

Vitamin A (Retinol) Overview

Why We Need It?

Vitamin A is an essential fat-soluble vitamin needed for vision, immune defense, skin health, and cellular function. It plays a key role in growth, reproduction, and reducing oxidative stress.

What It Does in the Body

- Vision Support – Prevents night blindness and maintains eye health.
- Immune Function – Strengthens defenses against infections.
- Cell Growth & Repair – Supports healthy skin, organs, and mucous membranes.
- Reproductive Health – Essential for fetal development and hormone regulation.
- Antioxidant Protection – Reduces inflammation and cellular damage.

How Much We Need (Daily Intake)

Group Recommended Amount (mcg RAE/day)

Children (1-8 yrs) - 300–400 mcg

Teens (9-18 yrs) - 600–900 mcg

Adults (19+ yrs) - 700–900 mcg

Pregnant Women - 770 mcg

Lactating Women - 1,300 mcg

Upper Limit - 3000mcg

(RAE = Retinol Activity Equivalents, accounting for different forms of Vitamin A)

Top Benefits of Vitamin A

- Enhances Eye Health – Prevents night blindness and age-related vision issues.
- Boosts Immunity – Strengthens the body's defense against infections.
- Supports Healthy Skin – Reduces acne, promotes wound healing.
- Aids Growth & Repair – Essential for tissue regeneration and organ function.
- Acts as an Antioxidant – Reduces oxidative stress and inflammation.

Most Bioavailable Form

Best Form: Retinol (Preformed Vitamin A) – Found in animal products like liver, egg yolks, and dairy. Directly used by the body.

Less Bioavailable Form: Beta-Carotene (Provitamin A) – Found in plant-based foods (carrots, spinach, sweet potatoes). Must be converted to retinol, making it less efficient.

Best Food Sources

- Animal-Based (Retinol): Liver, egg yolks, butter, fatty fish.
- Plant-Based (Beta-Carotene): Carrots, sweet potatoes, spinach, kale.

⚠ Toxicity Risk: Excessive intake from supplements can cause dizziness, nausea, and liver damage.

Conclusion

Vitamin A is crucial for vision, immunity, and cellular health. Retinol from animal sources is the most bioavailable, while plant-based beta-carotene provides an alternative. A balanced diet with natural sources is the safest way to maintain optimal levels.

