



## Vitamin B6

### WHAT IS IT?

Vitamin B6 (pyridoxine) is a water-soluble vitamin that is required for more than 100 cell reactions in the body. Vitamin B6 and its activated form, known as pyridoxal-5-phosphate (P5P), is necessary for optimal nervous and immune system function, and is required to make hemoglobin. It also helps maintain normal serum glucose levels.

### WHO MIGHT CONSIDER TAKING THIS?

**General Immunity.** Low vitamin B6 intake has been associated with impaired immune function (i.e. rheumatoid arthritis) especially in the elderly.

**Morning Sickness.** Vitamin B6 has been used to alleviate nausea and vomiting of pregnancy (NVP) for more than 50 years. The typical dose in many of the research studies was 25 mg taken every eight hours. This dose appears to be safe for both mother and baby. The American College of Obstetrics and Gynecology recommends 10–25 mg of vitamin B6 every eight hours as first-line treatment for NVP. Always check with your provider before taking any dietary supplement during pregnancy or while nursing.

**Pregnancy-Related Anemia.** Pregnant women with anemia who are not responding to iron supplementation may also have vitamin B6 deficiency. Vitamin B6 supplementation may help correct the anemia in some patients.

**Diabetic Neuropathy.** Peripheral neuropathy (numbness and tingling in feet and sometimes hands) in diabetics has been linked to vitamin B6 deficiency. Although more studies are needed in this area, correcting a low vitamin B6 level with supplementation may be helpful in some patients.

### PREPARATIONS AND DOSAGE

**SOURCES:** Excellent sources of vitamin B6 are fortified breakfast cereals, organ meats (e.g., liver), fish, starchy vegetables (e.g., potatoes and sweet potatoes), and non-citrus fruits. Vitamin B6 is sensitive to light and must be processed and stored carefully. Vitamin B6 is generally well absorbed from food sources and supplements.

**DOSE:** The food and Nutrition Board of the Institute of Medicine has established an upper tolerable intake level (UL) for vitamin B6 of 100 mg per day for all adults. The recommended Daily Value (RDV) is only 2 mg per day. Therapeutic doses for the conditions named above may be 25 mg per day to 100 mg per day.

### CONCERNS?

Vitamin B6 is the only B vitamin that is associated with nerve damage when taken at high doses, as a supplement (generally 500 mg per day, but possibly as low as 50 mg per day if taken for a prolonged period). High vitamin B6 intake from food has not been found to have adverse effects.

Those who follow a very strict vegetarian diet might need to increase vitamin B6 intake by eating foods fortified with vitamin B6 or by taking a supplement.

Patients with alcohol dependence, pregnancy, impaired kidney function, autoimmune disorders such as rheumatoid arthritis, and malabsorption syndromes, such as Crohn's disease, ulcerative colitis, or celiac disease are at risk of B6 deficiency.

**DRUG INTERACTIONS:** Doses of 10 mg or higher of vitamin B6, may decrease the effectiveness of anticonvulsant medications, such as phenytoin and phenobarbital, as well as levodopa, a medication used to treat Parkinson's.