What is Vitamin B2?

Vitamin B2 (Riboflavin) was first recognized as a greenish yellow pigment in milk in 1879. It is a water-soluble vitamin with no known toxic effects. Riboflavin cannot be stored and must be replenished regularly from food or from supplementation. Any surplus is excreted in the urine which may give the urine a yellow/green fluorescent color.

Why is Vitamin B2 important and what does it do in the body?

Like many B vitamins, vitamin B2 is very important for the success of many body reactions. It forms part of two important enzymes called FMN (Flavin mononucleotide) and FAD (Flavin adenine dinucleotide) which helps manufacture energy, primarily from carbohydrates but also from fats and proteins. Since this is so it is commonly known as one of the energy vitamins. Our DNA and RNA are comprised of nucleic acids and riboflavin is required to make these. In combination with vitamin A it also contributes to good vision. B2 helps maintain healthy skin, nails and hair and promotes growth, fertility and the uptake of iron (assimilation) as it promotes iron binding capacity and serum ferritin levels. It may also benefit individuals suffering from migraines and sickle cell anemia. Glutathione is one of the body’s main protectors against free radical damage and oxidative stress and riboflavin is involved in regenerating this essential substance.

What amount of Vitamin B2 do you need each day?

Recommended daily allowances are given as a guide to prevent illness. If you are active and expend more energy then you will use more Vitamin B2 and you will require a higher intake than someone who is sedentary.

The DRI (Daily Recommended Intake) /RDA (Recommended Daily Allowance) of dietary vitamin B2 are listed on the next page:

Please Note: By definition, the DRI/RDA recommendations apply only to 98% of healthy individuals and are not sufficient for those with higher nutrient requirements based upon their biochemical individuality, genetics, health status, medications, deficiencies, lifestyle, and toxic exposures.
Daily recommendations for Vitamin B2 are listed below.

**Adult**

- Men 19 years and older: 1.3 mg (RDA)
- Women 19 years and older: 1.1 mg (RDA)
- Pregnant women: 1.4 mg (RDA)
- Breastfeeding women: 1.6 mg (RDA)

Riboflavin is best absorbed when taken between meals.

People who do not eat a balanced diet every day may benefit from taking a multivitamin and mineral complex.

**Pediatric**

- Infants birth - 6 months: 0.3 mg (adequate intake)
- Infants 7 - 12 months: 0.4 mg (adequate intake)
- Children 1 - 3 years: 0.5 mg (RDA)
- Children 4 - 8 years: 0.6 mg (RDA)
- Children 9 - 13 years: 0.9 mg (RDA)
- Boys 14 - 18 years: 1.3 mg (RDA)
- Girls 14 - 18 years: 1 mg (RDA)

**RECOMMENDED DAILY ALLOWANCE**

1.7mg/Day but may be increased under stress and therapeutically to 200mg/Day

**OPTIMAL DAILY ALLOWANCE**

35mg/Day
### What are possible Vitamin B2 (Riboflavin) deficiency conditions and symptoms?
- Cataracts
- Congenital birth defects
- Depression
- Dermatitis
- Fatigue
- Impaired red blood cell formation
- Insomnia
- Mouth lesions - angular stomatitis (lesions at the angle of the lips)
- Red, itchy or gritty eyes
- Scaly skin on face
- Sensitivity to light
- Slowed mental response
- Tongue inflammation

### What are possible Vitamin B2 excess symptoms?
None known. Excess is secreted: may color the urine with a greenish/yellow fluorescent glow.

### What steals Vitamin B2 from the body?
- Certain drugs
- Oral contraceptives
- Bile acid sequestrants: Cholestyramine (Questran) and Colestipol (Colestid)
- Gout medications: Colchicine (Colbenemid) Probenecid (Benemid)
- Anti diabetic drugs: Metaclopramide HCL (Reglan)
- Psychiatric medications: Tricyclic antidepressants, Amitriptyline (Elavil), Nortriptyline (Pamelor), Imipramine (Tofranil), Desipramine (Norpramin) and Doxepin (Sinequan)
- Antipsychotic agents: Chlorpromazine (Thorazine), Thiothixene (Navane), Thioridazanine (Mellaril) and Fluphenazine esters (Prolixin)
- Broad spectrum antibiotics – which kill the colonies of beneficial gut bacteria.
- Nutrients: boron or boric acid (displace Riboflavin binding and increases excretion)

### What tests can be used to assess Vitamin B2 (Riboflavin) levels?
- Alpha–keto acids in urine
- Ethylmalonate in urine
### What foods contain the highest amounts of Vitamin B2?

#### TOP 10 VITAMIN B2 (RIBOFLAVIN) RICH FOODS ARE:

1. **Yeast extract**  
   14.3mg/100g

2. **Liver**  
   4.6mg/100g

3. **Dried chilies**  
   2.26mg/100g

4. **Paprika**  
   1.74mg/100g

5. **Almonds**  
   1.01mg/100g

6. **Mackerel**  
   0.54mg/100g

7. **Atlantic salmon**  
   0.49mg/100g

8. **Sun dried tomatoes**  
   0.49mg/100g

9. **Sesame seeds or tahini**  
   0.47mg/100g

10. **Trout**  
    0.42mg/100g

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### What are the best Vitamin B2 products?

Activated riboflavin (riboflavin-5-phosphate).

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**REFERENCES**

- [http://umm.edu/health/medical/altmed/supplement/vitamin-b2-riboflavin](http://umm.edu/health/medical/altmed/supplement/vitamin-b2-riboflavin)
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- Gibson Principles of Nutritional Assessment 2nd Ed. 2007
- Office of Dietary Supplements, NIH Fact sheets 2010
- Balch. A. Phyllis CNC Prescription for Nutritional Healing 2002

All the statements, including product labels, supporting literature and/or product manufacturers websites have not been evaluated by FDA. These products are not intended to diagnose, treat, cure or prevent any disease.
Vitamin B2 (Riboflavin)

What are the very best Vitamin B2 products to buy?

**PRL Max B-ND**
Dietary Supplement
Max B-ND™ is a nutritional industry first - with never before available probiotic-cultured B vitamins. It contains a high-energy, end-chain, B vitamin complex derived from live sources for ...

**ProThera Thera-B**
B-complex with activated folate and B12. Thera-B™ provides a full-complement of essential B-complex vitamins and related nutrients in high potency amounts. Inclusion of Metafolin®** L-5-methyltetrahydrofolate (L-5-MTHF, a bioactive …

**Klaire VitaSpectrum**
Powdered multiple vitamin/mineral supplement for children with Autism Spectrum Disorders. Natural berry-pomegranate flavor. This comprehensive multiple vitamin/mineral supplement contains 28 highly bioavailable …

**ProThera MultiThera 3**
Iron- and copper-free multiple formula. Both iron and copper have been eliminated from this version of MultiThera® to address the needs of patients who may have elevated tissue identical in all other respects to MultiThera® 1 …

**Pure Caps Womens Pure Pack**
Women's Supplement to Support Bone and Heart Health. Now With Metafolin® L-5-MTHF. Sizes Available 30 packets. Each packet contains 6 different supplements, including …

**Pure Caps Mens Pure Pack**
Regardless of your walk of life, all men need to ensure that they get enough of an array of important nutrients. However, who wants to spend their time picking out supplements for a daily …