What is Vitamin B1?

Vitamin B1 (Thiamine) was the first B vitamin to be discovered and so was designated B1. It is a water-soluble vitamin and has no known toxicity effects because any surplus is excreted. In fact, a constant supply of vitamin B1 is needed because the body finds it challenging to store.

Why is Vitamin B1 important and what does it do in the body?

Like many B vitamins, vitamin B1 is very important for the success of many body reactions. It forms part of an enzyme called thiamine pyrophosphate (TPP) which helps manufacture energy, primarily from carbohydrates but also from fats and protein. Since this is so, vitamin B1 is commonly known as one of the “energy vitamins” and it is also required to ensure that the oxygen levels in the blood are at a level which allows the optimal release of energy by the cells.

What amount of Vitamin B1 do you need each day?

Recommended daily allowances are intended to give guidelines in order to prevent illness and disease. If you are very active you will require more energy and accordingly a greater intake of vitamin B1 than an individual who is inactive. Women who are pregnant, lactating and individuals under more stress, have an illness or are recovering from surgery require additional Vitamin B1.

The DRI (Daily Recommended Intake) /RDA (Recommended Daily Allowance) of dietary vitamin B1 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 recommended allowance for Vitamin B1.

**Adult**
- Men 19 years and older: 1.2 mg (RDA)
- Women 19 years and older: 1.1 mg (RDA)
- Pregnant or breastfeeding women: 1.4 mg (RDA)

**Pediatric**
- Newborns - 6 months: 0.2 mg (adequate intake)
- Infants 7 months - 1 year: 0.3 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)
- Men 14 - 18 years: 1.2 mg (RDA)
- Women 14 - 18 years: 1 mg (RDA)

Daily recommendations for dietary vitamin B1 according to the National Academy of Sciences are listed below.

**RECOMMENDED DAILY ALLOWANCE**
1.4mg/Day

**OPTIMAL DAILY ALLOWANCE**
350mg/Day but may be increased to 200mg/day
### What are possible Vitamin B1 deficiency conditions and symptoms?

- Calf muscle tenderness
- Constipation
- Depression
- Edema (Water Retention)
- Fatigue
- Foot/wrist drop
- Heart Palpitations
- Over active heart muscle (Hyperkinetic cardiomyopathy)
- Hypothyroidism
- Insomnia
- Loss of appetite
- Loss of reflexes
- Megaloblastic anemia
- Memory loss
- Mood Swings and Irritability
- Muscle Loss
- Nervous disorders such as Neurosthenia (nervous exhaustion)
- Noise sensitivity
- PICA
- Pins and Needles
- Poor vision
- Stress and Anxiety
- Thiamine responsive maple syrup urine disease

### What steals Vitamin B1 from the body?

- Heating and cooking may damage vitamin B1 and reduce its availability. Vitamin B1 is intricately involved with the other B vitamins in energy metabolism. Since this is so it is recommended that additional B vitamins such as B2, B3, B5, B6, Biotin (B7), Folic acid (B9) and B12 are taken together as a complex multi B vitamin because B1 alone may disturb the levels and ratios of the other B vitamins.
- Alcohol reduces vitamin B1 levels in the body significantly. Consumption of large volumes of alcohol may lead to a serious brain disorder called Wernicke-Korsakoff’s or “wet brain syndrome” the common symptoms of which are impaired memory, vision changes and possible brain damage and even death.
- Certain drugs
  - Diuretics: (Furosemide (Lasix), Bumetamide (Bumex), Torsemide (Demadex) and Ethacrynic Acid (Edecrin) and Dilantin
  - Anti epileptic medication: phenytoin
  - Broad spectrum antibiotics: kill the colonies of beneficial bacteria in the gut that make B vitamins
  - Foods and drinks: sulfites, tea, coffee and decaffeinated coffee

### What tests can be used to assess Vitamin B1 (Thiamine) levels?

- Elevated urinary branch chain amino acids
- Elevated blood pyruvate
What foods contain the highest amounts of Vitamin B1?

TOP 10 VITAMIN B1 (THIAMINE) RICH FOODS ARE:

1. Yeast extract
   9.7mg/100g

2. Sesame seeds or tahini
   1.6mg/100g

3. Sunflower seeds
   1.48mg/100g

4. Pork chops
   1.2mg/100g

5. Pine nuts
   1.2mg/100g

6. Pistachios
   0.87mg/100g

7. Macadamia Nuts
   0.7mg/100g

8. Pompano Fish
   0.68mg/100g

9. Pecan nuts
   0.66mg/100g

10. Tuna
    0.5mg/100g

What is the most bioavailable form of Vitamin B1?
Thiamine hydrochloride

What are the best Vitamin B1 products?
Thiamine as benfotamine

REFERENCES

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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 B1 (Thiamine)

What are the very best Vitamin B1 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 …