Vitamin B₁₂
High Potency Sublingual Tablets

DESCRIPTION
Sublingual Vitamin B₁₂ tablets, provided by Douglas Laboratories, dissolve rapidly, releasing 2,500 mcg of pure vitamin B₁₂.

FUNCTIONS
Vitamin B₁₂ is essential for normal energy metabolism of carbohydrates, fat and protein. As a cofactor for methylmalonyl-CoA mutase enzymes, vitamin B₁₂ helps convert odd chain fatty acids and branched chain amino acids into succinyl-CoA, a common citric acid cycle intermediate. Vitamin B₁₂ is also required for nucleic acid (DNA) synthesis, methionine synthesis from cysteine, and normal myelin synthesis in the nervous system. Along with vitamin B₈ and folic acid, adequate levels of vitamin B₁₂ are required to maintain normal plasma homocysteine levels. Elevated plasma homocysteine may be an independent risk factor for developing cardiovascular disease.

There are two distinct mechanisms for intestinal vitamin B₁₂ absorption; receptor-mediated absorption and passive diffusion. In the first, vitamin B₁₂ attaches to a salivary “R-binder” protein which transports it into the small intestine, where vitamin B₁₂ is released. The vitamin then binds to “Intrinsic Factor” (IF), a glycoprotein normally produced by the gastric parietal cells. This vitamin B₁₂-IF complex is carried down to the ileum, where it binds to mucosal receptors. Finally, the complex is absorbed and bound to serum vitamin B₁₂-binding proteins. The second absorption mechanism, passive diffusion, does not require any carriers, such as B-binder or IF. Only about 1% of free vitamin B₁₂ is passively absorbed, but this can be nutritionally significant with higher dietary vitamin B₁₂ intakes.

The elderly, HIV/AIDS patients, and strict vegetarians are often at risk for vitamin B₁₂ deficiency, either due to low dietary intake or impaired absorption. The receptor-mediated absorption pathway is subject to numerous genetic and pathologic defects which can severely impair normal vitamin B₁₂ absorption. These defects include hereditary absence of IF production, gastric atrophy, gastrectomy, and small intestinal disorders affecting the ileum, such as gluten-induced enteropathy, regional enteritis, chronic diarrhea, and intestinal resection. Affected individuals depend almost exclusively on the passive diffusion pathway, which requires high dietary vitamin B₁₂ intakes.

INDICATIONS
Vitamin B₁₂ tablets may be a useful nutritional adjunct for individuals who wish to increase their intake of vitamin B₁₂.

FORMULA (B₁₂)
Each tablet contains:
Vitamin B₁₂.................................................. 2,500 mcg

SUGGESTED USE
One tablet daily, or as directed by physician. Tablet may be dissolved in mouth or swallowed whole.

SIDE EFFECTS
No adverse side effects reported.

STORAGE
Store in a cool, dry place, away from direct light. Keep out of reach of children. Do not refrigerate.

REFERENCES


Harriman GR, Smith PD, Horne MK, et al. Vitamin B₁₂

(continued on reverse)

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.

Manufactured by
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440