

# The Power of Zinc!

Zinc is unquestionably one of the most important micronutrients for human health and longevity, yet most of the population fails to maintain optimal zinc status... or worse, may suffer from an overt deficiency.

Suboptimal zinc status (or insufficiency) is far more common than deficiency, though its impact on health remains a major concern considering its role in hormone production, immune health, spermatogenesis, DNA synthesis, growth and development, wound healing, thyroid and bone metabolism, vision health, antioxidant status, and anti-inflammatory activities in addition to many other biochemical and physiological processes.

## Who is at greater risk of suboptimal zinc status or overt deficiency?

Based on increased zinc needs, populations include:

- infants
- children
- adolescents
- pregnant or lactating women

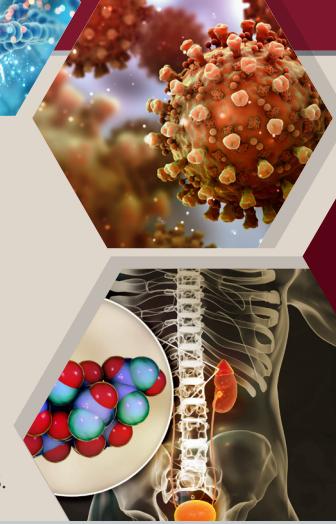


Based on low availability from diet or reduced absorption capacity, increased zinc demands are also common in:

- vegetarians/vegans
- elderly

And patients with:

- malnutrition
- alcoholism
- inflammatory bowel disease
- malabsorption syndromes



**Bio-Zinc/C Lozenge • Bio-Zinc 50 Caps • 1-800-825-7921 • biospecnutritionals.com**

## Zinc and Immunity

The immune system is markedly susceptible to reduced zinc levels, which has shown to influence virtually every immunological event in the body.

Established research supports the influence of zinc in both innate and adaptive immunity, particularly against different types of viral infections.



## The Copper/Zinc Imbalance<sup>25 26</sup>

*A 2011 study found that men with elevated copper and low levels of zinc had lower levels of testosterone.*



Zinc plays a significant role in the activation of testosterone producing Leydig cells. With aging and inflammatory states, **decreased zinc** and **elevated copper** inhibit biological repair and maintenance, most notably in aging populations. This altered copper-zinc ratio can also play a significant role in the development of cardiovascular disease, malignancy and all-cause mortality.

Other contributing factors to the Copper/Zinc imbalance are oxidative stress, dietary deficiencies, and elevated insulin levels. A serum/plasma copper to zinc ratio above 2.0 is indicative of an inflammatory state and a zinc deficiency.

**BioSpec Nutritionals** now offers zinc (as zinc citrate) in a chewable lozenge or high-potency capsule:

### Bio-Zinc/C Lozenge

- Contains 15mg of Zinc (citrate) per lozenge
- Each chewable lozenge includes 100mg of Vitamin C and 50mg Echinacea for additional immune support
- Can be taken multiple times per day at the onset of illness or during times of increased stress
- Excellent tasting mixed-berry flavor



#### Bio-Zinc/C Lozenge Immune Support Formula\*

**DIRECTIONS:** As a nutritional supplement, 1 or 2 lozenges daily or as directed by your Healthcare Professional. For maximum absorption and results, lozenges should be chewed or allowed to dissolve in the mouth before swallowing.

SUPPLEMENT FACTS		
Serving Size: 2 Lozenges		
Servings Per Container: 45		
	Amount per Serving	% DV
Vitamin C (ascorbate complex)	200 mg	222 %
Zinc (citrate)	30 mg	273 %
Echinacea Purpurea	100 mg	†

\*Daily Value not established\*Daily Value not established

Other Ingredients: Agglomerated Dextrose, Maltodextrin, Vegetable Stearic Acid, Vegetable Magnesium Stearate, Silicon Dioxide and Mixed Berry Flavor.

Suitable for Most Vegetarians.

**FORM: 90 LOZENGES**  
**PRODUCT: 570**



### Bio-Zinc 50

- Bone formation
- Blood clotting
- Arterial calcification prevention
- Glucose metabolism and insulin sensitivity regulation
- Optimizes sex hormones



#### High Potency Zinc Citrate with Copper Immune Support Formula\*

**DIRECTIONS:** As a nutritional supplement for adults, 1 capsule daily or as directed by your Healthcare Professional.

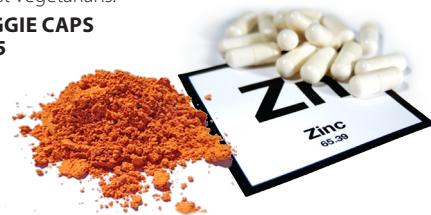
SUPPLEMENT FACTS		
Serving Size: 1 Veggie Cap		
Servings Per Container: 90		
	Amount per Serving	% DV
Zinc (citrate)	50 mg	455 %
Copper (amino acid chelate)	2mg	222 %

\*Daily Value not established

Other Ingredients: Microcrystalline Cellulose and HPMC.

Suitable for Most Vegetarians.

**FORM: 90 VEGGIE CAPS**  
**PRODUCT: 575**



**References**

Saper, R. B., & Rash, R. (2009). Zinc: an essential micronutrient. *American family physician*, 79(9), 768–772.  
 Roohani, N., Hurrell, R., Kelishadi, R., & Schulin, R. (2013). Zinc and its importance for human health: An integrative review. *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*, 18(2), 144–157.  
 Gammoh, N. Z., & Rink, L. (2017). Zinc in Infection and Inflammation. *Nutrients*, 9(6), 624.

\*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.

BioSpec products are manufactured in the USA under strict cGMP guidelines

