



# Zinc Plus®



## Each 10 mL serving contains:

- ✓ 4 mg Zinc (as Zinc Gluconate)
- ✓ 0.2 mg Copper (as Copper Gluconate)

## Benefits\*



**SUPPORTS** healthy immune function



**PROVIDES** essential trace minerals zinc and copper



**COMBINES** zinc and copper to support a healthy mineral balance



**PROMOTES** normal growth and development

\*These statements have not been evaluated by the Food and Drug Administration.  
This product is not intended to diagnose, treat, cure or prevent any disease.

ChildLife Essentials® presents its addition to the family:

## Zinc Plus®

The immune system needs adequate intake of multiple specific micronutrients, including zinc and copper, for both innate and adaptive immune function.<sup>1</sup> These two essential trace minerals also play an important role in establishing proper function of physical barriers and immune cells.<sup>2</sup> Excess zinc intake was found to decrease copper absorption due to competition for a common transporter.<sup>1</sup>

### Zinc

Zinc is an essential trace mineral important for growth and development. Its function ranges from catalytic (nearly 100 enzymes depend on zinc), structural (facilitates protein folding to produce biologically active molecules), and regulatory (regulates gene expression).<sup>3</sup> Many metalloenzymes needed for cell membrane repair, cell proliferation, growth and immune system function use zinc as their cofactor.<sup>4</sup>

Zinc is involved in both innate and adaptive immune function<sup>5</sup>:

- Innate immune function:
  - Antioxidant effect
  - Helps modulate cytokine release
  - Helps maintain skin and mucosal membrane integrity
- Adaptive immune function:
  - Important role in cellular growth and differentiation of immune cells
  - Essential for intracellular binding of tyrosine kinase to T cell receptors, required for T lymphocyte development and activation

Zinc helps enhance the skin barrier function, support the protective activities of immune cells, and is essential for antibody production.<sup>6</sup> Supplementation with zinc provides antioxidant and anti-inflammatory properties.<sup>7</sup>

### Copper

Copper is an important trace mineral for normal brain function and development.<sup>8</sup> It also has an important functional role in bone metabolism and turnover, and is essential for normal skeleton growth and development.<sup>9</sup> Chicks with copper-deficient diets are observed to have increased bone fragility (fractures, collagen contain fewer cross-links compared to normal bone).<sup>10</sup> In addition, studies show that copper has important roles in infant growth, host defense mechanism, bone strength, red and white cell maturation, iron transport, cholesterol and glucose metabolism, myocardial contractility, brain development, and is also involved in the function of several enzymes.<sup>11</sup>

It's important to note, that while these trace minerals are essential, our bodies only require small, or trace amounts compared to other nutrients. Excessive intake of trace minerals well beyond the recommended daily intake (RDI) may pose danger. We've formulated carefully, to provide amounts that do not exceed the RDI per serving per age group.

## References:

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