

# Tonic Vitamin B1-B6-B12

Vitamins B1, B6 and B12 are indispensable factors in the metabolism of the nervous system and the brain, essential in maintaining cognitive functions and neurotransmission.<sup>[1]</sup> They could enhance physical strength, brainpower, resistance and appetite. B vitamins supplement is suitable for those who get fatigue easily, concern about neuralgia or need to be mentally agile in their jobs.<sup>[1-3,5,6]</sup>

## Vitamin B1 (Thiamine)

Thiamine functions as a coenzyme in the conversion of carbohydrates and certain amino acids to provide energy for muscle, brain and nervous tissue.<sup>[1,3]</sup> Therefore, thiamine could modulate cognitive performance and help avoid muscle fatigue and body tiredness, also promote health of the brain and the nervous system. Thiamine deficiency has been associated with chronic alcoholism.<sup>[3,4]</sup> Consumption of tea and coffee would also increase the requirement for thiamine intake.<sup>[4]</sup>

## Vitamin B6 (Pyridoxine)

Vitamin B6 is required for the proper growth and development of the brain, nerves, skin, and many other parts of the body.<sup>[5]</sup> The major form of vitamin B6 in the tissues is PLP, a coenzyme for more than 100 enzymes involved in amino acid metabolism, neurotransmitter synthesis and heme biosynthesis.<sup>[3]</sup>

It helps maintain a sufficient supply of hemoglobin. Vitamin B6 may also help relieve depression, irritability and tiredness of premenstrual women.<sup>[6]</sup>

## Vitamin B12 (Cobalamin)

Vitamin B12 is essential for normal blood formation and neurological function.<sup>[3]</sup> It participates in methyl conversion and folic acid metabolism, facilitates blood cell and nerve cell metabolism and neurotransmitter synthesis to ensure normal function of the central nervous system.<sup>[1,3,7]</sup> Some individuals, especially the elderly or people with digestive tract disorders, may be unable to absorb naturally occurring vitamin B12 effectively.<sup>[3,7]</sup> They may need to take supplements in order to meet their dietary requirement. Supplementation with B12 may improve cerebral and cognitive functions in the elderly.<sup>[1]</sup>

## Vitamin B: Do you know?

<b>Nutrient Loss</b>	B Vitamins are soluble in water and could be destroyed by heat (e.g. washing or cooking), resulting in nutrient loss.		
<b>Cooperative Effect</b>	B Vitamins must work together to achieve cooperative effect. Human requires balanced intake of different B vitamins.		
<b>Deficiency Symptoms</b>	<b>Vitamin B1</b>	<b>Vitamin B6</b>	<b>Vitamin B12</b>
	<ul style="list-style-type: none"> <li>• Beriberi</li> <li>• Listlessness</li> <li>• Insomnia</li> <li>• Vomiting</li> <li>• Nervous system problems</li> <li>• Depression</li> </ul>	<ul style="list-style-type: none"> <li>• Anaemia</li> <li>• Nervousness</li> <li>• Insomnia</li> <li>• Depression</li> <li>• Muscle cramps</li> </ul>	<ul style="list-style-type: none"> <li>• Anaemia</li> <li>• Slowness in thinking</li> <li>• Emotional chaos</li> <li>• Poor memory</li> <li>• Weakened sensation</li> </ul>

Source: Department of Health



## Vitamin B1-B6-B12 is suitable for people concerned about health:

- ★ Trigeminal neuralgia, sciatica, shoulder-arms syndrome, tennis elbow
- ★ Stressful, neurasthenia, cardiac arrhythmia
- ★ Muscular atrophy, muscle cramps, facial nerve paralysis
- ★ Nausea, vomiting or neuralgia caused by pregnancy or contraceptives
- ★ Diabetic, toxic or alcoholic neuropathy
- ★ Psoriasis, herpes zoster
- ★ Attention deficit, poor memory and sense of balance
- ★ Beriberi, quadriplegia, cold and weak limbs
- ★ Acne, skin problems
- ★ Mouth ulcers, bad breath
- ★ Anaemia, listlessness, tiredness
- ★ Smoking and alcohol consumption

## Recommended daily dose:

For Adult: take 1 tablet daily or as directed by the physicians.

For special needs, take 1 tablet 3 times daily.

### References:

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3. Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. Washington, D.C.: National Academy Press, 1998. In Print.
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6. Doll H, Brown S, Thurston A, Vessey M. Pyridoxine (vitamin B6) and the premenstrual syndrome: a randomized crossover trial. J R Coll Gen Pract. 1989;39(326):364-8.
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