

Selenium Overview

Why We Need It?

Selenium is an essential trace mineral that plays a key role in antioxidant defense, thyroid function, immune health, and DNA synthesis. It helps protect cells from oxidative stress, supports metabolism, and contributes to overall well-being.

Functions in the Body

Antioxidant Protection: A component of glutathione peroxidase, helping reduce oxidative stress.

Thyroid Function: Supports the production of thyroid hormones and regulates metabolism.

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

Heart Health: May reduce inflammation and lower the risk of heart disease.

Cognitive Health: Supports brain function and may reduce the risk of neurodegenerative diseases.

Reproductive Health: Essential for sperm production and reproductive function.

Daily Recommended Intake (RDI):

Infants (0-6 months): 15 mcg/day

Children (1-8 years): 20-30 mcg/day

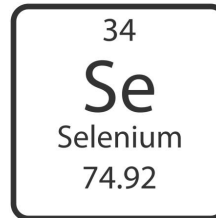
Adolescents (9-18 years): 40-55 mcg/day

Adults (19+ years): 55 mcg/day

Pregnant Women: 60 mcg/day

Lactating Women: 70 mcg/day

Upper Limit (UL): 400 mcg/day (excess intake can cause toxicity, leading to hair loss, brittle nails, and neurological issues).



Benefits of Supplementation

- Helps protect against oxidative stress and reduces inflammation.
- Supports healthy thyroid function and metabolism.
- Strengthens immune response and reduces the risk of infections.
- May support heart health by reducing oxidative damage.
- Protects brain function and may help lower the risk of cognitive decline.

Most Bioavailable Form

Selenomethionine: Highly absorbable, found in food and supplements.

Sodium Selenite & Sodium Selenate: Commonly used in supplements, slightly less bioavailable.

Selenium Yeast: A natural source used in fortified foods.

Best Food Sources

Brazil Nuts: One of the richest natural sources.

Seafood: Tuna, sardines, salmon, shrimp.

Meat & Poultry: Beef, chicken, turkey, pork.

Dairy Products: Eggs, cheese, yogurt.

Whole Grains: Brown rice, whole wheat, oats.

Legumes & Seeds: Sunflower seeds, lentils, chickpeas.

Conclusion

Selenium is a vital nutrient for antioxidant defense, thyroid function, and immune health. While most people get enough from food, supplementation can be beneficial in cases of deficiency. However, excessive intake should be avoided to prevent toxicity.