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## ZINC SUPREME™

NATURAL SUPPORT FOR HEALTHY ZINC LEVELS  
90 VEGETARIAN CAPSULES | NPN80045088 | ZNP090-CN



**Zinc Supreme™** is a unique chelated zinc formula enhanced with vitamins B2 and B6, molybdenum, taurine and malic acid for optimal zinc supplementation. These nutrients work with zinc to facilitate vital functions and enzymatic reactions. Zinc and the amino acid taurine work together to support healthy vision and aid in optimal functioning of the central nervous system. Molybdenum helps reduce the excretion of zinc, and vitamin B6 has been shown to help maintain zinc levels. Each one-capsule serving of Zinc Supreme™ provides 30 mg of zinc along with clinically relevant amounts of these accessory nutrients.

Adequate zinc levels are essential for the healthy functioning of every cell in the body. The beneficial effects of zinc are extensive because this mineral is the body's most abundant intracellular trace element and at least 200 zinc-dependent enzymes have been identified.<sup>1</sup> Zinc is essential for growth and physical development and for the metabolism of proteins, fats, and carbohydrates. Most aspects of reproduction in both males and females require zinc. This mineral is also vitally important to the immune system. Practically every enzyme reaction in the brain involves zinc and so do the development and function of the central nervous system. The highest concentrations of zinc are in the brain, ears and eyes. Some individuals are poor absorbers of this mineral but most cases of zinc deficiency are due to poor diet, chronic stress, vegetarianism, or excessive alcohol intake. Some deficiencies result from exposure to toxic metals, such as cadmium from cigarettes or excess copper from copper-lined tap water pipes.

Severe deficiency is associated with skin changes, diarrhea, hair loss, mental disturbances, and recurrent infections as a result of impaired immune function.<sup>2</sup> Marginal zinc deficiency may contribute to poor

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wound healing, type 2 diabetes, prostate enlargement, cataracts, ulcers, food allergies, toxic metal accumulation, osteoporosis, decreased sense of taste or smell, hearing impairments, blood sugar imbalances, and skin disorders including acne, eczema, and psoriasis.

## ELEVATED COPPER

Copper imbalance can result from zinc deficiency. The zinc-to-copper ratio in the body is optimal at approximately 15:1. Inadequate zinc levels may result in functional copper excess. Poor diet, vegetarianism, and certain lifestyle habits (e.g., smoking) can create zinc deficiency which may cause an imbalance with copper. Ceruloplasmin is a copper-binding protein needed for proper copper utilization. Unhealthy adrenal glands have difficulty making ceruloplasmin. This can be a major cause of copper build-up (unable copper) or copper toxicity. Taking birth control pills, hormone replacement therapy, or drinking tap water from copper-lined pipes may also lead to elevated copper and decreased zinc. This elevation in copper may lead to migraine headaches, damage to the eyes<sup>8</sup> and possibly macular degeneration, preeclampsia,<sup>9</sup> breast cancer,<sup>10</sup> lymphoma, depression, anxiety, schizophrenia, and chronic leukemia.<sup>11</sup> Other symptoms of elevated copper include acne, adrenal insufficiency, anemia, PMS, mind racing, candida overgrowth, osteoarthritis, and viral infections.

## VISION, TASTE, AND SMELL

Zinc is essential for the maintenance of vision, taste, and smell.<sup>12</sup> Night blindness and other ophthalmic problems may result from zinc deficiency. Zinc is highly concentrated in neurons of the olfactory bulb, which may explain its key role in the senses of taste and smell.<sup>13</sup> Poor zinc status is prevalent among the elderly and a decline or loss of these olfactory senses is a common problem for this age group.<sup>14,15</sup> Supplementation with zinc may help improve taste and smell in some of these individuals.

## IMMUNE HEALTH

Zinc is involved in virtually every aspect of the immune response. Zinc has demonstrated antiviral activity against several viruses that cause the common cold.<sup>16</sup> A clinical study found that using zinc lozenges reduced cold symptoms from an average of seven days to four days.<sup>17</sup> Supplementation with zinc stimulates synthesis of white blood cells and generally supports the activity of other immune system components such as neutrophils, T lymphocytes, and tumor-fighting natural killer (NK) cells.<sup>18</sup> Zinc is also required for producing thymulin, the major hormone of the thymus gland.<sup>19</sup> A reduction of thymulin may result in impaired immune function.

## SKIN HEALTH

Several studies have demonstrated the effectiveness of zinc in the treatment of acne. In a study of advanced acne in both men and women, zinc levels were significantly lower than those without acne.<sup>24</sup> Although some individuals see dramatic improvement with zinc supplementation, the majority will not see results immediately. Weeks or months may pass before a noticeable difference in the appearance of the skin is seen.

## STRESS AND MOOD

Stress lowers zinc body stores and leaves one vulnerable to weakened immune function, acne, and other symptoms of elevated copper. Prolonged psychological stress may be a contributor to depressive disorders. Animal models show that psychological stress decreases total zinc levels and induces zinc dyshomeostasis in the hippocampus.<sup>29,30</sup>

## Medicinal Ingredients (per vegetarian capsule):

Taurine (2-Aminoethanesulfonic acid).....	400 mg
L-Malic acid .....	30 mg
Zinc (Zinc bisglycinate) .....	30 mg
Vitamin B2 (Riboflavin) .....	5 mg
Vitamin B6 (as Pyridoxal-5-Phosphate).....	5 mg
Molybdenum (Molybdenum bisglycinate).....	250 mcg

**Non-Medicinal Ingredients:** Microcrystalline cellulose, hypromellose, magnesium stearate (vegetable source). **Recommended Dose:** Adults: Take 1 capsule per day, or as directed by your health care practitioner. Take with food a few hours before or after taking other medications. Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

## REFERENCES

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