



SELENO EXCELL™ SELENIUM

Enhanced selenium bioavailability for antioxidant action

“In the search for nutrients that might prevent cancer, selenium has recently taken on a certain star quality... A lack of selenium impairs the immune system, but high doses don't seem to improve immunity in healthy people. Among other junctions, selenium acts as an antioxidant and appears to play a key role in reducing the risk of some cancers.” – *UC Berkeley Wellness Letter, June 2000*

Mounting research points to selenium as a key nutrient to maintaining good health and preventing the key degenerative diseases that we all fear. A landmark study reported that selenium produced an astonishing 50% reduction in total cancer mortality and selenium supplementation was found to reduce the incidence of all cancers by better than one-third. Incidence of lung cancer was reduced by almost half, colo-rectal cancer by more than half and prostate cancer by two-thirds. (Clark, *et al.*) As so aptly put by Dr. Parris Kidd: “It isn't every week that the *Journal of the American Medical Association, (JAMA)*, carries a scientific report of a nutritional substance successfully used against cancer. *JAMA* is notoriously conservative and historically has been quite reserved with regard to nutrients and “alternative medicine.” So when *JAMA's* peer-review system allows into its pages a paper that indicates many cancers can be prevented with a lowly mineral, something scientifically real must be happening. What may have been the scientific event of that year happened on Christmas Day 1996, when *JAMA* published the paper by Dr. Larry Clark and about 40 other MD and PhD researchers on the results of their large double-blind trial with selenium against cancer.”

WHAT IS SELENIUM?

Selenium is a trace element found in the soil to a varying extent. It enters the diet through plants such as whole grains and through the meat of animals grazing on vegetation that contains selenium. Whole grains, mushrooms, seafood, garlic, and eggs contain selenium.

WHY ORGANIC SELENIUM?

Dr. Richard Passwater: “Since we haven't really identified which dietary selenium compound(s) may protect against cancer, nor have we elucidated the mechanisms through which they act, I feel it is extremely important to stick with the exact supplement that has been proven effective in clinical trials which is high selenium yeast.” As a natural nutritional food source, yeast replicates the mineral conversion process performed by most plants (i.e. garlic,

broccoli). This natural plant process converts inorganic (low bioavailability, potentially toxic) minerals, selenium, to safer organic (high bioavailability, reduced toxicity) forms for improved nutrient utilization.

HOW DOES SELENIUM WORK IN OUR BODY?

Our body needs selenium for the production of several important body compounds, including enzymes, or catalysts, involved in antioxidant protection and thyroid hormone metabolism. It is estimated that between 50 and 100 different selenium-containing proteins in the human body, including those that build heart muscle, red blood cells, and sperm.

INSUFFICIENT SELENIUM AND THE FLU

Getting the flu? Researchers have found that not enough selenium in the diet can cause the flu virus to do more damage. When mice were exposed to a strain of the human influenza virus, those that had insufficient selenium in their diets developed more lung inflammation than the mice who were on a normal diet. Melinda Beck, MD from the University of North Carolina, Chapel Hill, comments, “What that suggests is that the deficiency in selenium altered their immune response, and so they got sicker than they would normally.”

CANCER PREVENTION?

According to Dr. Gerald Combs, Jr. (Cornell University), “there is perhaps no more extensive body of evidence for the cancer-preventive potential of a normal dietary component than there is for selenium.” – *UC Berkeley Wellness Letter, June 2000*

The evidence is so strong that selenium reduces prostate cancer risk that Harvard Medical School's Dr. Edward Giovannucci, recommends that public health officials encourage people to increase their selenium intake now.

A comprehensive review of selenium was published in *The Lancet*. Author and researcher, Dr. Margaret Rayman comments on the anticancer effect of selenium: “The anticancer effect of selenium may relate more closely to its ability to enhance the immune response or, more likely, to its ability to produce anti-tumourigenic metabolites that can perturb tumour-cell metabolism, inhibit angiogenesis and induce apoptosis of cancer cells. In this context, there is considerable interest in defining the species of selenium present in selenium yeast with a view to identifying the

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most active anticarcinogenic component." (Rayman, *et al.*)

DO I GET ENOUGH SELENIUM IF I EAT A BALANCED DIET?

Although selenium does occur in some foods, it still is important to supplement because much of the soil is selenium-poor. Dr. Larry Clark comments: "It is almost impossible for the average person to know how much is in the diet because foods vary in their content depending upon where they come from. This is why the use of supplements is warranted in the case of selenium where it might not be warranted with other nutrients."

ARE THERE STUDIES USING SELENO EXCELL SELENIUM?

Yes, there are a series of cancer and health-related trials currently underway using Seleno Excell high selenium yeast as the intervention agent. Some of these studies are being funded by the National Cancer Institute (NCI), National Institute of Health (NIH), United States Department of Agriculture (USDA), Department of Defense (DOD), and the International Cancer Alliances.

IS IT SAFE TO USE A NUTRITIONAL SUPPLEMENT THAT CONTAINS YEAST?

Yes. According to Dr. Seymour Pomper, a leading researcher in industrial food applications: "The yeast in nutraceuticals is dead, since the yeast manufacturing process involves a high-temperature, sterilization of the cream yeast immediately prior to spray drying... By definition, an inactive yeast is dead and has lost its ability to reproduce in or out of the human body."

Yeast naturally converts inorganic forms of selenium into organically bound seleno compound forms in a consistent and controllable fermentation system. Organically bound high selenium yeast provides increased bioavailability for the human body compared to other forms of selenium, greatly reducing the potential for toxicity.

SAFETY AND DOSAGE

Although research shows that organic selenium has a higher margin of safety, the NPC study used 200 mcg of selenium per day with no noteworthy side-effects reported.

DON'T LEAVE IT TO CHANCE

This trace element is too important to your health to miss getting in your diet. Even foods normally considered selenium-rich may come from selenium-poor soils, reducing the amount available to you. A good multivitamin or selenium supplements derived from Seleno Excell high selenium yeast might be the best way to ensure that you get the health benefits from this important element.

KEY REFERENCES

Clark L.C., *et al.*, "Effects of selenium supplementation for cancer prevention in patients with carcinoma of the skin," *Journal of the American Medical Association*, 276 (24): 1957-1963; 1996

Rayman M.P., *et al.*, "The importance of selenium to human health," *The Lancet*, Jul 15, 356 (9225): 233-41; 2000