Health by Hope
Functional Nutrition and Lifestyle Strategies

Zinc:

Why is Zinc Important?

Zinc is another important mineral in the human body. Zinc is important to immune system function and prevention of infection, wound healing, and sense of taste. Zinc consumption has decreased over the last decade because of the increased consumption of processed foods and less animal protein. Maintaining the homeostasis of zinc makes sure that your body is functioning properly.

What Body Functions is Zinc Important for?

Albumin: about 70% of zinc is bound to albumin, a protein found in your blood that regulates osmotic gradients. This means that any changes to the concentration of albumin can decrease the concentration of zinc.

Immune System: Zinc is important for the maturation of lymphocytes and development of acquired immunity (such as T-cell activation). Zinc also helps that body metabolize substances to protect cells from damage or inflammation.

Wound Healing: Zinc helps reduce inflammation when needed, it clears bacteria from the wounds to prevent infection and helps repair the damaged tissue.

Sense of Taste: Zinc helps with the neural processes that control your perception of taste.

Different Types of Zinc:

Zinc Sulfate: This form of zinc is used to prevent and treat zinc deficiency and can also help in immune system function.

Zinc Acetate: This form of zinc is used to treat zinc deficiency.

Zinc Gluconate: This form of zinc is used to support immune function and is found in certain cold medications to decrease the severity of cold symptoms.

Food Sources Zinc is in:

Animal Sources	mg/serving
Eastern Oysters (3 ounces)	32
Pacific Oysters (3 ounces)	28.2
Beef Sirloin (3 ounces)	3.8
Blue Crab (3 ounces)	3.2
Pork Chops (3 ounces)	1.9
Turkey Breast (3 ounces)	1.5
Cheddar Cheese (1.5 ounces)`	1.5
Shrimp (3 ounces)	1.4
Sardines (3 ounces)	1.1
Cow's Milk (1 cup)	0.9
Greek Yogurt (6 ounces)	1.0
Egg	0.6
Salmon (3 ounces)	0.5
Plant Sources	**mg/Serving**
Pumpkin Seeds (1 ounce)	2.2
Lentils (½ cup)	1.3
Roasted Peanuts (1 ounce)	0.8
Brown Rice (½ cup)	0.7
Whole Wheat Bread (1 slice)	0.6
Broccoli (½ cup)	0.4
White Rice (½ cup)	0.3
Cherry Tomatoes (½ cup)	0.1
Blueberries (½ cup)	0.1

Signs and Causes of Zinc Deficiency:

Zinc deficiency is becoming increasingly common. Causes of zinc deficiency include inflammatory bowel diseases including Ulcerative Colitis and Crohn's Disease, bariatric surgery, newly diagnosed celiac disease, people who are vegan or vegetarian, people with sickle cell disease, alcoholism, and those who have HIV. People who are pregnant are more at risk for zinc deficiency due to increased demand.

Skin Signs of Zinc Deficiency: Skin rashes/lesions, hair loss, and delayed wound healing can be caused by a zinc deficiency.

Gastrointestinal Signs of Zinc Deficiency: Diarrhea and loss of appetite can be caused by zinc deficiency. A deficiency can also led to loss of taste and smell.

Growth and Development Signs of Zinc Deficiency: Delayed growth, delayed puberty, and impaired cognitive development can be caused by zinc deficiency.

Immune Signs of Zinc Deficiency: Frequent infections and a weakened immune system can be caused by zinc deficiency.

Signs and Causes of Zinc Toxicity:

Causes of zinc toxicity do not just occur from naturally occurring zinc, but either from zinc supplements, or from exposure to zinc either through your skin or inhalation of fumes.

Gastrointestinal Signs of Zinc Toxicity: Nausea and vomiting, stomach pain, diarrhea, and changes in taste or smell can be caused by zinc toxicity.

Immune Signs of Zinc Toxicity: Flu-like symptoms and frequent infections can be caused by zinc toxicity.

Supplementation of Zinc:

Supplementation of zinc is important if you aren't consuming enough zinc through food. Particularly if you are vegan or vegetarian. Zinc supplementation can help strengthen a weakened immune system and make sure that your growth and development is occurring at the correct rate.

Common Cold: If zinc is given when someone has a cold it can reduce the duration and severity of the cold by inhibiting the binding and replication of the virus in the nasal mucosa and suppresses inflammation.

***It is important to know that dietary intake of zinc should be your main source of zinc, and any zinc supplements should supplement the zinc you are already ingesting.**

Daily Recommended Dose of Zinc:

Age	Male	Female	Pregnancy	Lactation
Birth to 6 months	2 mg	2 mg		
7-12 months	3 mg	3 mg		
1-3 years	3 mg	3 mg		
4-8 years	5 mg	5 mg		
9-13 years	8 mg	8 mg		
14-18 years	11 mg	9 mg	12 mg	13 mg
19+ years	11 mg	8 mg	11 mg	12 mg

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