

# P-5-P

## Metabolically active form of vitamin B6

P-5-P is the pyridoxal-5-phosphate form of vitamin B6. Vitamin B6 occurs in three forms – pyridoxine hydrochloride, pyridoxal, and pyridoxamine – all of which must be converted into activated P-5-P by the liver. P-5-P is the bioactive form of vitamin B6 the body ultimately uses and requires for a wide range of biochemical processes critical for physical and mental health.

Vitamin B6 is found in animal and plant foods and is widely available in the food supply. However, some individuals have health challenges that may impair the body's capacity to convert other forms of B6 into active P-5-P. Additionally, occasional periods of stress or illness may increase the body's need for B6 above that which can reasonably be obtained from food. Elderly individuals, individuals who consume large amounts of alcohol, and individuals with suboptimal liver health may benefit from supplemental amounts of P-5-P. Some medications also interfere with B6 metabolism in the body.

P-5-P is necessary for the production of neurotransmitters that help support balanced moods, a positive mental outlook, and a healthy response to stress. These include gamma-aminobutyric acid (GABA – a calming neurotransmitter), the conversion of 5-HTP to serotonin (sometimes called the "feel good" neurotransmitter), and the conversion of L-DOPA into dopamine (a neurotransmitter involved in the "reward pathways" in the brain).

P-5-P is also a required cofactor for the enzyme that synthesizes heme, the iron-containing portion of hemoglobin, which is the molecule that carries oxygen in the blood. Therefore, P-5-P is crucial for maintaining healthy energy levels by facilitating the delivery of oxygen to tissues throughout the body. Additionally, P-5-P helps maintain healthy blood glucose levels by serving as a cofactor for enzymes that break down the body's stored carbohydrates (glycogen) into glucose, as well as enzymes involved in generating glucose from amino acids—a process called gluconeogenesis. Another process that depends on adequate P-5-P is the conversion of homocysteine to the amino acid cysteine. (Elevated homocysteine may be a marker for compromised cardiovascular health.)

**Recommended Use:** As a dietary supplement, take one capsule per day, or as directed by your health care practitioner.

### Based on the many functions of P-5-P, this product may be beneficial for:

- Supporting healthy blood glucose levels
- Promoting a positive mental outlook
- Supporting a balanced response to stress
- Supporting a normal, healthy attitude during the menstrual cycle
- Water retention



\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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