

**WATER - SOLUBLE VITAMINS:  
VITAMIN B<sub>2</sub> (RIBOFLAVIN)**

Patient Resource

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## Patient Resource

### Functions of Riboflavin

- energy metabolism
- cellular health & reproduction
- growth

### Did you know...?

Riboflavin is found **naturally** in some foods and **fortified** in other foods!

### How stable is Riboflavin?

#### Stable in

- heat
- oxygen
- acid

#### Unstable in

- light (especially UV)
- alkali

### Sources of Riboflavin

#### Grains & Pastas

- enriched cereals and breads
- fortified grain products

#### Vegetables

- asparagus
- spinach
- broccoli
- dark leafy vegetables (i.e. spinach, kale)

#### Other

- mushrooms
- tempeh
- almonds

#### Major Sources

- animal products
- milk, dairy products, and cheeses

#### Animal Sources



- pastured eggs
- liver
- milk and dairy products (i.e. cheese)
- organ meats
- yogurt
- lean meats



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## Dietary Reference Intakes

The amount of riboflavin you need depends on your sex and age. See the table to the right of this paragraph to estimate your recommended amount of daily intake for this vitamin.

## Helpful Terms to Know

- **Recommended Dietary Allowance (RDA):** covers the needs of 97-98% of individuals in a group; the average amount of a nutrient a healthy person should consume daily. Vary by gender, age, and whether a woman is pregnant or breastfeeding. Developed by the Food and Nutrition Board at the Institutes of Medicine (IOM) of the National Academies.
- **mcg** = microgram

## Upper Limit (UL) & Toxicity Levels

Riboflavin has not yet been present in cases of toxicity, however it is known that high doses are not beneficial. Stay within the RDA for your respective age and gender to know the amount of riboflavin you should consume daily. If you have questions, consult your dietitian or a trusted, vitamin-literate member of your healthcare team. Oral doses up to 400 mg of riboflavin have been consumed in patients with migraines without side effects, however this should be done under supervision of a medical professional and not as a home experiment. Talk with your physician and dietitian before increasing your normal dose.

Recommended Daily Amounts (RDA) of Riboflavin (in mg/day)	
<b>Infants</b>	
0-6 months	0.3
7-12 months	0.4
<b>Children</b>	
1-3 years	0.5
4-8 years	0.6
9-13 years	0.9
<b>Males</b>	
14- >70 years	1.3
<b>Females</b>	
14-18 years	1.0
19 - >70 years	1.1
<b>Pregnancy</b>	
Under 18- 50 years	1.4
<b>Lactation</b>	
Under 18-50 years	1.6

## Deficiency

### General/Early stages

- Photophobia
- Tearing
- Burning and itching of the eyes
- Loss of visual acuity (sharpness)
- Soreness or burning of the lips, mouth, and tongue

### Advanced Stages

- Fissuring of the lips (*cheilosis*)
- Cracks in the skin at the corners of the mouth (*angular stomatitis*)
- Greasy eruption at skin folds (i.e. nasolabial folds, scrotum, vulva)
- Purple, swollen tongue
- Capillary overgrowth around the cornea of the eye
- *Peripheral neuropathy* (weakness, numbness, and pain due to nerve damage in the extremities such as hands or feet)



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### **Dietary Supplements**

Multivitamin and multimineral supplements generally provide about 1.3 mg of riboflavin, which accounts for 100% of the estimated daily value. For B-vitamins, B-complex supplements (that include riboflavin) may also be available. Be sure to check the label of any supplement you intend on consuming before ingestion.

### **Recommendations**

The Dietary Guidelines for Americans suggest trying to obtain your daily amount of vitamins, including riboflavin, first from food (such as the sources listed above). Unnecessary supplementation can interact with other medicines and how your body processes nutrients, so consult with your healthcare team before starting a riboflavin supplement to see if you are truly in need of taking one.

### **NOTE:**

It can be helpful to bring in your supplements to a doctor's visit or your next appointment with your healthcare providers. Providing the actual containers of products you take can help your healthcare team to avoid under- or over-dosing you or your family members on supplements. It is also a helpful practice since there are many B vitamins and their variants can go by different names.

