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## Vitamin B 12

### What are the dangers of Vitamin B12 deficiency?

**Vitamin B12** is very important to good health: It helps maintain healthy nerve cell and red blood cells, and is also needed to make DNA and aid in growth and development – especially in children. It is found primarily in meat, eggs and dairy products, whereas plants do not contain vitamin B12. Although the minimum requirement for vitamin B12 is quite small, a deficiency can be a very serious problem.

### When is a deficiency likely to occur?

Vitamin B12 deficiency may occur as a result of an inability to absorb B12 from food. It can also occur in individuals that exclude animal foods from their diets. Generally, most individuals who develop a deficiency have an underlying stomach or intestinal disorder that limits the absorption of vitamin B12. A deficiency will result in anemia, and if prolonged, can lead to nerve degeneration and irreversible neurological damage. Deficiency can also cause dementia and is a risk factor for cardiovascular disease. Early detection and treatment (usually with vitamin B12 injections) can reverse disability.

### What are the symptoms of vitamin B12 deficiency?

Symptoms include fatigue, weakness, nausea, breathlessness, poor resistance to infection, loss of appetite and weight loss. Deficiency can also lead to neurological changes such as numbness and tingling in the hands and feet.

### Who may need a vitamin B12 supplement to prevent a deficiency?

- 1.) Individuals with pernicious anemia.
- 2.) Individuals with gastrointestinal disorders.
- 3.) Older adults.
- 4.) Vegetarians.

### What tests are available to determine Vitamin B12 deficiency?

- 1.) Vitamin B12 levels.
- 2.) Intrinsic Factor Blocking Antibodies.
- 3.) Anti Parietal Cell Antibody.

### Reference nutrient intakes for vitamin B12 µg/day (1000 µg = 1 mg)

0 to 6 months	0.3 µg
7 to 12 months	0.4 µg
1 to 3 years	0.5 µg
4 to 6 years	0.8 µg
7 to 10 year	1.0 µg
11 to 14 years	1.2 µg
15 + years	1.5 µg
Breast feeding women	2.0 µg

Pregnant women are not thought to require any extra B12, though little is known about this.

Lactating women need extra B12 to ensure an adequate supply in breast milk.