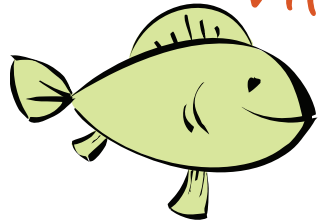


## Vitamins

# Vitamin B12



*Eat more fish!*

### What is it?

Unlike other vitamins, Vitamin B12 cannot be produced by most plants and animals. The exclusive source for this vitamin is mold, algae, yeast and some very specific bacteria.

### Why do I need it?

Its most important role is probably its function as part of red blood cell development. It is essential for the development of the DNA. When cells are deficient in B12, they are large and malformed and you can detect that on a slide when looking at a smear of someone's blood. In order to be absorbed, it requires a special protein, intrinsic factor that is made in the stomach. It is actively absorbed in the ileum. Patients who have had gastric bypass or older patients who have a history of atrophic gastritis will need to get B12 by other means than food. It may be taken thru an injection or sub-lingually.

Pernicious anemia manifests as anemia or low blood count but is often accompanied by neurologic symptoms including dementia and neuropathic pain.

When derived from animal foods, B12 is well preserved under most cooking conditions. We can store B12 for up to 20 years making deficiencies appear mostly in older people.

# Vitamin B12

## Vitamins

### Where do I find it?

The best sources of Vitamin B12 are liver and fish (from the bacteria or algae they have ingested).

Snapper, baked 4 oz.	3.97 mcg
Liver, Calf, 4 oz.	41.39 mcg
Halibut, Baked/Broiled 4 oz.	1.55 mcg
Yogurt, cow milk, low fat (1 cup)	1.38 mcg
Egg, boiled	0.89 mcg
Salmon Baked/Broiled	3.25 mcg

### How much do I need?

Adult males: 2.4 mcg. daily

Adult females: 2.4 mcg. daily

Lactating females: 2.8 mcg. daily

You need only very tiny amounts of these nutrients, but vitamins are absolutely essential for your health.

