

# Nutrition Needs for Older Adults: Vitamin B-12



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## Introduction

Vitamin B-12 is a water-soluble vitamin that plays an important role in the health of older adults. Vitamin B-12 is involved in making DNA, red blood cell formation, and proper nerve function<sup>1</sup>. While more research is needed, low vitamin B-12 levels have also been linked to increased bone fracture risk<sup>2</sup>.

Vitamin B-12 is primarily found in animal products. Older adults who consume very little to no animal products are at an increased risk of vitamin B-12 deficiency<sup>1</sup>. It is important that this group of individuals be mindful to eat foods fortified with vitamin B-12 or take a supplement.

## How Much is Needed?

Older adults do not require more vitamin B-12 than younger adults, but absorption of vitamin B-12 may decrease with age.

The RDA is based on an assumption that 50% of vitamin B-12 is absorbed in the body. However, approximately 10-30% of older adults are unable to absorb vitamin B-12 through food sources. Therefore, it is recommended that older adults get at least half of their vitamin B-12 through fortified foods or supplements<sup>1</sup>.

### Recommended Dietary Allowances (RDA) for Vitamin B-12<sup>1</sup>:

Life Stage Group	Men and Women
14+ years	2.4 micrograms (mcg)

It's important to get the right amount of vitamin B-12. Too little can cause anemia, fatigue, gastrointestinal issues, constipation, unintended weight loss, neurological changes, confusion, and soreness of the mouth or tongue. If left untreated, vitamin B-12 deficiency can cause permanent nerve damage<sup>1</sup>.

While there is significant risk of vitamin B-12 deficiency with low intake, it is very unlikely that vitamin B-12 from food and supplementation can cause toxicity. For this reason, there is no set tolerable upper limit level (UL) for vitamin B-12.

## Food Sources of Vitamin B-12

Vitamin B-12 is primarily found in seafood, meat, dairy, eggs, and foods fortified with vitamin B-12.

### Food Sources of Vitamin B-12<sup>3</sup>:

Food source	Amount per serving	mcg per serving
Clams	3 ounces	84.1
Beef liver	3 ounces	70.7
Fortified nutritional yeast	1 serving	6.0
Salmon	3 ounces	4.8
Tuna	3 ounces	2.5
Fortified cereal	1 serving	1.5
Beef	3 ounces	1.4
Milk (low-fat)	8 ounces	1.2
Yogurt (low-fat)	8 ounces	1.1
Egg	1 large	0.6
Chicken breast	3 ounces	0.3

Some older adults are not able to get adequate vitamin B-12 through food alone. Supplementation may be needed through a multivitamin or single-vitamin supplement. It is important that older adults work with their health care team to determine whether supplementation is needed.

## Strategies to Help Older Adults Optimize Intake Daily

The following strategies can help older adults optimize their intake of vitamin B-12:

### When Shopping:

- Purchase foods naturally high in vitamin B-12, like seafood and meat
- Look for food items fortified with vitamin B-12, like nutritional yeast and cereals
- Read food labels for vitamin B-12 content

### During Meal Preparation:

- Breakfast is a good opportunity for high vitamin B-12 foods — from eggs, to cereal, to milk
- Lunch and dinner are good opportunities for high vitamin B-12 foods, like meat
- Include seafood at least two days of the week in menu planning

### At the Table:

- Offer beverages with vitamin B-12, such as milk or milk alternatives fortified with vitamin B-12 (read labels for specific brands that fortify with vitamin B-12)
- Provide foods and snacks fortified with vitamin B-12



### TAKE HOME MESSAGE:

**Vitamin B-12 is an important nutrient for older adults. Many older adults are unable to absorb vitamin B-12 from food sources. Additionally, older adults who consume little to no animal products are at an increased risk for deficiency. Consuming foods fortified with vitamin B-12 is important for older adults.**

#### REFERENCES

1. Institute of Medicine, Food and Nutrition Board. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. Washington, DC: National Academy Press, 1998. <https://www.nap.edu/read/6015/chapter/1>. Accessed November 19, 2019.
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3. FoodData Central. U.S. Department of Agriculture. <https://fdc.nal.usda.gov/>. Accessed November 19, 2019.