

Food Sources:

Vitamin B12

Vitamin B12 is a water-soluble nutrient required to make healthy red blood cells, support brain health, make DNA, metabolize homocysteine, and prevent pernicious anemia.¹ Vitamin B12 typically comes from animal sources of protein (fish, meat, poultry, eggs), fortified foods (cereals, nut “milks”), and supplements, but is not found in fruits or vegetables.

There are several forms of vitamin B12 including cyanocobalamin, methylcobalamin, deoxyadenosylcobalamin, and hydroxocobalamin. Those who have high homocysteine levels or genetic variants in methylation genes may respond better to “active” forms of vitamin B12 such as methylcobalamin.²

Strict vegetarians and vegans are at higher risk for vitamin B12 deficiency because of the avoidance of animal foods. Those with celiac disease, Crohn’s disease, low stomach acid, and the elderly may also be at higher risk for vitamin B12 deficiency because of poor absorption.¹ Certain medications (proton pump inhibitors, H2 receptor antagonists, Metformin) may also increase the likelihood of vitamin B12 deficiency.¹

The Recommended Dietary Allowances (RDAs) for vitamin B12 are as follows:

- **Adults, ages 14+:** 2.4 microgram (mcg) per day
- **Pregnancy:** 2.6 mcg per day
- **Lactation:** 2.8 mcg per day

Food, standard serving size	Average Vitamin B12 Content (in micrograms)
Clams, 3 ounces	84
Grass-fed beef liver, 3 ounces	70
King crab, 3 ounces	9.8
Lean beef, 3 ounces	7
Wild-caught Rainbow trout, 3 ounces	5.4
Sockeye salmon, 3 ounces	4.8
Light canned tuna, 3 ounces	2.5
Nutritional yeast, fortified, 1 serving	2.4
Haddock, 3 ounces	1.8
Cow milk, 1 cup	1.2
Yogurt, 8 ounces	1.1
Swiss cheese, 1 ounce	0.9
Roasted turkey, 3 ounces	0.8
Hard-boiled egg, 1 large	0.6

REFERENCES

1. U.S. Department of Health and Human Services, National Institutes of Health, Office of Dietary Supplements. Vitamin B12. <https://ods.od.nih.gov/factsheets/VitaminB12-HealthProfessional/>. Updated February 19, 2020. Accessed March 20, 2020.
2. Oregon State University, Linus Pauling Institute. Micronutrient Information Center. Vitamin B12. <https://lpi.oregonstate.edu/mic/vitamins/vitamin-B12>. Updated June 2015. Accessed March 20, 2020.
3. U.S. Department of Agriculture, Agricultural Research Service. FoodData Central. fdc.nal.usda.gov. Accessed March 23, 2020.

