

# THINK ZINC

## The Power of Zinc for Human Health

### The Role of Zinc in Nails

**Zinc is the second most abundant trace mineral in the human body. It is a major constituent of every cell and is involved in cellular metabolic activities.**

Zinc is an essential trace element which exerts many functions in various biological and physiological processes in the human body. The essentiality of zinc in humans was established in 1963, and during the past 61 years, tremendous advances in both clinical and basic sciences of zinc metabolism in humans have been observed. In humans, zinc plays a significant role in the antioxidant defense system and helps to optimize immune function.



**Zinc deficiency, which may be due to a lack of zinc in the diet or an underlying medical condition, can cause nail dystrophy.**

#### **Zinc Deficiency and Its Effect on Nails**

When zinc levels are insufficient, several changes and abnormalities can occur in the nails:

- Zinc is involved in cellular replication, and a deficiency can slow down the growth rate of nails. Nails become thinner and more fragile, prone to splitting and breaking.
- Zinc helps in the production of keratin. Without sufficient zinc, nails become brittle and are more likely to crack or peel.
- A more severe lack of zinc can cause nail dystrophy, characterized by deformed, discolored or weak nails.
- Zinc deficiency can weaken the immune response, making the skin around the nails more susceptible to infections like paronychia, a bacterial or fungal infection around the nail folds. The cuticle may become inflamed, leading to discomfort and further nail damage.
- Leukonychia: This condition, often caused by zinc deficiency, results in white spots or bands appearing on the nails. While these may appear as harmless marks, they signal underlying nutritional issues related to zinc levels.

## How Zinc Helps Improve Keratin in Nails:

Keratin makes up 80-90% of the human nail. It is a tough, fibrous protein that is crucial for the nail's strength, structure and resilience.

- Zinc is crucial for the body's ability to produce and synthesize proteins, including keratin, the primary structural protein in nails.
- Zinc supports the growth of keratinocytes, the cells responsible for producing keratin. This promotes healthy nail growth and helps prevent brittleness and splitting.
- By aiding in keratin formation, zinc helps nails grow stronger, thicker and more resistant to damage, such as cracking or peeling.
- Supplementation can help repair and restore the nails integrity by boosting keratin in production.

## The Function of Keratin in Nails:

- Keratin provides the nails with rigidity and strength, allowing them to protect the fingertips and perform tasks without breaking easily.
- Hard keratin resists wear and tear, which helps prevent nails from splitting, cracking or peeling under pressure or exposure to the environment.
- Keratin is water-insoluble, which helps maintain nail integrity and prevents them from becoming overly dry or brittle when exposed to moisture.
- Nails act as protective plates, with the hardness of keratin being key to this protective function.
- Keratinocytes, the cells that produce keratin, are responsible for the continuous growth and regeneration of nails. This ensures that nails remain healthy as they grow from the nail matrix.

## Why Choose Zinc from Zinpro®?

When deciding on which zinc supplements to take, it is important to choose a source that can be easily absorbed by the human body. Zinc amino acid complexes are more stable in the gastrointestinal tract, which results in better absorption and utilization (bioavailability) than their inorganic counterparts. [For over 53 years, Zinpro has been a pioneer in the research and development of performance trace minerals and innovative nutritional solutions.](#) The company's dedication to improving health and wellbeing has led to the development of the patented Zinpro® Zinc LG, a new generation of zinc, marked by a unique combination of an organic zinc source with glutamic acid (Glu) and lysine (Lys). [This provides superior protection against antagonists, facilitates unique absorption via amino acid transporters, and enables distinctive metabolism and systemic delivery, potentially leading to increased zinc levels in humans.](#)

Learn more at  
[zinpro.com/zinc](http://zinpro.com/zinc)



## Three Main Takeaways



During the past 50 years, tremendous advances in both clinical and basic sciences of zinc metabolism in humans have been observed



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Zinpro Zinc LG provides superior protection against antagonists, promotes unique absorption and improves the body's utilization of zinc