



DEPARTMENT OF **PUBLIC HEALTH & HUMAN SERVICES**

August 2026 Nutrition Article **Vitamin B12 Absorption in Older Adults**

Aging changes the way your body processes food, making it harder to efficiently absorb some nutrients, including vitamin B12. Malabsorption of B12 affects 10 to 30% of community-dwelling older adults and up to 40% in institutionalized populations, and deficiency is linked to anemia, cognitive decline, and dementia.

Older adults have a higher risk of vitamin B12 deficiency. As people age, changes in digestion can make it harder for the body to absorb B12. Pernicious anemia, which affects the body's ability to absorb B12, also becomes more common with age. Some medicines, including metformin and proton pump inhibitors (PPIs) used to treat acid reflux, can also reduce B12 absorption.

Vitamin B12 deficiency can cause physical, mental, and nervous system symptoms. Some symptoms, such as memory problems and confusion, may look like signs of dementia. Nerve damage can become permanent without treatment.

Factors That Affect Absorption

Several factors can make it harder for older adults to absorb vitamin B12 from food. A primary cause is reduced stomach acid, which is a natural part of aging. Acid-reducing medicines, such as omeprazole and other PPIs, can worsen this issue by lowering stomach acid levels even further.

Another reason for B12 malabsorption is decreased or absent intrinsic factor (IF). IF is a protein made by stomach cells that helps the small intestine absorb vitamin B12. Conditions like gastritis (inflammation of the stomach) can damage the cells that produce IF, resulting in a reduction of B12 absorption.

Digestive conditions such as small intestinal bacterial overgrowth (SIBO) can also contribute to low B12 levels.

And finally, what you eat — or don't eat — can affect B12 levels as you age. Vegetarian and vegan diets may provide little or no naturally occurring B12, which is found in foods such as meat, fish, eggs, and dairy. Choosing foods that contain B12 can help maintain adequate levels, although absorption problems may still occur even when dietary intake is adequate.

How Vitamin B12 Is Absorbed

Vitamin B12 absorption involves several steps. First, hydrochloric acid and the digestive enzyme pepsin release B12 from food in the stomach. IF then binds to B12 and helps carry it to the small intestine, where it can be absorbed.

Several age-related factors can interfere with this process. Gastritis, H. pylori infection, and long-term use of PPIs or other acid-reducing medicines can lower stomach acid. Reduced stomach acid and IF production can make it harder for the body to release and absorb B12, even when a person gets enough through food.

Vitamin B12 plays an important role in red blood cell formation, neurological function, and DNA production. Deficiency can cause numbness, tingling, balance problems, cognitive changes, anemia, and fatigue. Health care providers can use blood tests to check B12 levels and may order additional testing for IF antibodies.

Treatment depends on the cause and may include high-dose supplements, injections, or fortified foods. Providers may also address contributing factors, such as H. pylori infection, acid-reducing medications, or gastrointestinal disorders.

Prevention Strategies

Preventing vitamin B12 deficiency in older adults often requires eating B12-rich foods or taking supplements, treating underlying health conditions, and regularly monitoring B12 levels. Early treatment can help prevent long-term neurological and blood-related complications.

Diet is one way to maintain adequate B12 levels. Natural sources include meat, poultry, fish, eggs, and dairy. Fortified foods, such as certain cereals, plant-based milks, and nutritional yeast, can also provide B12. Pairing these foods with acid-rich foods, such as citrus, tomatoes, and vinegar, can help stimulate stomach acid and support B12 absorption.

Supplementation should be guided by a health care provider. Treatment may include high-dose oral supplements, while people with severe malabsorption may need B12 injections. Injections bypass the digestive system, allowing the body to receive B12 without relying on absorption in the stomach and small intestine.

Addressing contributing factors is also important. This may include treating *H. pylori* infection, reviewing acid-reducing medications with a health care provider, and working with a dietitian or other health professional to manage digestive conditions that contribute to malabsorption.

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Recipe of the Month

Avocado Deviled Eggs

This snack is high in protein, freezer-friendly, and completely customizable with your favorite veggies, meats, and cheeses.

INGREDIENTS

- 12 eggs
- 2 avocados, pitted
- 3 tbsp lime juice
- 2 cloves garlic, minced
- ½ jalapeno, de-seeded and minced
- ½ tsp cayenne pepper
- 1 tsp salt
- ¼ cup fresh cilantro, chopped



INSTRUCTIONS

1. Cover eggs with 1½-inches of water in a large saucepan. Bring water to a boil, then remove from heat and cover with a lid. Set aside and allow the eggs to cook for about 18 minutes. Have a large bowl ready with ice and water. Remove eggs after 18 minutes and place them into ice water. Once cool, peel.
2. Cut each egg lengthwise. Carefully remove the yolks and place them in a food processor.
3. Add the avocados, lime juice, minced garlic, minced jalapeno, cayenne pepper, and salt.
4. Process until smooth.
5. Add cilantro and pulse a few times.
6. Use a spoon to fill the center of each egg half.
7. Sprinkle with a touch of cayenne pepper and cilantro.
8. Serve immediately or place in the refrigerator for future use.