

Vitamin B6 100 mg Tablets



Product Summary:

Vitamin B-6 (pyridoxine) is necessary for protein metabolism, energy production and normal nervous system function. Vitamin B-6 is involved in nearly 60 enzyme systems in the body. It is necessary for normal growth, red blood cell synthesis and vitamin B-12 absorption.

A factor in the maintenance of good health.¹

Properties/Uses:

The claim as approved by the *Natural Health Products Directorate* (NHPD): Helps to metabolize fats, proteins and carbohydrates.

This product is used where there is a special need for high dose vitamin B6 for a period of time, or where a physician prescribes long-term high dose B6.

Higher than normal doses of vitamin B6 are used in Carpal Tunnel Syndrome, depression, diabetes to avert neuropathy, depressed immunity, chronic episodes of kidney stones, and PMS.²



GENERAL HEALTH
& WELLNESS



Pharmacology:

Vitamin B6 is recognized for its importance in diverse metabolic reactions and physiological actions important to overall wellbeing.⁸

Vitamin B6 must be converted to its aldehyde form and phosphorylated to give pyridoxal-5-phosphate before it is biologically active, requiring riboflavin, magnesium, and zinc as conversion cofactors.

Some of the central metabolic domains where appropriate pyridoxal-5-phosphate levels are active include the following categories:⁸ gluconeogenesis, niacin formation, lipid metabolism (plasma pyridoxal-5-phosphate levels are positively correlated with plasma HDL-cholesterol levels), red blood cell metabolism and function, neurological system production of neurotransmitters and normal EEG tracings, immune system interleukin-2 production and lymphocyte proliferation, hormone modulation effecting endocrine-modulated diseases.



Manufactured product information:

Manufacturer:

WN Pharmaceuticals® Ltd.

Size/UPC:

100's 7 77747 10317 1

NPN:

80003665

Expiry Date:

36 months from date of manufacture

Active Ingredient:

Each tablet contains:

Vitamin B6 (Pyridoxine Hydrochloride) 100 mg

Non-Medicinal Ingredients (in descending order):

Microcrystalline cellulose, magnesium stearate

Appearance:

Round, white tablet.

Packaging:

175 cc white round bottle with safety seal under a 38 mm white induction sealed cap with vented interior seal and a label applied to the bottle. Lot number and expiry date are printed on label applied to exterior of bottle.

Storage:

Store in a cool, dry place.





Dose:

For metabolic disorders, including xanthurenic aciduria, primary cystathioninuria, or primary homocystinuria, 100-500 mg daily is generally effective. For kidney stones, 25-500 mg daily has been used.¹² A single dose of 100 mg of pyridoxine does not translate into a significantly greater level of pyridoxal-5-phosphate, the active form, than produced with 50 mg, indicating the liver rate of conversion is almost maximal at 50 mg.²

Directions:

(Adults): 1 tablet daily or as recommended by a physician.

Caution:

The caution as approved by the *Natural Health Products Directorate* (NHPD): KEEP OUT OF THE REACH OF CHILDREN. STORE AT ROOM TEMPERATURE IN A DARK, DRY PLACE. DO NOT USE IF SEAL UNDER CAP IS BROKEN OR MISSING.

This product is 100 mg of vitamin B6. Phenytoin blood levels can be reduced by Vitamin B6 and folic acid in high doses. Vitamin B6 > 80 mg per day will reduce the efficacy of phenytoin by 50 percent. See Interactions section.

Theophylline significantly depresses pyridoxal-5-phosphate levels, the active form of vitamin B6.^{2,9} Vitamin B6 supplementation significantly reduces the typical adverse side effects of theophylline, including headache, nausea, irritability, and sleep disorders.^{2,10}

The expected benefits of increased pyridoxine intake may not be realized if the user is also deficient in riboflavin (vitamin B2), magnesium, and zinc. These cofactors operate in the liver conversion of B6 to its active form, pyridoxal-5-phosphate.

Deficiency Symptoms:

Symptoms of pyridoxine deficiency include muscle weakness, nervousness, irritability, depression, difficulty concentrating, and short-term memory loss.





Drug Interactions /Contraindications:

Riboflavin and magnesium are required to convert pyridoxine to its active form, pyridoxal-5-phosphate.²

Pyridoxine interacts with vitamin B12 and folic acid to modulate plasma homocysteine levels. Vitamin B6 may enhance the intracellular concentrations of magnesium and zinc.^{1,2}

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Alcohol, regularly consumed, can retard B6 and B12 absorption and utilization.¹⁰

Penicillamine, long term may deplete the body of B6.¹¹

Oral contraceptive medications are associated with depletion of B6, as well as folic acid. Vitamin B6 depletion can lead to depression. Depletion of folic acid is associated with cervical dysphasia.^{2,11} Routine supplementation should be discussed when OC's are used.

Estrogen replacement therapy can lower folic acid and B6. Risk of depression is associated with low B6 levels, while low folic acid levels is a risk of cervical dysplasia.^{2,11}

Hydralazine containing drugs may deplete the body of B6. Supplementation is recommended.¹¹

Corticosteroids in long term use can deplete the body of B6, B12, and folic acid.^{2,11}

Epilepsy drugs like barbiturates and phenobarbitol can be adversely lowered in plasma concentration by B6 and folic acid, potentially leading to seizures.¹¹

Phenytoin may cause depletion of folic acid as well as B6. However, supplementation must be directed by the physician since it can reduce the effectiveness of the phenytoin with resultant seizures. More than 2 mg of folic acid per day is a risk, while 80 mg per day of B6 will reduce the efficacy of phenytoin by 50 per cent.^{2,11}

The effectiveness of L-dopa can be significantly lowered by B6 supplementation.

Supplementation should only be prescribed by a physician.¹¹

Isoniazid can deplete the body of B6, as well as niacin/niacinamide. Too much B6 or niacin/niacinamide supplementation can reduce the effectiveness of isoniazid.

Recommended ranges are, 6-50 mg per day of B6, and 15-25 mg per day of niacin or niacinamide.¹¹





Toxicity/Adverse Reactions:

Vitamin B6 can produce toxic effects when used at very high doses for a protracted time.² Using more than 2000 mg per day is a risk for neuropathy manifested as tingling sensation in the feet, reduced muscle coordination, and nerve degeneration.¹ Dosages of 500 mg per day have demonstrated neuro-toxic effects when taken over many months or years.⁵ There are a few reports of neuro-toxicity associated with long-term use at doses as low as 150 mg per day,^{2,3,4,5,6} however, neuro-toxic effects are rarely seen in the dose range of 2 to 250 mg per day, and usually seen only in chronic use.⁸





Allergen Content/Ingredient Sensitivity:

NO	YES
Artificial Colors	
Artificial Flavors	
Artificial Sweeteners	
Corn Products	
Egg Products	
Fish	
Gluten	
Hydrolyzed Plant Protein	
Lecithin	
Milk Products	
Peanuts	
Preservatives	
Sesame Products	
Shellfish	
Soy Products	
Starch/Modified Starch	
Sulphites	
Tartrazine	
Tree Nuts	
Wheat Products	
Yeast	

ACCEPTABLE FOR THE FOLLOWING DIETARY RESTRICTION:

Free of animal products

NOT ACCEPTABLE FOR THE FOLLOWING DIETARY RESTRICTION:

Kosher





References

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2. Murray, Michael T., Encyclopedia of Nutritional Supplements, Prima Publishing, Rocklin, CA, 1996
3. Zemleni, J., Pharmacokinetics of vitamin B6 supplements in humans, J Am Coll Nutr, 14:579-586, 1995
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9. Shimizu, T., *et al*, Theophylline attenuates circulating vitamin B6 levels in children with asthma, Pharmacol, 49:392-397, 1994
10. Bartel, P.R., *et al*, Vitamin B6 supplementation and theophylline-related effects in humans, Am J Clin Nutr, 60:93-99, 1994
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12. Pyridoxine (Vitamin B6) Natural Medicines Comprehensive Database [internet] 2007 [cited April 2007] Available from: [http://www.naturaldatabase.com/\(S\(kaudj245vtr4l255q2j4a2nw\)\)/nd/Search.aspx?cs=CEPDA&s=ND&pt=100&id=934&fs=ND&searchid=3948386](http://www.naturaldatabase.com/(S(kaudj245vtr4l255q2j4a2nw))/nd/Search.aspx?cs=CEPDA&s=ND&pt=100&id=934&fs=ND&searchid=3948386)

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