

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 function¹. While more research is needed, low vitamin B-12 levels have also been linked to increased bone fracture risk².

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 deficiency¹. 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 supplements¹.

Recommended Dietary Allowances (RDA) for Vitamin B-12¹:

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 damage¹.

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-12³:

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.