

Zinc Supplementation Is 500% More Effective with Zinc Picolinate

Picolinic Acid Increases Availability

Picolinic acid, which occurs naturally within the body, has been found to be the most effective chelator of metal ions.⁽⁹⁾ One clinical case showed zinc picolinate to be 500% more effective than elemental zinc, allowing the patient to use much smaller doses.⁽⁵⁾

Prolonged high doses of supplemental zinc can displace other minerals, specifically copper and iron.⁽¹⁰⁾ Zinc picolinate can accomplish its therapeutic goal at lower doses thereby minimizing the risk of mineral imbalances. Use of the picolinate form may also leave more intestinal picolinic acid free to aid absorption of other minerals.⁽⁵⁾

ZINC PICOLINATE PLUS™

25 mg. Zinc Capsule in a Naturally Chelating Base

Product No. 977 Fill Size: 60 Capsules

Each capsule supplies:	% Daily Value
Zinc 25 mg.	167%
From Zinc Picolinate 125 mg.	*

Other ingredients: specially processed natural chelating base containing 50 mg. each of peas, lentils, buckwheat and millet (carefully dried to retain their natural trace nutrient content) and gelatin.

RECOMMENDED USE: One capsule daily.

Major Cause of Irreversible Blindness in the Elderly Responds Dramatically to Zinc Supplementation

Zinc, already firmly established as a principal protector of the immune system and major disease fighter, has recently demonstrated a dramatic ability to impede a prevalent eye disorder called macular degeneration, which produces irreversible blindness in the elderly.⁽¹⁾

This disorder affects parts of the eyes in which zinc is known to have an important impact on the metabolic function of enzymes crucial in vision. To investigate the role of zinc deficiency in this disease, researchers constructed a double-blind, placebo controlled trial involving 151 patients. In a 12 to 24 month follow-up, vision loss was significantly less in patients given zinc supplements than in the placebo group.⁽¹⁾

Age Impaired Immune System May Be Repaired with Zinc Supplements

The low-income elderly may be consuming less than half the RDA for zinc. Even the middle-to-upper class elderly may be getting insufficient zinc in their diets as manifested by decreased zinc levels.⁽¹⁾ It is clearly established that zinc is essential for cell-mediated immunity. Research indicates that adequate supplies of zinc are essential to development and maintenance of a healthy immune system and that aging is associated with immune impairment that can sometimes be partially repaired with zinc supplementation.⁽¹⁾

As people grow older, there are significant alterations in the immune system. These alterations probably account for some aspects of aging. Asso-

ciated with aging is an increase in the production of antibodies against self, the so-called autoimmune diseases, as well as in increased proneness to infections. Progressive zinc deficiency may play an important part in the gradual breakdown of the aging immune system.⁽¹⁾

One study showed that zinc supplementation increased the number of circulating T-lymphocytes, which fight infection, and improved antibody response in a group of healthy people over 70 years old. No such improvement was seen in a control group with no supplementation.⁽¹⁾

Even Marginal Deficiency of Zinc May Produce Impotence

It is claimed that even marginal zinc deficiency can produce impotence. It is certain that moderate to severe deficiency produces regression of the testes.⁽¹⁾

Zinc is essential for sperm formation. Men who are mildly zinc deficient have reduced sperm counts. Those who are moderately to severely deficient may produce no sperm cells and exhibit decreased sexual interest as well as mental lethargy, emotional problems, poor appetite and all the other consequences of zinc deficiency. Zinc deficiency is also accompanied by decreased testosterone level.⁽¹⁾

Sexually impotent men suffering from chronic kidney failure who also had low blood levels of zinc reported a marked improvement in potency when zinc was added to their hemodialysis solu-

(over)

tions. This was accompanied by an increase in blood levels of testosterone and in follicle-stimulating hormone. No such changes were observed in the placebo group.⁽¹⁾

The prostate gland is one of the organs richest in zinc. Prostatic zinc increases with puberty and it is thought that testosterone is the main factor governing the zinc level of the prostate. Zinc is believed to regulate the metabolism of testosterone in the prostate.⁽¹⁾

Poor Diet and Other Factors Lead to Zinc Deficiency

Although moderate to severe zinc deficiency is unlikely in developed countries, many groups are at risk for marginal deficiencies.⁽¹⁾ The most common cause for deficiency is an unbalanced diet, although other factors may also be responsible.⁽⁴⁾

- **Estrogen** enhances excretion of zinc; therefore, risk of zinc deficiency is increased in young females, especially if oral contraceptives are used.⁽⁷⁾
- **Weight loss** diets, unless carefully balanced and/or supplemented with a balanced vitamin and mineral formula, can lead to deficiencies of zinc as well as other essential nutrients.⁽⁷⁾
- **Anorexia Nervosa** — While reduced food intake initially results from social factors, starvation (along with other stresses) increases urinary excretion of zinc. As zinc status declines, impairment of zinc dependent senses of taste and smell may further reduce the desire for food. Zinc supplements have been successfully used in treating anorexia nervosa.⁽⁶⁾
- **Vegetarians** may be at risk for zinc deficiency since the best dietary sources are seafood and animal meats.⁽¹⁾ Whole grains also supply zinc but their high phytate content decreases its bioavailability.^(1,3,4)
- **Zinc Malabsorption** — Certain zinc deficiency conditions such as acrodermatitis enteropathica have been related to lack of intestinal absorption.⁽⁵⁾ Zinc's bioavailability may also be decreased by high intake of phytates as well as excessive intake of other minerals which compete for absorption sites in the intestines.^(3,8) Picolinic acid has been shown to promote intestinal absorption of zinc and other minerals.^(5,9)
- **Diabetics** typically excrete too much zinc in the urine and, therefore, require supplementation. Zinc is involved with virtually all aspects of insulin metabolism.^(1,2)

Zinc Is Essential for Wound Healing

Since zinc is necessary for cellular repair, enhanced wound healing is to be expected in zinc deficient individuals following zinc supplementation. However, patients with gastric ulcers who showed no zinc deficiency had an ulcer healing rate three times that of patients treated with placebo. In addition, complete healing of ulcers was more frequent in the patients taking zinc.⁽¹⁾

- **Alcohol consumption** can cause deficiency by flushing stored zinc from the liver and into the urine.⁽⁴⁾
- **AIDS** patients have been found to have significantly lower plasma levels of zinc than a normal control group. One report noted that patients with other stages of HIV virus did not show zinc deficiency.⁽¹⁾

Metabolic Effects of Zinc Deficiency

More than 200 enzymes require the trace mineral zinc for their activity, including those enzymes involved in RNA and DNA production.⁽¹⁾

Because of its variety of functions, zinc deficiency has extensive metabolic effects. Protein synthesis, collagen production and energy production are impaired. Alcohol tolerance is lessened. These functions alone result in diverse effects including changes in hair and nails, dwarfism, sterility, impotence, skin inflammation, lethargy, anemia, poor wound healing and loss of taste and smell.⁽³⁾

This information is provided for health care professionals only. **This publication and the product contained herein have not been approved or evaluated by the Food and Drug Administration. This publication, and the product contained herein are not intended to diagnose, treat, cure or prevent any disease.** The product relates to nutritional support only.

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