PEAS, POTATOES, PULSES

Cassava root is a highly-digestible, grain-free carbohydrate that maintains kibble integrity and texture, promoting dental health. Nutritionally, cassava root is a good source of energy and both soluble and insoluble fibre. Soluble fibre forms a viscous solution that slows stomach emptying and increases intestinal

transit time, promoting satiety and nutrient absorption. Insoluble fibre increases fecal mass and reduces intestinal transit time, contributing to the proper functioning of the gastrointestinal tract. Both fibre types have the potential to be fermented, providing nutrients for the "good" bacteria in the gut.

HEALTHY HEART

Taurine is a unique amino acid as it is not incorporated into larger proteins but is found as a free amino acid in tissues. Taurine is especially concentrated in the heart muscle and is essential for proper heart function. Taurine is considered non-essential in dogs, meaning normally enough can be synthesized in the body. Using the amino acids methionine and cysteine provided by the diet, sufficient taurine is normally made to meet the body's requirement. However, we continue to supplement our grain-free diets with taurine to ensure the body achieves adequate levels.

L-carnitine is a nonessential, vitamin-like molecule that's synthesized in the liver from the amino acids lysine and methionine. L-carnitine is concentrated in heart muscle and its role is to facilitate fatty acid metabolism for the production of energy. This vitamin-like molecule is essential for healthy heart function as the heart obtains the majority of its energy from fatty acid oxidation.

DL-Methionine is a supplement of the essential amino acid methionine. As indicated above, this amino acid is critical for heart function as it is a precursor to taurine and L-carnitine. As an essential amino acid, methionine must be provided in the diet to meet the body's requirements. Methionine is formulated into our pea-free formulas from animal proteins and supplementation, ensuring a sufficient quantity is available for processes, including the synthesis of taurine and L-carnitine.

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GUT HEALTH

Probiotics are microorganisms that are naturally occurring in the gastrointestinal tract. They promote proper digestion, supply key nutrients and play an important role in the immune functions found within the gastrointestinal tract. By feeding probiotics, the “good” populations of microbes are replenished, and the “bad” microbes can be reduced. Addition of these sources in our Wholesome Blend Pea-Free formulas is done after the cooking and drying process, in order to ensure a viable population is provided to your pet.

Prebiotics are functional fibres that provide nutrition for the naturally occurring “good” microbes that reside in the gastrointestinal tract. These fibre sources are preferred by the beneficial microbes and contribute to their robustness and proliferation in the gut. Our Wholesome Blend Pea-Free formulas are formulated with fructooligosaccharides (sourced from chicory root) and mannanoligosaccharides (sourced from yeast extract).

OMEGA 6-3-9 BALANCE

Dietary fat provides a concentrated source of energy and is a carrier for vitamins, but it also is the source of specific essential fatty acids (EFAs). Fatty acids are

incorporated into the membranes of cells and their organelles, and are used to manufacture energy and make chemical messengers known as eicosanoids. Unsaturated fatty acids of different structures create specific eicosanoid types that signal the immune system function.

The **families of omegas** get their nomenclature from where the first carbon double bond is in relation to the methyl end on the carbon chain. Omega 6 and 3 have a parent fatty acid (linoleic acid (LA) C18:2 n-6, alpha-linolenic acid (ALA) C18:3 n-3) that can be converted to long-chain polyunsaturated fatty acids (arachidonic acid (AA) C20:4 n-6, docosahexaenoic acid (DHA) C22:6 n-3 and eicosapentaenoic acid (EPA) C20:5 n-3), but due to the location of the double bond, interconversion between families is not possible. Omega 6 and 3 are essential fatty acids, requiring these nutrients to be included in the diet. Enough omega 9 can be produced in the body to meet requirements, however, it can be advantageous to provide it in the diet.

Omega 6 polyunsaturated fatty acids (PUFA) are essential for maintaining the skin and coat, structure and function of cell membranes, and distribution of fat soluble vitamins throughout the body. Omega 6 PUFAs are a precursor for proinflammatory eicosanoids, which are chemical messengers that are physiologically

Table 1: Sources and actions of Omega 6-3-9 fatty acids

TYPE	SOURCE	MAKES	ACTION
Omega - 6	Canola oil, eggs, fresh turkey	Proinflammatory & immunoreactive eicosanoids	Promotes immune responses, inflammation and blood clotting
Omega - 3	Fresh cod, herring oil flaxseed	Anti-inflammatory & non-immunoreactive eicosanoids	Reduces immune reactions, decreases inflammation and calms immune response
Omega - 9	Olive oil	Anti-inflammatory & protective compounds	Support immune function, reduce demands when Omega-3 conversion is needed

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active in the body and amplify the local immune and inflammatory responses.

Omega 3 polyunsaturated fatty acids (PUFA) that are most notable are DHA and EPA. DHA is crucial for neurological and visual development during growth, and EPA is incorporated into the cell membrane and is a precursor for anti-inflammatory eicosanoids. Anti-inflammatory eicosanoids are chemical messengers that are physiologically active in the body and dampen the local immune and inflammatory responses.

Omega 9 polyunsaturated fatty acids (PUFA) such as oleic acid (C18:1 n-9) can be beneficial in sparing the other EFAs in times when the body's abilities to manufacture and convert fatty acids are impaired, reducing the demands on the body.

Omega 6-3-9 balance is important for the normal functioning of the body as the two families of essential fatty acids produce eicosanoids that have opposing effects on the body, and thus act as controllers for each other. While both types of eicosanoids are essential, when either are in excess there can be detrimental effects to the body.

90% PROTEIN FROM ANIMAL SOURCES

TURKEY & PUMPKIN: DEBONED TURKEY, CHICKEN MEAL, DRIED WHOLE EGG

COD & PUMPKIN: DEBONED COD, SALMON MEAL, WHITEFISH MEAL, DRIED WHOLE EGG

Animal protein is a high-quality protein source as it has a more complete amino acid profile than plants. The amino acid profile is crucial to protein synthesis, since a deficiency in one amino acid will limit the body's ability to form new protein molecules and replace old tissues. Egg is one of the best sources of protein and is often the benchmark for other proteins; it contains all the essential amino acids that dogs require and is highly digestible.

SUSTAINABLE PROTEINS

Black soldier fly larvae, as the name implies, is the larvae of the black soldier fly. The larvae are raised solely on traceable, recycled food including fruits, vegetables and grains. They are reared using vertical farming techniques that do not use agricultural land and require no water as they obtain enough from their diet. When mature, the larvae are dried and ground into a highly digestible protein meal that's high in calcium, iron and lauric acid.

Fresh cod is a white, lean fish sourced from carefully managed Canadian wild fisheries. The Government of Canada's Department of Fisheries and Oceans implemented stock rebuilding plans to support the long term sustainability of the Cod Fishery in Canada. Along with monitoring, habitat protection and cooperation from across the industry, the harvest amounts are controlled to ensure the future health of the cod stocks.

Fresh turkey is sourced from Canadian turkey farmers who believe in meeting the highest standards for health, safety, and animal welfare. Canadian turkey is a supply-managed industry, matching what they produce with consumers demands.

FRESH RAW INFUSED PUMPKIN

A GOOD SOURCE OF DIETARY FIBRE AND BETA-CAROTENE

Fibre is essential to the normal functioning of the gastrointestinal tract and provides nutrition for the beneficial microbes in the gut. It is also important to managing the energy intake in dogs, and to provide a feeling of satiety. As obesity rates increase in our pets, helping them to feel full and manage their blood sugar levels becomes increasingly important.

Beta-carotene is an antioxidant carotenoid and a precursor to vitamin A in dogs; important for vision, bone growth, reproduction and the function of epithelial tissues. Beta-carotene works with other antioxidants,

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such as vitamins E and C within the cells of the body to control dangerous free radicals.

BIODEGRADABLE PACKAGING

Eco-One® is an organic additive that allows plastic to be broken down into humus (rich soil), methane (energy source) and carbon dioxide in biologically active landfills (BAL). Only when Eco-One® plastic reaches BAL, does this technology encourage moisture to infiltrate and expand the plastic, allowing microbes to enter and break-down the packaging. The addition of this organic additive has no effect on the traditional appearance, feel or durability of plastic, ensuring our products maintain freshness.

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