THE VITAMIN. Defined as a compound that is essential for normal physiological function. Not produced by the body in adequate amounts to meet physiological need, it is necessary to obtain vitamins through diet or supplementation.

Pyridoxine, Vitamin B6, is part of the B Complex family of vitamins. Pyridoxal-5-Phosphate (P5P) is the metabolically active (co-enzyme) form of Pyridoxine and is referred to as PLP in scientific literature, particularly when referencing plasma levels. P5P is required by various enzymes to carry out reactions in the body. It is vital for a healthy immune system, formation of glucose and niacin, red blood cell metabolism and synthesis of several neurotransmitters including serotonin and GABA. P5P is involved in more than 100 individual reactions, and when taken in supplemental form is readily utilized by the body.

Chronic deficiency of Vitamin B6 can lead to hypochromic microcytic anemia, nervous system breakdown due to lack of neurotransmitter synthesis, and endocrine (hormone) related disease as low B6 levels can affect receptors for estrogen, androgen, progesterone and glucocorticoids. P5P levels have also been positively correlated with plasma HDL-C (good cholesterol) and negatively correlated with plasma LDL-C (bad cholesterol).

Decreased P5P plasma concentrations have been found in those with asthma, renal disease, coronary heart disease, breast cancer, obesity, Hodgkin's disease, diabetes and sickle cell anemia. Several malabsorption syndromes including Celiac disease, Crohn’s disease and ulcerative colitis may lead to low P5P plasma levels. Individuals who suffer from alcoholism or have been long-term smokers may also have depleted plasma levels.

TR Nutritionals has been the leading supplier of P5P to the dietary supplement industry for 10 years, selling material exclusively manufactured by Shanghai Jinli Chemical Co, Ltd. This facility has been awarded the High Technology Enterprises Certificate by the Chinese government. It has received both ISO 9001:2008 and ISO 14001:2004 certification with guidelines established by ICH Q7 (International Conference of Harmonisation - GMPs for Active Pharmaceutical Ingredients). One of the most respected manufacturing facilities in China, Jinli’s production process yields P5P that consistently meets purity levels of not less than 98.5%.

Pyridoxal-5-Phosphate is the most metabolically active form of Vitamin B6 for use in your supplement, medical food, beverage, nutritional bar or food product. Set your formulation apart from the competition by using the highest quality Pyridoxal-5-Phosphate available only from TR Nutritionals.

*TR Nutritionals is a leading raw material supplier of vitamins, botanical extracts and specialty ingredients.*

For more information, please visit [www.trnutritionals.com](http://www.trnutritionals.com) or contact us at (404) 935-5761.