FAST FACTS

NEOLIFE®

TRE-EN-EN® GRAIN CONCENTRATES

Cell membranes need lipids and sterols to stay healthy. Unfortunately, grain processing strips lipids, sterols and other vital nutrients from the foods that make up our dietary staples. Tre-en-en® Grain Concentrates help assure good nutrition at the cellular level by providing a unique and exclusive blend of whole-food extracts from wheat germ, rice bran and soya beans. Developed and introduced by NeoLife in 1958, Tre-en-en® was the world's first phytonutrient supplement. It provides phyto-LIPIDS essential to optimal health and cellular function, including omega-6 and omega-3 fatty acids and phyto-STEROLS, including beta-sitosterol, gamma-oryzanol, stigmasterol and campesterol, plus octacosanol.

NeoLife Scientific Advisory Board

#2135 – 60 capsules
#2130 – 120 capsules

Why Grain Concentrates?

- As grain processing strips away nutrient-dense and nutrient-diverse outer layers, the foods that make up our dietary staples (i.e. white flour, white rice) often lack meaningful amounts of nutrients important for cell function - namely, lipids and sterols.
- Soya beans, wheat and rice provide key lipids and sterols that are important for cellular health.

Why NeoLife's Tre-en-en® Grain Concentrates?

- **Diverse phytonutrient extracts** supply essential nutrients - cells need to be their healthy best.
- Supports **efficient nutrient utilisation.**
- Supports **overall cardiovascular growth and development.**
- **Cold pressed and cold processed** to preserve nutritional value.
- **No cholesterol.**
- **Complete lipids and sterols** from wheat germ, rice bran and soya beans.
- **Includes beta-sitosterol, gamma-oryzanol, stigmasterol and campesterol, plus octacosanol.**
- **Soft gelatin capsules with plant based chlorophyll colour.**
- **Vitamin E** for antioxidant protection of phytonutrients.

Tre-en-en® supplies what food processing strips from dietary staples

To increase their shelf life, grains are subjected to about two dozen processes before they are transformed into dietary staples, such as white flour and white rice. Processing removes the nutritious outer layers of the grain. These layers contain the majority of grain's vitamins and minerals, as well as "good fats" called lipids and sterols. Other foods, notably soya beans, provide healthful lipids and sterols as well.

In the 1950s, a series of studies conducted at a Southern California hospital indicated that people suffering from chronic fatigue could benefit dramatically from a mixture of plant extracts providing broad-spectrum lipids and sterols. Now, over six decades later, that mixture - NeoLife's Tre-en-en® - is still helping people worldwide. It forms the base into which vitamins and related food factors, minerals, enzymes and protein have been added to create NeoLife's multifactor food supplement, Formula IV.

The world's first phytonutrient supplement, Tre-en-en® provides plant lipids and sterols which food processing has stripped from the staple foods that form the foundation of our daily diets. Named from the Greek "3-in-1", Tre-en-en® is a unique combination of concentrated extracts from whole wheat berry, rice bran and soya beans. More than just wheat germ or soya oil, it contains everything naturally available from the lipid portion of the plants.

Lipids and Sterols: Building blocks for every cell membrane in the human body

When it comes to health, not all fats are bad. Some fats are good - even essential. Fats provide energy, essential fatty acids and cellular building blocks and they have regulatory functions. For instance, fats are necessary for normal growth and development. They are also important to the structure and function of the nervous system. *But most importantly, they make up the greater part of the membranes that surround every cell in the human body*.

Healthful lipids and sterols from wheat, rice and soya beans are "good fats". Certain lipids, including omega-6 and omega-3 fatty acids, may increase the fluidity, or "pliability", of cell membranes and help keep cells functioning normally. Plant sterols may have a number of beneficial effects and may support the proper functioning of the cardiovascular system. Both lipids and sterols are located in the bran and outer layers which are removed during grain processing (see *The Story of Wheat, The Story of Rice* and *The Story of Soya*).

Consequences of the imbalance of "good" and "bad" fats in the modern diet

With consumer preferences shifting to low-fat and fat-free foods, people are eating less fat than in recent years, although the fat content of the Western diet is still far from the 30% recommended by health experts. While reducing the fat content of the diet has many positive health consequences, it means that people are reducing the total lipids and sterols they are taking in from all sources, not just "bad" fats such as saturated fats. They are also reducing their intake of "good" fats from whole grains and soya beans, which supply important lipid and sterol nutrients you need to feel your best.

In the quest to reduce the fat content of the diet, fat substitutes or "fake fats" have begun to make their way into the marketplace. While these substances may make some foods less fatty and lower in kilojoules, they do nothing to meet the body's hunger for good nutrition. Whole-food lipids and sterols from wheat, rice and soya will be especially important for the growing group of people who use fat substitutes to reduce the fat content of their diets.

The decrease in total fat consumption is only part of the reason the modern diet features an imbalance of "good" and "bad" fats. The other part of the story is that the foods that make up the human diet have changed dramatically in the last 50 years. As artificial fats have increasingly displaced natural fats in the foods we eat, the lipid and sterol profile of the diet has changed. While our hunter/gatherer ancestors consumed a diversity of natural fats, mostly from locally gleaned plants, this diversity decreased when people became successful at growing agricultural crops which could be sold at the local farmers' market. This eroding nutrient diversity was compounded by a decrease in nutrient density when people discovered that grains could be stored longer without going rancid if their lipid-and sterol-rich outer coatings were removed. And after World War II, the world got its first taste of margarine and other artificially hydrogenated oils and the global kitchen has never been the same. This relatively rapid displacement of natural fats with artificial fats in all types of foods has created an unhealthy imbalance of "good" versus "bad" fats and has diminished the amount and variety of healthful lipids and sterols in the diet.

Imbalance has consequences: Insufficiency of lipids and sterols may cause alterations of the cell membrane, leading to reduced cellular efficiency throughout the body. It may also affect the ability of the cell's "metabolic machinery" to produce energy. Lipid/sterol insufficiency may also slow the normal workings of the endocrine glands, which virtually control the body's energy levels. For these reasons, insufficiency of lipids and sterols may be a factor in long-term fatigue.

Tre-en-en® for cellular efficiency

Our bodies are composed of trillions of cells which must work efficiently if we are to stay healthy. How do cells stay healthy? The key is their membranes. Like bodies, cells must take in nutrients and eliminate waste. Every cell in the body is surrounded by a lipid membrane with the discretionary power to allow only needed nutrients to enter the cell. By the same token, it allows only waste material and metabolic products (hormones, enzymes, neurotransmitters, etc.) to exit. Deficiencies of lipids, sterols and amino acids can compromise the discretionary power of cells. Cells can become "starved" (inhibited in their ability to take in substances) even though nutrients are available. And they can become "constipated" (inhibited in their ability to eliminate accumulating waste products or export metabolites). Under these conditions, cells work inefficiently, expending more energy than healthy cells would to get the same results.

Tre-en-en® Grain Concentrates supply essential lipids and sterols to promote the efficient functioning of cells. Remember, we are only as healthy as our cells and Tre-en-en® strengthens the lipid/sterol "link" in our "Chain of Life", supporting cellular health and vitality.