What is Vitamin B6?

Vitamin B6 (pyridoxine) is one of the most active of all the B vitamins. It offers multiple benefits and comes in different forms. These include pyridoxine (PN), pyridoxal (PL), pyridoxal phosphate (P-5-P) and 4-pyridoxic acid (4PA).

Why is Vitamin B6 important and what does it do in the body?

Like most B vitamins, pyridoxine is involved in many crucial metabolic functions. These include the release of fuel from the liver, in the form of glycogen which supplies our muscles with energy. It is also involved in the formation of protein: the structural component of the body, as well as chemical neurotransmitters including dopamine, serotonin, nor-epinephrine and melatonin. It helps make nucleic acids which are essential for DNA and RNA formation. It also makes red blood cells and prostaglandins, which help control inflammation.

Vitamin B6 supports the immune system by antibody production which protects us from infection. It plays a role in maintaining hormonal balance as well as controlling obesity. B6 helps balance sodium and potassium, thus supporting the regulation of body fluids and maintaining the correct pH balance in the blood system. When combined with magnesium, B6 helps to reduce oxalic acid salts and reduce the symptoms of gout and kidney stones. It has also been used to prevent the development of eclampsia (toxaemia) in pregnancy and reduce nausea and morning sickness. It also controls dandruff and dries oily skin – especially important in controlling acne. Elevated homocysteine and methylation disorders have been associated with many disorders including autism, heart disease and osteoporosis. Since this is so, supporting the methylation cycle with B6, folinic acid (MTHF is the best available form) and B12, plus magnesium may be highly important.

What amount of Vitamin B6 do you need each day?

Vitamin B6 is found in multivitamins and B complex vitamins. It is also sold individually as pyridoxine. The most bio-available source is pyridoxal phosphate (P-5-P).

The DRI (Daily Recommended Intake) /RDA (Recommended Daily Allowance) of dietary vitamin B6 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 B6 are listed below.

**Pediatric**
- Infants 0 - 6 months: 0.1 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: 1 mg (RDA)
- Boys 14 - 18 years: 1.3 mg (RDA)
- Girls 14 - 18 years: 1.2 mg (RDA)

**Adult**
- 19 - 50 years: 1.3 mg (RDA)
- Men 51 years and older: 1.7 mg (RDA)
- Women 51 years and older: 1.5 mg (RDA)
- Pregnant women: 1.9 mg (RDA)
- Breastfeeding women: 2.0 mg (RDA)

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**RECOMMENDED DAILY ALLOWANCE** 2mg/Day
**OPTIMAL DAILY ALLOWANCE** 75mg/day

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**NUTRIENT DEFICIENCY SYMPTOMS AND CONDITIONS**

**What are possible Vitamin B6 (Pyridoxine) deficiency conditions and symptoms?**

- Acne
- Allergies
- Anemia
- Carpal Tunnel syndrome
- Convulsions and/or seizures
- Cracking of the lips and/or tongue
- Depression
- Eczema
- Edema (Water Retention)
- Gout
- High cholesterol
- Hypoglycemia (low blood sugar)
- Immune deficiency
- Inability to tan
- Inflammation
- Kidney stones
- Loss of Appetite
- Memory Loss
- Morning sickness
- Numbness of hands and feet
- Osteoporosis
- Poor sleep and infrequent dream recall
- Pre Menstrual Syndrome (PMS)
- Seborrheic dermatitis
- Cheilosis – cracks or splits at the corner of the mouth
- Glossitis – sore and inflamed tongue
- Sensitivity to Sun
What are possible Vitamin B6 excess symptoms?

Vitamin B6 is one of the few water-soluble B vitamins with any toxicity. This may occur if it is taken in moderate or high doses (exceeding 100mg) for extended periods.

Doses should be divided over the course of the day with no more than 50mg at any one dosage. Neuropathy may develop with prolonged high-dose use.

Avoid supplementation during L-Dopamine treatment.

What steals Vitamin B6 from the body?

There are many things that steal B6 from the body:

- Smoking
- Alcohol
- Processed food
- Oral contraceptives
- Penicillamine - anti rheumatic and lead poisoning therapeutic
- Maleic hydrazide – herbicide
- Succinic acid-2, 2-dimethylhydrazide - fruit ripening agent
- Tartrazine (FD&C yellow No.5- the food color and the mood stabilizer)
- Valproic acid – an anti epileptic drug
- Dopamine
- Diuretics: Furosemide (Lasix), Bumetamide (Bumex), Torsemide (Demadex) and Ethacrynic acid (Edecrin)
- Broad spectrum antibiotics: Tetracycline, (Demeclocycline, Doxycycline and Methacycline), Amoxicillin/Clavulanic Acid (Augmentin), Vancomycin will kill off the colonies of beneficial bacteria in the gut that help make B6 vitamins
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What tests can be used to assess Vitamin B6 or pyridoxine levels?

- PLP in plasma ( <30nmol/L suggests deficiency)
- EGOT index (>1.5 indicates deficiency)
- EGPT index (>1.25 indicates deficiency)
- Homocysteine in plasma >15nmol/mL suggests deficiency
- Xanthurenone and kynurenone in urine (above reference range suggests deficiency)
What foods contain the highest amounts of Vitamin B6?

**TOP 10 VITAMIN B6 (PYRIDOXINE) RICH FOODS ARE**

1. Rice bran
   4.07mg/100g
2. Dried chili powder
   3.67mg/100g
3. Pistachios
   1.7mg/100g
4. Raw garlic
   1.235mg/100g
5. Liver
   1.04mg/100g
6. Salmon
   1.04mg/100g
7. Sunflower seeds
   0.81mg/100g
8. Pork tenderloin (lean)
   0.74mg/100g
9. Hazelnuts
   0.62mg/100g
10. Cod
    0.46mg/100g

What are the best Vitamin B6 products?

Pyridoxal phosphate (P-5-P) - however bacteria may use this before it enters the blood system. If sufficient magnesium and riboflavin (B2) are present pyridoxine is sufficient as a supplement.

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 B6 (Pyridoxine)

What are the very best Vitamin B6 products to buy?

**Klaire P5P**
Pyridoxal 5'-Phosphate.
Pyridoxal-5-Phosphate (P-5-P) is the converted and easy-to-assimilate form of vitamin B6. This phosphorylated B6 metabolite is a coenzyme in more than 50 different metabolic steps ...

**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 ...

**Neurobiologix Stabilizer Cream**
As a solution, our unique topical delivery system, assures that our pharmaceutical grade Neuro ...

**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 ...