

# **Organic selenium with 89% bioavailability**

# What is SelenoPrecise Forte?

SelenoPrecise Forte is the strong version of Pharma Nord's patented, standardized selenium yeast. It consists of small, round white tablets each containing 200 micrograms of selenium in the form of high-absorbable organic seleno-methionine and



more than 20 other organically bound selenium compounds. The prepa-ration is unique in the sense that it it emulates the various selenium compounds we get from selenium rich food and is able to document a very high level of bio-availability and a stable quality:

- 15 laboratories in 12 different countries have measured the content of L-methionine selenium in SelenoPrecise to be high and stable
- 89% of the selenium content is absorbed in the body

# Why so many different selenium compounds?

SelenoPrecise contains many different selenium compounds because each type of selenium has different functions in the human body. By supplying a wide spectrum of selenium compounds it is possible to emulate the natural variety of selenium types found in selenium rich food. This, scientists believe, has the best effect on our health.

# What is selenium?

Selenium is an essential trace element that supports an array of selenoproteins and selenium-dependent enzymes that are important for human health and wellbeing. One of these enzymes is glutathione peroxidase (GSH-Px), which has several important functions in the body. In addition, selenium supports a normal thyroid function. The thyroid function helps the metabolism in balance. Furthermore selenium supports biological processes as:

- a normal immune system
- production of normal sperm cells
- cell protection
- the maintenance of normal hair and nails

# Most of the selenium in the body is found in two forms:

Selenomethionine (that is embedded in different proteins instead of methionine) and selenocysteine.

We get selenomethionine from the diet exclusively because the body is unable to synthesize it. The body is, however, able to convert selenomethionine to selenocysteine, which we are also able to get from the diet in the form of se-methylselenocysteine.

In situations where we get too little dietary selenium, the body is able to use selenium that is stored in the bo-



# **SelenoPrecise Forte**

#### 1 tablet contains

		RDA*
Selenium	200 µg	364%
* RDA= Recommended Daily Allowance.		
<b>Dosage</b> 1 tablet daily, unless otherwise advised. Preferably during/after a meal.		

Do not exceed the recommended daily dosage.

A healthy lifestyle and a varied balanced diet is important for maintaining good health.

#### Ingredients

Selenium yeast (SelenoPrecise), microcrystalline cellulose, dicalcium phosphate, silicium dioxide, hypromellose, talc, magnesium stearate, titanium dioxide.

Storage Dark, dry and at room temperature. Keep out of reach of young children.

Suitable for vegetarians.

Dietary supplements should not replace a varied diet.

dy, simply by converting selenomethionine that is bound in different proteins.

SelenoPrecise contains both of these main selenium sources (selenomethionine and selenocysteine) plus several other selenium compounds.

# The ability of selenium to bind to heavy metals

In the body, selenium binds to different heavy metals and forms insoluble compounds that are eventually discharged from the body. This process consumes some of the available selenium, leaving less for other important selenium-dependent processes\*. Studies show that selenium binds mercury in a 1:1 ratio. \* Schrauzer GN Selenium and selenium-antagonistic elements in nutritional cancer prevention. Crit Rev Biotechnol. 2009;29(1):10-7.

# Where do we get selenium from the diet?

Selenium is found in such things as fish, nuts, wholegrain. People who do not consume these food items regularly may benefit from taking a selenium supplement for the sake of getting sufficient amounts of the nutrient. The recommended daily allowance (RDA) for selenium is around 50-70  $\mu$ g (differs from country to country), were men generally need a little more than women.

#### Organically bound selenium has higher absorption

Selenium in the agricultural soil is inorganic. Once it gets absorbed by plants (and ends up in animals) it gets converted to organic selenium. The selenium we get from our diet can be bound to amino acids such as methionine and cysteine. In contrast, selenium in supplements can either be organic or inorganic. It is known that organic selenium compounds have an easier time getting absorbed into the body and incorporated in the different selenium-dependent enzymes and selenoproteins.

# The selenium content in agricultural soil differs

In countries where the agricultural soil is rich in

selenium the population has a correspondingly high selenium intake. In the United States where there is a high selenium content in the soil (especially in the northern regions), the average selenium intake is around 60-220 µg daily.

# Daily intake of selenium through the diet (in µg / day).



As shown by the illustration, many populations in European countries have a low selenium intake from the diet. When the figures for Finland are not too low, it is due to the country's selenium enrichment of fertilizers.

#### Selenium is not just selenium

Selenium is an element and a mineral found in the soil in varying amounts. In countries such as he United Sta-

tes, the agricultural land has a fairly high content of selenium, while it is relatively low in most European



countries. Grain and other plants absorb selenium from the soil. Therefore, the diet's selenium content largely depends on the amount of selenium found in the agricultural land.

#### **Organic and inorganic selenium**

It is important to be aware that there are different types of selenium when selecting a selenium supplement.

#### **Inorganic selenium**

In selenium supplements, inorganic selenium is often used in the form of simple selenium salts. It might be sodium selenite and sodium selenate. Selenium is usually insoluble in water, but selenium in the form of selenite and selenate is soluble in water. A little over half of these two inorganic selenium salts are absorbed into the body, selenite slightly better than selenate, however, they are also excreted quite quickly, which limits their usefulness.

### **Organic selenium**

Plants absorb inorganic selenium from the soil in the form of selenate. When the selenium hereafter is incorporated into the plants as selenomethionine and, to a lesser extent, selenocysteine, it becomes organic selenium. The organic selenium compound L-selenomethionine - i.e. the selenium attached to the amino acid methionine - can also be manufactured synthetically. Synthetic L-selenomethionine is widely used as organic cell supplement and is one of the most studied selenium compounds.

From animal food we primarily get selenium in the form of selenocysteine.

#### **Selenium yeast**

Selenium yeast originate from yeast cells which are grown in a selenium-containing nutrient substrate. It provides a high content of naturally occurring organic Lselenomethionine. The yeast also contains methylselenocysteine as well as a variety of other organic selenium compounds that emulate the natural selenium variants found in the diet and, according to scientific studies, are important. The yeast is subsequently inactivated by heat and made into a powder after which it functions as a selenium rich protein.

#### Also difference in selenium yeast

There is also a difference between the quality of different yeast products. A non-standardized yeast is typically exposed to relatively large variations in the nature and amount of the various selenium compounds. This means that their absorbability can vary a lot. The yeast products that show the best properties are made as pharmaceutical grade and have a very small variation in type and amount of its various selenium compounds.

# **EU's Best-Documented Selenium Product**

SelenoPrecise Eurotabs is one of the most wellsubstantiated selenium preparations when it comes to scientific documentation for stability, safety and absorption.



SelenoPrecise is the only selenium supplement with a uniformly high content of active selenium at 88.7%.

More than 40 scientific studies have been published having dealt with the quality, the stable selenium content, the high level of bio-availability, and the safety of SelenoPrecise. This is what makes the preparation an extremely well-documented selenium source. Also, it is the main reason why SelenoPrecise is used in scientific studies and research projects worldwide.

Many people take selenium supplements daily, but they are perhaps not aware of the large differences in quality and bioavailability in the different dietary supplements. If you are not sure whether you are using the right product, you can try to test your current selenium tablet against SelenoPrecise - the best-documented selenium tablet.

