



## **NUSEL PLUS - Selenium 100mcg Tablet**

### **INDICATED CLAIMS**

- An antioxidant for the maintenance of good health.

### **GENERAL INFORMATION:**

Selenium is an essential trace element in human nutrition. The amount of selenium in food is a function of the selenium content of the soil. Selenium enters the food chain through incorporation into plant proteins as the amino acids L-selenocysteine and L-selenoniethionine. Selenium, like most trace elements and minerals, is not evenly distributed in the world's soil.

Selenium deficiency appears to cause an illness or disorder in combination with a co-factor. In the case of Keshan disease, the co-factor appears to be the Coxsackievirus. It has been shown that infection of mice on a selenium-deficient diet with a nonvirulent Coxsackievirus selects a stable cardio virulent strain. In the case of Kashin-Beck osteoarthropathy, the co-factor appears to be iodine deficiency.

Selenium is found in human tissues as L-selenomethionine or L-selenocysteine. L-selenomethionine is incorporated randomly in proteins in place of L-methionine. These proteins are called selenium-containing proteins. Only a small fraction of L-methionine in proteins is present as L-selenoniethionine. On the other hand, the incorporation of L-cysteine into proteins known as selenoproteins is not random. That is, in contrast to L-selenoniethionine, which randomly substitutes for L-methionine, L-selenocysteine does not randomly substitute for L-cysteine. In fact, L-selenocysteine has its own triplet code and is considered to be the 21<sup>st</sup> genetically coded amino acid.

Selenium has antioxidant activity. Selenium may also have immunomodulatory, anticarcinogenic and anti-atherogenic activities. It may have activity in detoxification of some metals and other xenobiotics and activity in fertility enhancement in males. Antioxidant activity of selenium can also be accounted for by its role in the selenium-dependent thioredoxin reductases.

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**For Accidental Overdose** (such as child ingesting formula)

Please dial your Local Emergency number or visit your nearest Health Care professional

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Selenium deficiency appears to depress the effectiveness of various components of the immune system. In humans, selenium deficiency has been associated with depressed IgG and IgM antibody titers. The possible ant carcinogenic activity of selenium may be accounted, for, in part, by its antioxidant activity as well as its possible immune-enhancing activity.

Selenium has been demonstrated to antagonize the effects of a number of toxic metals, including cadmium and arsenic. Selenium may have fertility enhancing effects for males, Phospholipids hydro peroxide glutathione peroxidase, in addition to its antioxidant role in sperm, also appears to be responsible for maintaining the structure of sperm

## **PHARMACOKINETICS**

There are various forms of supplemental selenium, including high-selenium yeast, L-selenomethionine, sodium selenate and sodium selenite. High-selenium yeast contains L-selenomethionine in proteins. Proteins in high-selenium yeast are enzymatically digested in the small intestine to yield amino acids, oligopeptides and L-selenomethionine. L-selenomethionine is efficiently absorbed from the small intestine via a similar mechanism to that of L-methionine. L-selenomethionine is transported via the portal circulation to the liver where a fraction is extracted by the hepatocytes and the remaining amount is transported by the circulation to the various tissues of the body.

NuSel Plus (selenium -100mcg) formulated from selenium yeast an antioxidant for the Maintenance of good health

### **NUSEL PLUS - Selenium 100mcg Tablet**

#### **Product information**

Available as 120 tablets

Each tablet contains:

Selenium – 100mcg

Non-medicinal ingredients: Microcrystalline cellulose, Dicalcium phosphates dehydrate, Magnesium Stearate.

Directions for use: adult: take 1 tablet daily or as directed by a health care practitioner.

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### **Benefits**

- Selenium has shown some ability to protect against oxidative damage to blood vessels.
- Selenium confers further protection by inhibiting per oxidation of some lipids.
- Other heart Benefits may accrue from selenium's demonstrated ability to inhibit platelet aggregation, modulate prostaglandin synthesis and protect against heavy metals.
- Selenium has been found to be essential for healthy immune function.

### **CONTRAINDICATIONS**

Selenium is contraindicated in those who are hypersensitive to any component of a selenium-containing preparation.

### **PRECAUTIONS**

Pregnant women and nursing mothers should avoid selenium intakes greater than RDA amounts (60 and 70 micrograms daily, respectively).

### **ADVERSE REACTIONS**

Intakes of selenium less than 900 micrograms daily (for adults) are unlikely to cause adverse reactions. Prolonged intakes of selenious acid of doses of 1,000 micrograms (or one milligram) or greater daily may cause adverse reactions.

The most frequently reported adverse reactions of selenosis or chronic selenium toxicity are hair and nail brittleness and loss. Other symptoms include skin rash, garlic-like breath odor, fatigue, irritability and nausea and vomiting.

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**INTERACTIONS:  
DRUGS**

There are no known interactions with drugs in clinical practice.

**NUTRITIONAL SUPPLEMENTS**

Iodine: Intake of selenium and iodide may have synergistic activity in the treatment of Kashin-Beck disease.

Vilanalín C: Concomitant intake of selenium and the selenite form of selenium may decrease the absorption of selenium.

Vitamin E: Intake of vitamin E and selenium may produce synergistic beneficial effects.

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