

Vitamin B2 (Riboflavin) Overview

Why We Need It?

Vitamin B2 (riboflavin) is an essential water-soluble vitamin that plays a key role in energy production, metabolism, and antioxidant function. The body does not store riboflavin in large amounts, so a consistent dietary intake is necessary.

Functions in the Body

Energy Production: Essential for breaking down carbohydrates, fats, and proteins into ATP (adenosine triphosphate), the body's primary energy source.

Cellular Function & Growth: Supports healthy skin, eyes, and red blood cell formation.

Antioxidant Role: Acts as a coenzyme in the reduction of oxidative stress and supports glutathione recycling, a key antioxidant in the body.

Nervous System Support: Helps maintain proper neurological function and may aid in migraine prevention.

Daily Recommended Intake (RDI) Age Groups

Infants (0-6 months) - 0.3mg

Children (1-3 years) - 0.5mg

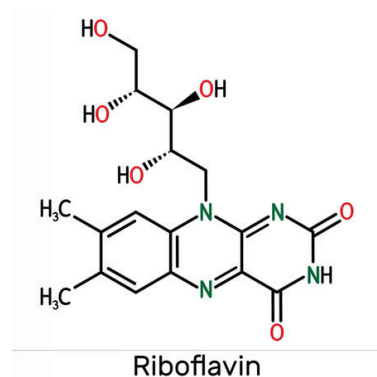
Children (4-8 years) - 0.6mg

Adolescents (9-13 years) - 0.9mg

Adults (14+ years) - 1.3mg

Pregnancy - 1.4mg

Lactation - 1.6mg



Health Benefits

- **Boosts Energy Production**: Converts macronutrients into usable energy.
- **Supports Eye Health**: Helps prevent cataracts and maintains vision clarity.
- **Enhances Skin & Hair Health**: Contributes to cell regeneration and skin repair.
- **Reduces Oxidative Stress**: Plays a role in combating free radicals and inflammation.
- **Migraine Prevention**: Clinical studies suggest riboflavin supplementation may reduce migraine frequency and severity.
- **Supports Iron Metabolism**: Helps prevent anemia by assisting in iron absorption and hemoglobin synthesis.

Most Bioavailable Form

Riboflavin-5'-Phosphate (R5P): The most bioactive and readily absorbed form, bypassing conversion steps required for standard riboflavin.

Sources of Vitamin B2

Animal Sources: Liver, eggs, dairy products (milk, yogurt, cheese), lean meats.

Plant Sources: Almonds, mushrooms, spinach, whole grains, fortified cereals.

Conclusion:

Vitamin B2 is an essential nutrient that plays a crucial role in energy production, cellular health, and antioxidant function. Ensuring adequate intake through a balanced diet or supplementation with the most bioavailable form, Riboflavin-5'-Phosphate (R5P), can support overall well-being, prevent deficiency, and optimize metabolic processes.