

Aqueous Zinc

Support For Healthy Immune Function

Zinc is a mineral essential to both normal health and to optimal cellular function. As a cofactor for an excess of seventy enzymes, zinc plays an important role in cellular processes. The second vital function of zinc is as a component of specific DNA binding proteins, known as zinc finger proteins, commonly referred to as zinc fingers. Zinc fingers are vital for nutrient/gene interactions. For example vitamins A and D, as well as numerous hormones including insulin-like growth factor 1 (IGF-1) and growth hormone (GH) rely on specific zinc fingers to bind to DNA regions, which in turn effect the expression of specific genes. Functionally, zinc participates in cell membrane stability, and provides structural strength to bones, as it is part of the bone mineral apatite.

Zinc also affords many other immunological and host defenses. Thymulin, a thymus specific hormone, requires zinc for expression of activity. New protein production for tissue repair is a zinc dependent process, thus zinc status is particularly important in times of high tissue reformation, as seen in trauma and sepsis. In animals a zinc deficient diet maintained for two weeks resulted in a severe impairment in the ability to generate a cytotoxic response to a tumor challenge, which was reversed with zinc administration. Zinc deficiency has been associated with both thymic atrophy and lymphoid tissue atrophy. Zinc is also an important component in blood sugar stabilization, as insulin production is a zinc dependent process. Furthermore, low zinc status has also been observed in women with osteoporosis and osteopenia.

A separate study deduced zinc supplementation resulted in the deterrence of diabetic cardiomyopathy, which was attributed to zinc-induced cardiac MT induction. Additionally, zinc is virtually absent in highly refined foods, thus is likely deficient in individuals consuming this type diet. Taken together these studies and others demonstrate the beneficial roles of oral zinc. Zinc deficiency is generally widespread in the American population. Because of its involvement in an abundant number of physiologically different enzymatic processes, deficiency encompasses a wide array of symptomatology, and may be broad reaching.

Supplemental forms of zinc are easily administered, and aqueous varieties offer the advantage of an easily adjustable dose. Additionally, an aqueous form is easily utilized to perform a Zinc Tally or Zinc Taste Test to assess for deficiency. Those zinc-deficient have little to no taste for zinc. Signs of zinc deficiency include poor wound healing, slow growth, and poor appetite. Gustin, a zinc dependent polypeptide in the mouth may be utilized to assess for zinc deficiency. This protein aids in discriminating specific tastes for metals such as zinc.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

