

# Build Your Immunity Community With Zinc Max

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HUMAN NUTRITION & HEALTH





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# Consumer Insights & Market Trends

# Immune health is a priority around the globe



**65%** of global consumers are more conscious of immunity since Covid-19<sup>1</sup>

**67%** of global consumers are interested in products that “boost immune health”<sup>2</sup>

**72%** of global consumers prefer to receive immunity benefits through food and beverage formats<sup>2</sup>

More than **1 in 3** US consumers are currently taking a zinc supplement to support their immunity<sup>3</sup>

**53%** of Americans say their ideal dietary supplement would offer immune support<sup>4</sup>



# Zinc growth has been fueled by the pandemic, consumer interest in staying healthy

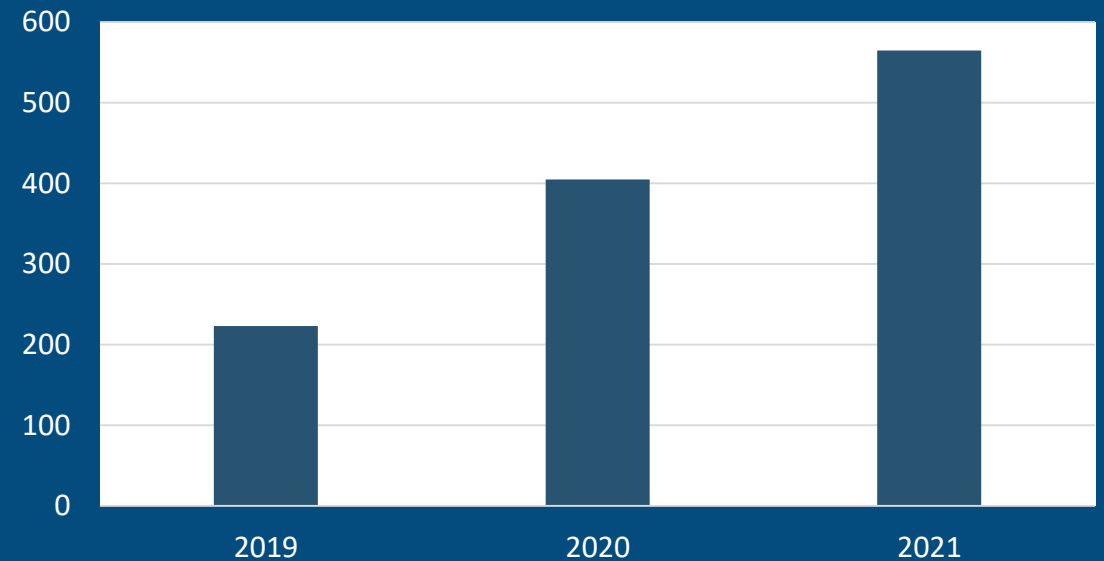
**US Zinc retail sales show massive consumer demand in light of pandemic conditions<sup>1</sup>:**

+126.9% in \$ sales

+112% in physical volume



**US New Product Launches – Supplements with Zinc<sup>2</sup>**





# Premium commercial Zinc products highlight chelation and its benefits





# How will you build your immunity community?





# Nutrition's Impact on Immune Health





# How Does Nutrition Impact The Immune System?

## Zinc

Helps the immune system work properly and may help wounds heal

## Protein

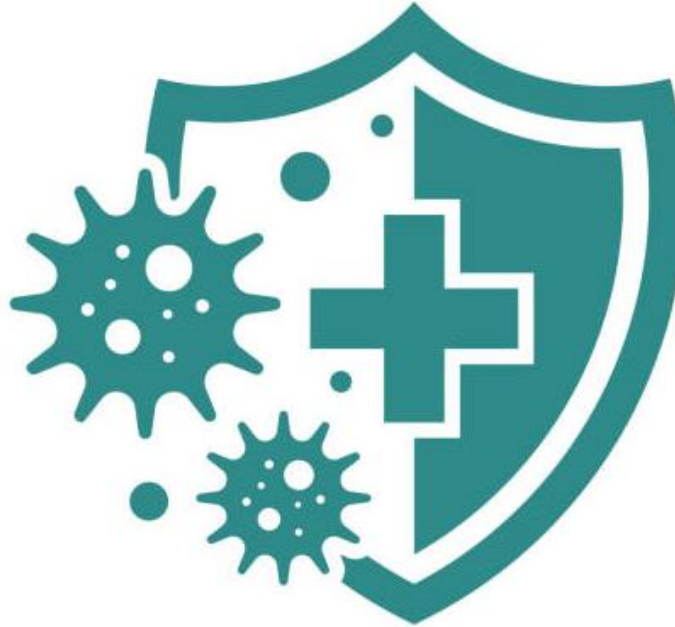
Plays a role in the body's immune system, especially for healing and recovery

## Vitamin D

Supports immune cell production of microbe fighting proteins

## Vitamin C

Supports the immune system by stimulating the formation of antibodies



## Selenium

Supports antioxidant enzymes essential for immune function

## Fluids & Electrolytes (Na, K)

Helps regulate the body's hydration status

## Vitamin A

Helps regulate the immune system and protect against infections

## Vitamin E

Works as an antioxidant and may support immune function



# What Does Zinc Do For Me?



**Supports Immune Health**

**Supports the Body's  
Antioxidant Defense System**

**Supports Protein Metabolism**

**Supports Skin Health by aiding  
in the wound healing process**

**Supports Digestive Health**

**Supports Normal Growth &  
Development during  
pregnancy, childhood, and  
adolescence**

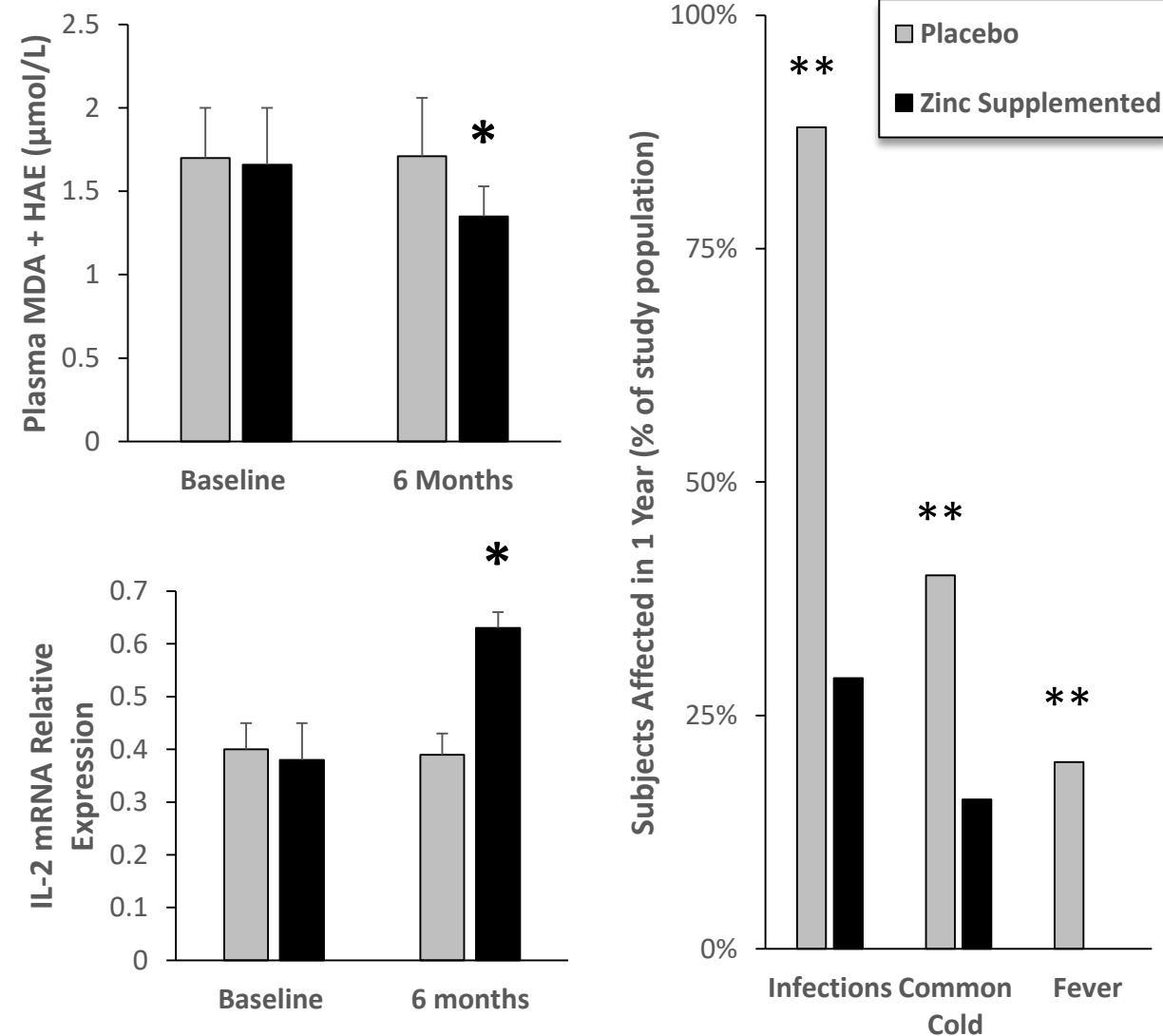


# Zinc Supplementation Improves Immune Health

## Results & Conclusions

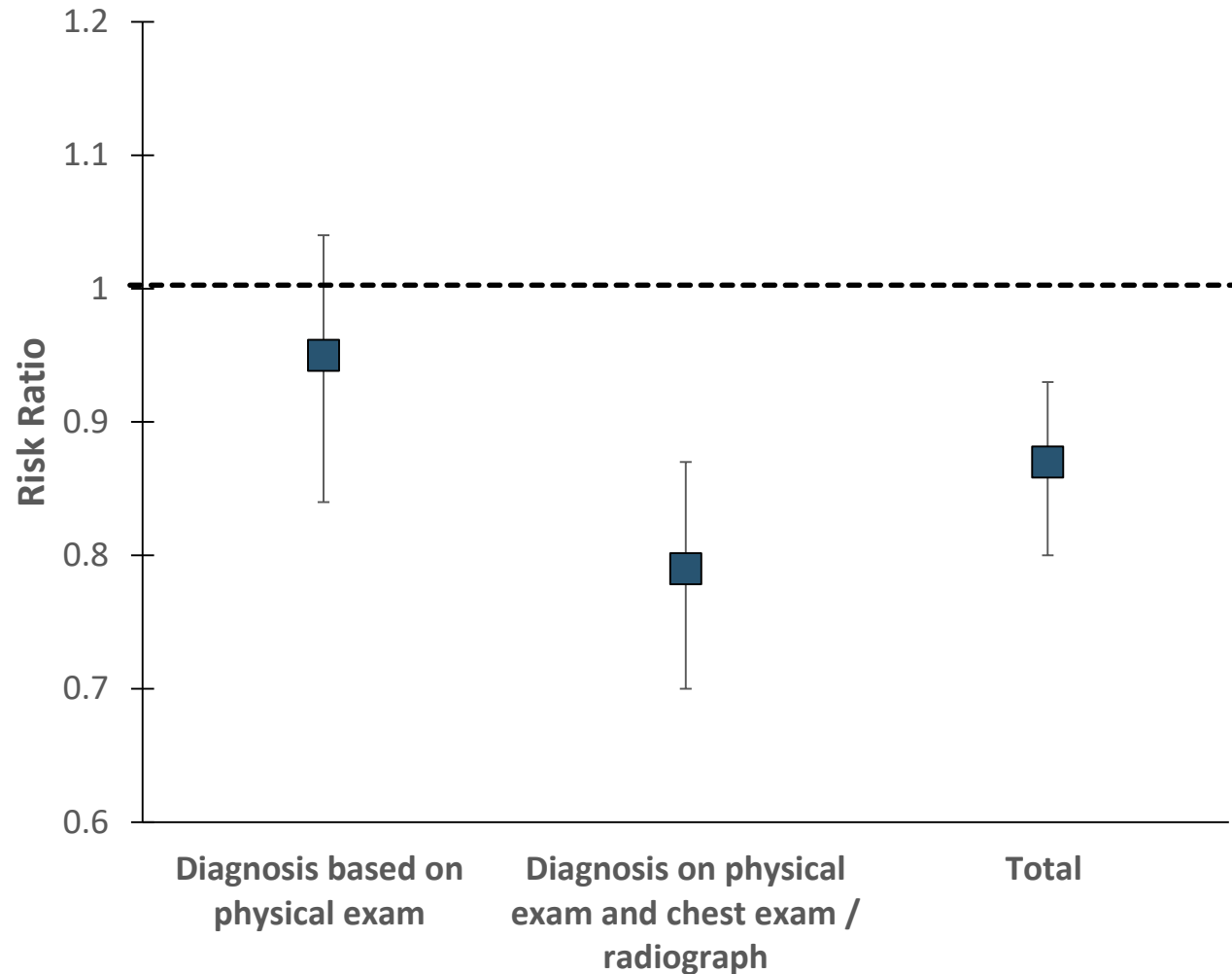
- Zinc supplementation **decreased markers of oxidative stress**
- Zinc supplementation **increased expression of cytokine signaling molecules** such as IL-2
- Zinc supplementation **significantly decreased**:
  - Incidence of **infection**
  - Incidence of the **common cold**
  - Incidence of **fever**

**Zinc supplementation improves immune health**





# Zinc Supplementation Improves Immune Health In Children



## Study Goal

Evaluate the effectiveness of zinc supplementation in the prevention of pneumonia in children aged 2-59 months (~4.9y)

## Study Design

Meta analysis of 6 trials, N=5,193 participants

## Results & Conclusions

Zinc supplementation (10 – 70 mg/day) reduced the incidence of pneumonia by 13% (RR=0.87; 95% CI: 0.80-0.93)

**Zinc supplementation in children is associated with a reduction in the incidence and prevalence of pneumonia**



# Nutrient Gaps & Implications on Immune Health



# How Much Zinc Do We Need?

Recommended Dietary Allowance (RDA) for Zinc:

Age Group	Male	Female	Pregnancy	Lactation
0-6 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

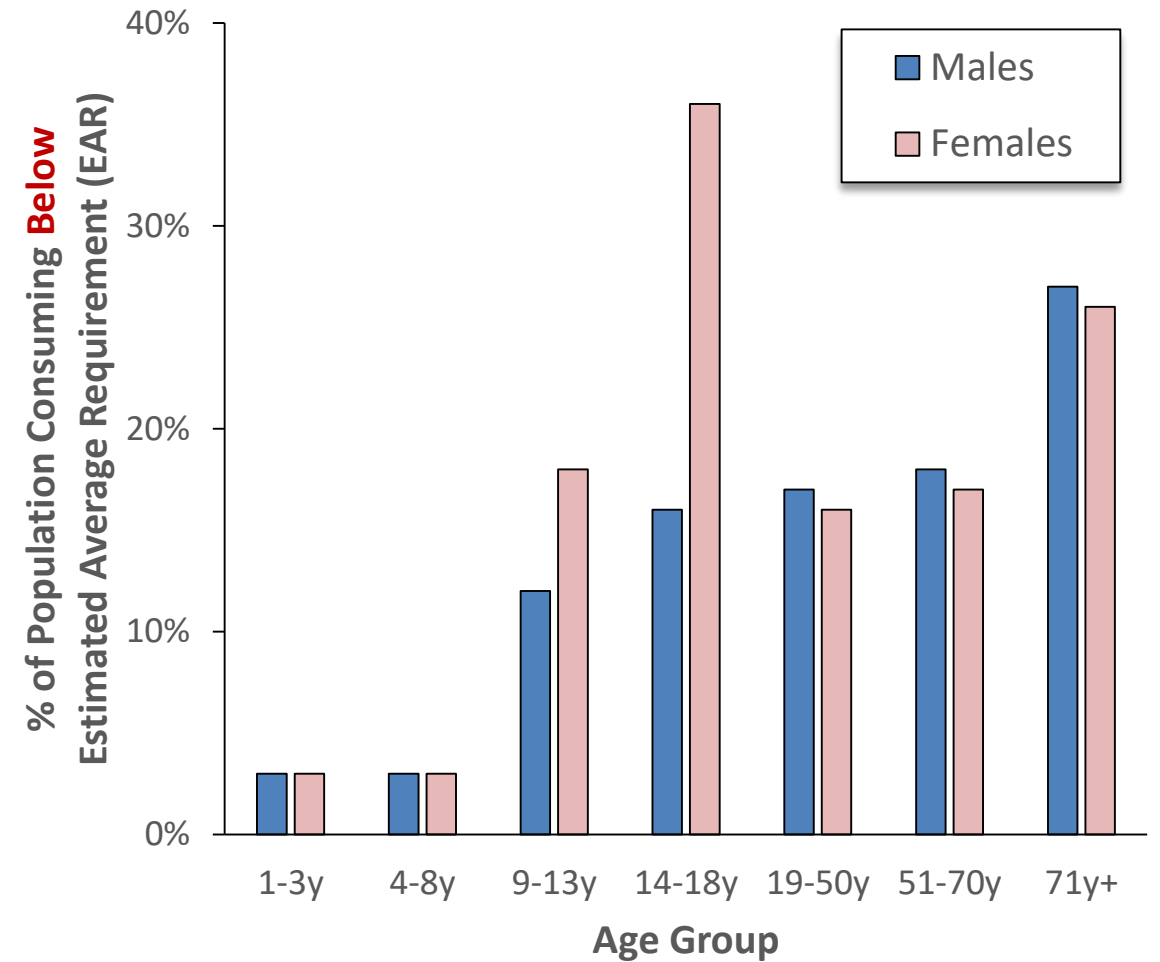


**FDA Daily Value (Adults & Children Age ≥ 4y = 11 mg)**



# Are We Getting Enough Zinc?

- **Zinc inadequacy is common** among Americans
- **More than 1/3 of teen girls** in the United States do not get enough Zinc in their diet
- **Nearly 1 in 5 American adults** (age 19y+) do not get enough Zinc in their diet
- **More than 1 in 4 American seniors** (age 71+) do not get enough Zinc in their diet



# Zinc Inadequacy Is Recognized By The Dietary Guidelines For Americans

*“Zinc-rich complementary foods (e.g., meats, beans, zinc-fortified infant cereals) are important from age 6 months onwards **to support adequate zinc status, which supports growth and immune function**”*

*“Women following a vegetarian or vegan dietary pattern [during pregnancy or lactation] should consult with a healthcare provider to determine whether supplementation of iron, vitamin B12, and/or other nutrients such as choline, **zinc**, iodine, or EPA/DHA is necessary and if so, the appropriate levels to meet their unique needs”*





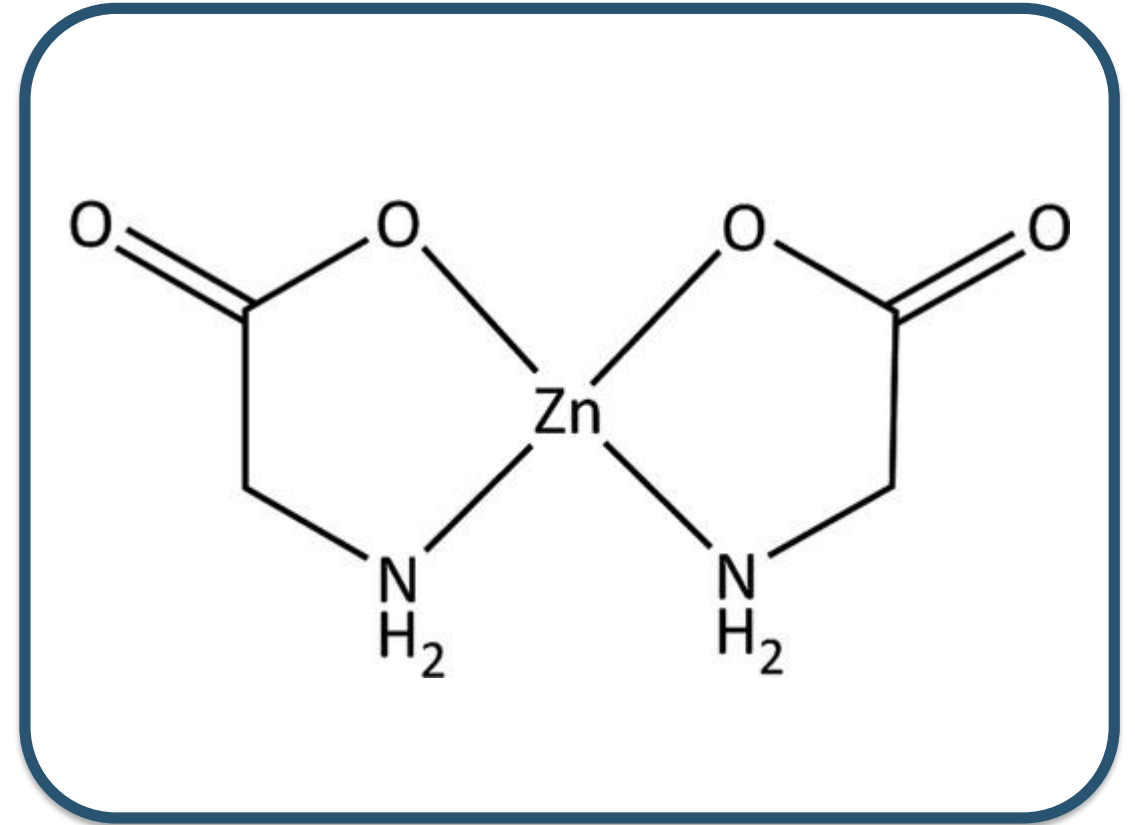
# When You Think Immunity, Think Zinc Chelates



# What Are Mineral Chelates?

**Chelates are minerals bound to amino acids** to improve stability and remain neutral in solution

By remaining neutral, mineral chelates have been shown to **reduce the binding of Anti-Nutrients** and **are better absorbed** than their non-chelated counterparts

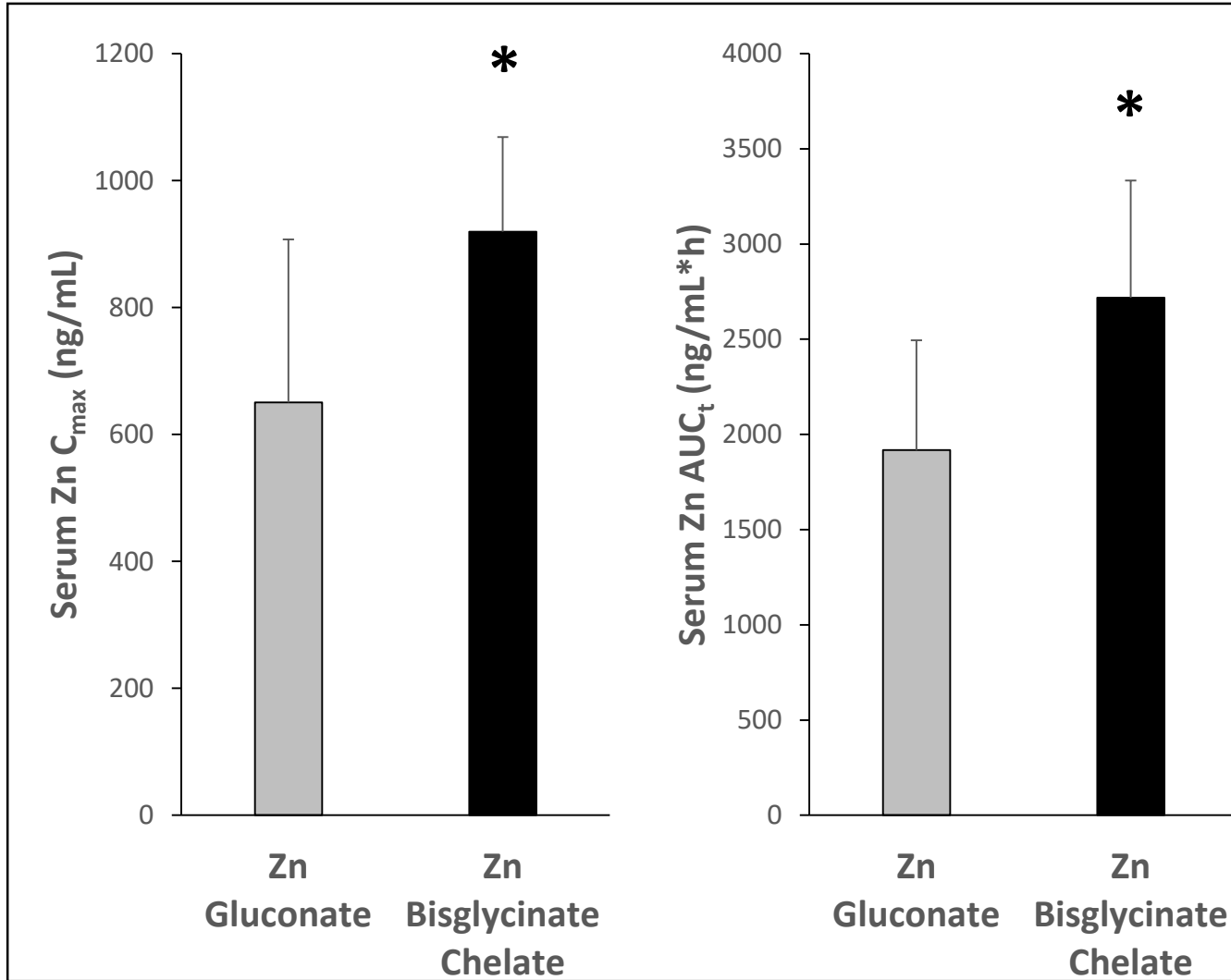




# Zinc Bisglycinate Chelate Absorption Is Well Studied

Author/ Publication	Study Design	Study Population	Duration / Dosage	Primary Outcome	Outcome
Gandia P, et al. <i>Int J Vitam Nutr Res</i> 2007; 77(4): 243-248.	Randomized, open, crossover trial	N=12 healthy Females, age 18-28y	<b>8 Hours</b> 15 mg elemental zinc as: <ul style="list-style-type: none"> <li>• Zn gluconate</li> <li>• Zn bisglycinate</li> </ul> All subjects received vit B1, B2, B3, B5, B6, B7, cysteine	Serum Zn	<ul style="list-style-type: none"> <li>• Zn Bisglycinate is 43% more bioavailable than Zn gluconate</li> </ul>
Swan M et al; <i>FASEB J</i> 2008; 22 (1 supp):693.3-.3. (Abstract)	Randomized crossover trial	N=13 healthy Females	<b>4 Hours</b> 50 mg elemental Zn as: <ul style="list-style-type: none"> <li>• Zn Oxide</li> <li>• Zn Gluconate</li> <li>• Zn Glycinate</li> <li>• Zn Picolinate</li> </ul>	Plasma Zn	<ul style="list-style-type: none"> <li>• Zn Bisglycinate had best acute uptake</li> </ul>
DiSilvestro RA, et al; <i>Biol Trace Elem Res</i> , 2015; 168(1): 11-14	Randomized, double-blind, placebo-controlled trial	N=30 healthy Females; age 18-24y;	<b>6 weeks</b> 60 mg elemental Zn as: <ul style="list-style-type: none"> <li>• Zn Gluconate</li> <li>• Zn Glycinate</li> </ul> -or- <ul style="list-style-type: none"> <li>• Placebo (0 mg Zn)</li> </ul>	Plasma Zn	<ul style="list-style-type: none"> <li>• Plasma content of zinc is increased by 50% with zinc bisglycinate</li> <li>• No significant change on plasma Zn with zinc gluconate or placebo</li> </ul>

# Zinc Bisglycinate Demonstrates Superior Absorption



## Results & Conclusions

- Zinc Bisglycinate supplementation resulted in a **significantly greater maximum serum Zinc concentration** than Zn Gluconate
- The **bioavailability of Zinc Bisglycinate was 43.4% higher** than that of Zn Gluconate
- Zinc bisglycinate is **safe and well tolerated**

**Zinc Bisglycinate is 43.4% better absorbed than conventional Zinc salts like Zn Gluconate**



# Why Zinc Max is the Optimal Source of Zinc



# Zinc Bisglycinate Chelates by Albion® Minerals

**With more than 200 scientific studies, 98 patents and 70 human clinical trials conducted using Albion® Minerals, Balchem is an established market leader. As the pioneer and founder of chelated minerals, the globally trusted Albion Minerals brand continues to deliver high quality, highly bioavailable nutritional solutions through new product innovations.**



# Introducing NEW Z-life™ Zinc Max

A 27% Zinc Bisglycinate Chelate with even more bioavailable zinc than ever before

Higher elemental zinc  
enables a **higher dose**  
in supplement  
applications

Formulation  
efficiency yields a  
**more affordable**  
cost-in-use

Zinc Max meets the  
**clean label** demands  
of today's consumers  
(silica free, not BE,  
vegan, NGPV)

Scientific substantiation  
for zinc bisglycinate  
chelate suggests  
**greater bioavailability**  
than inorganic mineral  
salts



# Consumer Validated Concept



*Concept shown is for demonstration purposes only. Ingredient users are solely responsible for ensuring the compliance of formulation and labeling (inclusive of claims) with applicable regulations.*





# Concept: High Absorption Zinc Kids Gummy



Trying to keep your children healthy throughout these unprecedented times has not been easy. With **NEW High Absorption Zinc Kids Gummies**, you can rest assured that your kids will receive the proper amount of zinc they need to support their everyday immune health.

Zinc is an essential mineral, responsible for healthy immune function, a key health benefit that **resonates with today's parents**, which is more important than ever.

High **Absorption Zinc Kids Gummies** delivers **5mg** of zinc in a chelated form, which means it's **more bioavailable than other zinc products**, maximizing absorption and ensuring proper delivery of the active.

With all natural fruit flavors, these gummies not only taste great, but are great for your kids, too! **High Absorption Zinc Kids Gummies** are available at retailers near you.



# Thank You

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