THINK ZINC

The Power of Zinc for Human Health

The Importance of Zinc for Intestinal Health

The intestinal system plays a key role in a range of body functions such as immunity and protection against inflammation. But alcohol, diseases or stress can disrupt intestinal health. This is where zinc supplementation can help.

The human gastrointestinal tract is a complex system divided into four layers. The mucosa is the innermost layer, followed by the submucosa, the muscularis propria and the serosa. The inner layer or the the intestinal epithelium layer is particularly important as it forms the barrier between the internal and external environment of the body and is essential for maintaining homeostasis. This barrier regulates nutrient absorption as well as preventing the invasion of pathogenic bacteria in the host as a first line of defense. It is composed of epithelial cells, tight junctions and a layer of mucus.

A healthy intestinal tract is key for gut integrity and reduction of “leaky gut”

Keeping the Tight Junctions Healthy

The tight junctions in the epithelium layer play a key role in intestinal barrier function, also called gut integrity. These tight junctions regulate the passage of proteins and liquids across the cell monolayer during the absorption of nutrients. A healthy intestinal tract has well performing tight junctions. However, tight junctions can be damaged and lead to unrestricted movement of microorganisms and large proteins across the paracellular space (3). This syndrome is known as ‘leaky gut’ and can cause inflammation or serious illness.

Importance of Zinc Homeostatis

Approximately 95% of the zinc in the body is within the cells. This intracellular zinc is required for a variety of cellular functions, including the maintenance of the structure and function of the intestinal mucosal barrier. In essence, zinc is essential to the building blocks of tight junctions. The constant state of cellular zinc nutrition (called homeostasis) is key during a challenge and can help to decrease the occurrence of leaky gut and mitigate inflammation (4). On the other hand, an imbalance in zinc can lead to impaired epithelial barrier function caused by a decreased expression of tight junction proteins (5), altered immune responses and gut microbiota dysbiosis (6). An imbalance in the microbiota (dysbiosis) can drive local inflammatory and autoimmune diseases such as colitis and inflammatory bowel diseases. Alcohol, certain processed foods, stress and/or disease can accelerate this imbalance and the onset of a leaky gut. Studies suggest that even minimal zinc deprivation exaggerates the damaging effect of alcohol on the epithelial barrier.

Benefits of Zinc Supplementation

An impaired intestinal barrier function is linked to the onset and development of intestinal diseases such as Inflammatory Bowel Disease (IBD), Irritable Bowel Syndrome and Colo-Rectal Cancer (6). Crohn's disease is a type of IBD also marked by increased permeability of the small intestine. For patients with poor intestinal health means that they are at higher risk for clinical relapses. Research showed that zinc supplementation can resolve permeability alterations (leaky gut) in patients in remission from Crohn's disease. This means that improving intestinal barrier function may contribute to reducing the risk of relapse.

Why Choose Zinc from Zinpro®?

The right amount of zinc is critical to intestinal health and can help to prevent leaky gut syndrome. When deciding on which 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 and bioavailable in the gastrointestinal tract, which results in better absorption than their inorganic counterparts. For over 52 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 zinc, marked by a unique combination of an organic zinc source with glutamic acid (Glu) and lysine (Lys). This ensures superior zinc uptake, which could lead to increased zinc levels in humans.

Learn more at
zinprozinc.com

ZINPRO® ZINC LG

Three Main Takeaways

1. Zinc homeostasis is key during a challenge and can help to decrease the occurrence of leaky gut syndrome and mitigate inflammation
2. Zinc deficiency is linked to the onset and development of a range of intestinal diseases
3. Zinc supplementation can help resolve leaky gut and supports healthy intestinal function

References available upon request