

**OptiZinc™**  
**Zinc Monomethionine**

**DESCRIPTION**

OptiZinc™ capsules, provided by Douglas Laboratories®, supply zinc monomethionine, a patented organic compound which provides zinc bound to the amino acid methionine in order to increase the bioavailability of zinc.

**FUNCTIONS**

Zinc is an essential trace element involved in most major metabolic pathways. General signs of human zinc deficiency indicate that zinc has important functions in maintaining immune function, reproduction, healthy skin, and growth.

Numerous studies support the fundamental role of zinc for normal immune response in humans. Immune cells must be able to rapidly divide in order to respond to daily challenges. Like all rapidly dividing cells, immune cells depend on adequate amounts of dietary zinc.

As a cofactor of the antioxidant enzyme superoxide dismutase (SOD), zinc can be considered an antioxidant nutrient. Zinc supplementation has been shown to increase the antioxidant activity of SOD, and provide increased free radical protection. Zinc deficiency is associated with increased oxidative damage. Absorption of toxic heavy metals, especially cadmium and lead, is lower in individuals with high zinc status compared to those with low zinc status.

The body pool of readily available zinc appears to be small, which renders the body susceptible to deficiency and therefore dependent on a steady dietary supply of bioavailable zinc. While typical zinc intakes in U.S. adults are between 10 and 15 mg per day, which approach the RDA, intakes in the elderly are often low. Pregnant women are also at risk for zinc deficiency, since they have a higher requirement for this trace element. Frequently, vegetarians and chronically depressed individuals have been found to have low zinc status.

OptiZinc® is a patented 1:1 complex of zinc and methionine, the amino acid best absorbed by the body. Human and animal studies show that zinc monomethionine, as supplied by OptiZinc, is absorbed and retained better than many other forms of zinc.

**INDICATIONS**

OptiZinc® may be a useful nutritional adjunct for individuals who wish to increase their intake of zinc.

**FORMULA (#200061)**

Each vegetarian capsule contains:

Zinc (monomethionine)\* ..... 30mg

\*OptiZinc™ is a trademark of InterHealth Company.

**SUGGESTED USE**

One capsule daily as a dietary supplement, or as directed by physician.

If pregnant or lactating, consult your physician before taking this product.

## OptiZinc™ Zinc Monomethionine

### SIDE EFFECTS

Orally, zinc may cause nausea, vomiting, and a metallic taste in the mouth. There is concern that high daily doses above the tolerable upper intake level (UL) of 40 mg per day might increase the risk of copper deficiency.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

- Abdallah SM, Samman S. The effect of increasing dietary zinc on the activity of superoxide dismutase and zinc concentration in erythrocytes of healthy female subjects. *Eur J Clin Nutr* 1993;47:327-332.
- Brignola C, Belloli C, De Simone G, et al. Zinc supplementation restores plasma concentrations of zinc and thymulin in patients with Crohn's disease. *Aliment Pharmacol Ther* 1993;7:275-280.
- Chirase NK, Hutcheson DP, Thompson GB. Feed intake, rectal temperature, and serum mineral concentrations of feedlot cattle fed zinc oxide or zinc methionine and challenged with infectious bovine rhinotracheitis virus. *J Anim Sci* 1991;69:4137-4145.
- Donovan UM, Gibson RS. Iron and zinc status of young women aged 14 to 19 years consuming vegetarian and omnivorous diets. *J Am Coll Nutr* 1995;14:463-472.
- Flora SJ, Kumar D, Das Gupta S. Interaction of zinc, methionine or their combination with lead at gastrointestinal or post-absorptive level in rats. *Pharmacol Toxicol* 1991;68:3-7.
- Food and Nutrition Board, National Research Council. *Recommended Dietary Allowances*. 10th ed. Washington, D.C. National Academy Press, 1989.
- Gordeuk VR, Brittenham GM, Hughes M, Keating LJ, Opplt JJ. High-dose carbonyl iron for iron deficiency anemia: a randomized double-blind trial. *Am J Clin Nutr* 1987;46:1029-1034.
- Goyer RA. Nutrition and metal toxicity. *Am J Clin Nutr* 1995;61 Suppl.646S-650S.
- Gupta RK, Bhattacharya SK, Sundar S, Kumar K, Kachhawaha JS, Sen PC. A correlative study of serum zinc and in vivo cell mediated immune status in rheumatic heart disease. *Acta Cardiol* 1996;47:297-304.
- Hong Bin Q, Garfinkel D. The cadmium toxicity hypothesis of aging: A possible explanation for the zinc deficiency hypothesis of aging. *Med Hypotheses* 1994;42:380-384.
- Keen CL, Gershwin ME. Zinc deficiency and immune function. *Annu Rev Nutr* 1990;10:415-431.
- Kidd MT, Qureshi MA, Ferket PR, Thomas LN. Dietary zinc-methionine enhances mononuclear-phagocytic function in young turkeys. Zinc-methionine, immunity, and Salmonella. *Biol Trace Elem Res* 1994;42:217-229.
- Kidd MT, Qureshi MA, Ferket PR, Thomas LN. Blood clearance of Escherichia coli and evaluation of mononuclear-phagocytic system as influenced by supplemental dietary zinc methionine in young turkeys. *Poult Sci* 1994;73:1381-1389.
- King JC, Keen CL. Zinc. In: Shils ME, Olson JA, Shike M, eds. *Modern Nutrition in Health and Disease*. 8th ed. Philadelphia: Lea & Febiger, 1994:214-230.
- Maes M, D'Haese PC, Scharpé S, D'Hondt P, Cosyns P, De Broe ME. Hypozincemia in depression. *J Affect Disord* 1994;31:135-140.
- Mares-Perlman JA, Subar AF, Block G, Greger JL, Luby MH. Zinc intake and sources in the US adult population: 1976- 1980. *J Am Coll Nutr* 1995;14:349-357.
- Mei W, Dong ZM, Liao BL, Xu HB. Study of immune function of cancer patients influenced by supplemental zinc or selenium-zinc combination. *Biol Trace Elem Res* 1991;28:11-19.
- Olin KL, Golub MS, Gershwin ME, Hendrickx AG, Lonnerdal B, Keen CL. Extracellular superoxide dismutase activity is affected by dietary zinc intake in nonhuman primate and rodent models. *Am J Clin Nutr* 1995;61:1263-1267.
- Oteiza PI, Olin KL, Fraga CG, Keen CL. Zinc deficiency causes oxidative damage to proteins, lipids and DNA

## OptiZinc™ Zinc Monomethionine

in rat testes. J Nutr 1995;125:823-829.

Prasad AS. Zinc: an overview. Nutrition 1995;11:93-99.

Prasad AS, Fitzgerald JT, Hess JW, Kaplan J, Pelen F, Dardenne M. Zinc deficiency in elderly patients. Nutrition 1993;9:218-224.

Roebbothan BV, Chandra RK. Nutrient consumption and body size in a group of institutionalized elderly. Nutr Res 1994;14:35-39.

Sherman AR. Zinc, copper, and iron nutriture and immunity. J Nutr 1992;122:604-609.

Singh A, Failla ML, Deuster PA. Exercise-induced changes in immune function: Effects of zinc supplementation. J Appl Physiol 1994;76:2298-2303.

Small SP, Best DG, Hustins KA. Energy and nutrient intakes of independently-living, elderly women. Can J Nurs Res 1994;26:71-81.

Wedekind KJ, Hortin AE, Baker DH. Methodology for assessing zinc bioavailability: efficacy estimates for zinc-methionine, zinc sulfate, and zinc oxide. J Anim Sci 1992;70:178-187.

### For more information on OptiZinc™ visit [douglaslabs.com](http://douglaslabs.com)

† These statements have not been evaluated by the Food and Drug Administration.  
This product is not intended to diagnose, treat, cure, or prevent any disease.

Manufactured by  
Douglas Laboratories  
600 Boyce Road  
Pittsburgh, PA 15205  
800-245-4440  
[douglaslabs.com](http://douglaslabs.com)



**You trust Douglas Laboratories.  
Your patients trust you.**

© 2013 Douglas Laboratories. All Rights Reserved