

Copper Overview

Why We Need It?

Copper is an essential trace mineral necessary for red blood cell production, immune function, and energy metabolism. It plays a vital role in iron absorption, brain health, and maintaining strong connective tissues.

Functions in the Body

Red Blood Cell Formation: Works with iron to support hemoglobin production and prevent anemia.

Immune System Support: Enhances immune response and helps fight infections.

Energy Production: Plays a role in mitochondrial function and ATP synthesis.

Brain & Nervous System Health: Supports neurotransmitter function and cognitive performance.

Antioxidant Protection: Aids in reducing oxidative stress by supporting enzyme activity.

Collagen & Connective Tissue Formation: Strengthens bones, skin, and blood vessels.

Daily Recommended Intake (RDI):

Infants (0-6 months): 200 mcg/day

Children (1-8 years): 340-440 mcg/day

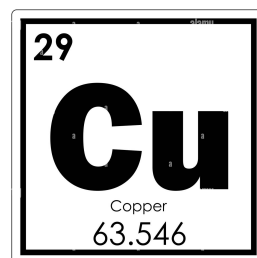
Adolescents (9-18 years): 700-890 mcg/day

Adults (19+ years): 900 mcg/day

Pregnant Women: 1,000 mcg/day

Lactating Women: 1,300 mcg/day

Upper Limit (UL): 10,000 mcg (10 mg)/day (excessive intake may cause toxicity, including liver damage).



Benefits of Supplementation

- Supports iron absorption and prevents anemia.
- Aids in collagen formation, promoting skin, bone, and joint health.
- Enhances immune function and wound healing.
- Supports brain function and may help protect against neurodegenerative diseases.
- Plays a role in cardiovascular health by maintaining healthy blood vessels.

Most Bioavailable Form

Copper Bisglycinate: Highly absorbable and gentle on digestion.

Copper Gluconate: A common form with good absorption.

Copper Sulfate: Used in some supplements but less bioavailable.

Copper Citrate: A well-absorbed form found in many multivitamins.

Best Food Sources

Animal-Based: Beef liver, shellfish (oysters, crab, lobster), kidney.

Plant-Based: Nuts (cashews, almonds), seeds (sunflower, sesame), whole grains.

Legumes: Lentils, chickpeas, kidney beans.

Vegetables: Spinach, mushrooms, potatoes.

Dark Chocolate: A rich source of copper and antioxidants.

Conclusion

Copper is a vital mineral for blood formation, immune function, and brain health. While deficiency is rare, ensuring adequate intake through a balanced diet or supplementation supports overall well-being. Since excessive intake can be toxic, maintaining the right balance is essential.