

# Laminaria

EXTRA STRENGTH FUCOIDAN

Brown Algae Extract

120 Veggie Capsules 500mg



## Patient Reference

### Matrix Nutritional

### Radiation, Heavy Metals, Chelation, Thyroid, Pathogens

**Matrix Nutritionals Series** was designed as an eclectic offering for the Physica Energetics line of remedies primarily to assist in the “reactivation of the mesenchyme” (Dr. Reinhold Voll), via the nutritional complement pathways. These pathways are present in every system throughout the body and require balanced attention. In keeping with the principles of BioEnergetic Medicine, the remedies nourish and support these systems without punishing them with overstimulation or imbalancing factors, which, ultimately, is counterproductive. This approach has been carefully and respectfully designed to provide the necessary natural (organic where available), synergistic factors in proper energetic and biochemical ratios, to ensure assistance towards yielding a deep and lasting result. They are not to be confused with replacement therapy nutraceuticals that may seem to help for the moment, until the patient stops taking them or the condition is driven deeper. These remedies honour The Legacy of BioEnergetic Medicine, and are known by both patient and practitioner to be exceptionally effective.

**Brown algae (Laminaria japonica) contains the life essential properties of organic iodine, fucoxanthin alginates, fucoidan and laminarin.** Seaweeds are organized into four classes: green algae, blue-green algae, red algae, and brown algae. Kelps, fucus vesiculosus also known as ascophyllum nodosum and other “wracks” and “coloured” and brown algae have been credited interchangeably with the **same properties** but this is an **incorrect assumption**. While many algae and seaweeds of all varieties may contain a trace amount of iodine and alginates, **it's the naturally highly concentrated fucoidan content that sets them apart**. Even the most recognized kelp and algae nutritional supplements are generally nothing more than variations of dry, ground seaweed with an expensive price tag! Always think in terms of **Bio-availability**.

Physica Energetics', Laminaria, is not just another dried, ground seaweed formulation. It is in fact, a highly concentrated extract of one of the most well researched brown algae.

One of the main factors that sets it apart from other types of seaweed products is its very **high content of soluble polysaccharides**; fucoidan, laminarin and alginate. Fucoidan is particularly rich in such simple sugars as glucuronic acid and fucose. The slightly sweet, distinctive taste of Laminaria is produced mostly from mannose.

The thyroid gland controls metabolism and promotes maturation of the nervous system. **Organic iodine** is an element that is needed for the production of thyroid hormone. Without adequate iodine, the thyroid progressively enlarges as it tries to keep up with demand for thyroid hormone production. Worldwide, iodine deficiency is the most common cause of

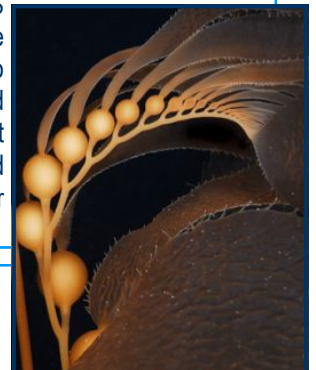
thyroid enlargement and goiter. As the body's iodine levels fall, hypothyroidism may develop, since iodine is essential for making thyroid hormone.

With iodine deficiency in the diet, there is less iodine in the blood. To a certain extent, the thyroid can adapt by becoming more efficient. However, when the deficiency is long enough and severe enough, the amount of iodide in the thyroid becomes depleted.

Iodine is especially important in **women** who are pregnant or nursing their infants. Severe iodine deficiency in the mother has been associated with **miscarriages**, stillbirth, preterm delivery, and congenital abnormalities in their babies. Congenital hypothyroidism due to iodine deficiency is the most common preventable cause of **mental retardation** in the world.

Iodine is accumulated by the **immune system**, especially by neutrophils during phagocytosis (engulfing of bacteria and other foreign bodies). A **potent antimicrobial system** is created with a peroxidase, hydrogen peroxide, and a halide. This system is highly effective against bacteria, viruses, fungi, and other micro-organisms. During this process, iodoproteins such as moniodotyrosine (T1) are created.

**There is an extensive body of research on iodine and the breast.** The breast contains NIS receptors (sodium [Na] iodide symporter) and is known to concentrate iodine in the excreted milk. Iodine is considered important for proper breast structure and health. The specific form of molecular



#### Ingredients (per 2 Veggie Capsules):

Brown Algae Extract 1000 mg  
(from Laminaria japonica 85% Fucoidan)

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iodine is considered to be essential for a healthy breast. Research on iodine and the breast focuses on (1) fibrocystic breast disease, (2) breast cancer, (3) iodine metabolism and (4) relationships between thyroid issues and the breast and (5) relationships between thyroid issues and the adrenals. According to the Ebers Papyrus, ancient Egyptians gave seaweed to patients with breast cancer.

**Fucoidan, another polysaccharide, causes certain types of rapidly growing cells** to self-destruct thereby promoting apoptosis (cell-destruction). It has also been demonstrated that Fucoidan acts as an "activator" of the reticulo-endothelial system (see SPLEEN 1-4) specifically as an enhancer of phagocytosis. It has also shown to significantly reduce enlarged lymphatic glands. This suggests another aspect of antitumor activity of Fucoidan. There are also non-polysaccharide fractions from Laminaria that have been found to have a significant cancer-preventative anti-mutagenic (anti-DNA damage) activity against typical genotoxic substances.

**Sloan-Kettering** reports: *"Fucoidan has been shown to inhibit metastasis by preventing adhesion of tumor cells to the extracellular matrix. This is achieved by blocking the fibronectin cell-binding domain, necessary for formation of adhesion complexes. Fucoidan was also shown to induce apoptosis of human T-cell leukemia virus type I (HTLV -1) that causes Adult T-cell leukemia. It does so by inactivating NF-kB that regulates antiapoptotic proteins. It suppresses AP-1, a transcription factor involved in cellular proliferation and transformation. A vitro study showed that Fucoidan can suppress angiogenesis induced by Sarcoma 180 cells in mice . Fucoidan has immunomodulating effects and enhanced the activity of NK cells, which play a crucial role in mediating tumor cell death. The neuroprotective effects of fucoidan are attributed to its ability to suppress tumor necrosis factor-alpha (TNF-alpha) and interferon-gamma (IFN-gamma)-induced NO production in C6 glioma cells and to its antioxidative effects".*

**Polysaccharide laminarin** helps to balance blood coagulation. It is reported to be helpful in the prevention and treatment of cardiovascular diseases. Laminarin is an arterial cleansing agent, giving tone to the walls of blood vessels and reducing deposits in the arteries while restoring their elasticity. It also strengthens the circulatory system and helps to lower cholesterol. It exhibits 30% of the anticoagulant activity of heparin.

**Therapeutic use of heparin has produced clinical remission (clinical remission is not a cure!) in a large number of patients with inflammatory bowel disorder.** One of the mechanisms involved is restoration of the fibroblast growth factor activity that stimulates repair of the epithelium.

**Fucoxanthin** is another substance naturally occurring in Laminaria. It may promote the loss of abdominal fat and help with diabetes. Claims as a miracle weight loss substance should be viewed with great scepticism.

**Alginate is a natural absorbent of radioactive elements, heavy metals and free radicals.** It has the unique ability of binding heavy metals and radioactive elements to its own molecules. As the alginate

cannot be broken down by the bile or saliva and cannot be absorbed by the body, it is secreted from the body together with the heavy metals and radioactive substances. As the alginate is non-digestible it is excreted from the body together with toxic compounds. This is particularly important for cadmium and mercury, as these metals are found at dangerously high levels in air, water and food (not to mention dentistry etc!).

**Alginate can also remove isotopes** that have previously been absorbed by the human body from the environment. Even small amounts of radioactive pollution will expose surrounding cells to harmful radioactive emission. The way alginate facilitates the excretion of toxic substances that find their way into the body from the environment can be shown using, as an example, the elimination of radioactive strontium.

Dr. Leonid Gordon MD reports: *"A percentage of Strontium molecules stored in the bone structure (or any other toxic substance stored in the tissue) is constantly released and is traveling with the blood stream. As the blood feeds the saliva and bile, part of the released strontium or other toxic metal ends up in the large intestine. Most of the liquid in the large intestine is reabsorbed by the body including the radioactive isotopes and heavy metals, which are redeposited back into the tissue. Alginate can break this process, as toxic substances are bound to the alginate molecules and released from the body with feces. Alginate binds to all heavy metals including lead, mercury, cadmium, cobalt, copper and radium".*

**Alginate is also considered a digestive demulcent** (soothing agent) used to ease reflux and heartburn. It is believed that its algin content forms a gel within the intestines that coats and soothes the intestinal lining. Moreover, that same alginate content also swells upon contact with water and when taken orally, it forms a type of "seal" at the top of the stomach, inhibiting reflux back into the esophagus. Alginates may also act as **prebiotics**, stimulating growth of beneficial bacteria in the colon.

**Chelation of heavy metals** may be assisted by Laminaria. Always test kidney clearance etc. prior to any type of chelation therapy, IV or oral. Note that drainage portal pathways must be opened prior to any heavy metal removal protocols, in particular kidney (*Solidago Intrinsic/Kidney Milieu/Cilantro Intrinsic/Allium Ursinum*) and thyroid (*Thyro Code/Thyro-Tox*). Suggest the RCCP program prior to specific/intense heavy metal protocol initiation.

**Laminaria is best taken on an empty stomach**, such as upon rising in the morning and in between meals with plenty of water, as it is highly concentrated product. Most people report an increased energy level with this product so it's best not to take before bed in some cases.

## Possible Contraindications:

*Laminaria may act as a uterine stimulant and may dilate the cervix and induce abortion. Hyperthyroid conditions may be aggravated by the additional natural iodine content.*

## References:

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