



Journey through Health: Stomach

EXTENSION

April 2021

Janice Hermann
Extension Nutrition Specialist

Seung Eun Jung
Assistant Professor

Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
extension.okstate.edu

Age-Related Stomach Changes

A common stomach condition that occurs with age is atrophic gastritis. Atrophic gastritis can result in stomach inflammation; bacterial overgrowth; and decreased production of stomach acid, the digestive enzyme pepsin, and intrinsic factor.

All of these changes can impair absorption of naturally occurring vitamin B12. Decreased stomach acid can also increase the risk of foodborne illness. Frequent use of antacids by older adults can further reduce stomach acidity.

Diet, Food Safety and Stomach Health

Vitamin B12 deficiency. Atrophic gastritis can result in a decreased ability to absorb naturally occurring vitamin B12, which can lead to a deficiency of vitamin B12.

Vitamin B12 deficiency can impair cognitive function and can cause loss of ability to concentrate, loss of memory, and confusion. Vitamin B12 deficiency can also result in irreversible nerve damage, which can affect balance and walking. In addition,



vitamin B12 deficiency is related to high levels of homocysteine in the blood, which is associated with increased risk of heart disease.

Naturally occurring vitamin B12 is found almost totally from animal foods. Significant sources include meat, poultry, fish, eggs, milk and milk products. Many foods are also fortified with a synthetic form of vitamin B12. The synthetic form of vitamin B12 found in fortified foods, such as cereals, or dietary supplements is easily absorbed.

Due to the decreased ability to absorb vitamin B12 with age, the Dietary Guidelines encourage adults 50 years of age and older

to include foods fortified with vitamin B12, such as fortified cereals, or take a dietary supplement containing vitamin B12.

Foodborne illness. In addition to affecting vitamin B12 absorption, decreased stomach acid increases the risk of foodborne illness. Stomach acid is the body's first line of defense against foodborne pathogens. This is one reason why the risk of foodborne illness increases with age.

Following safe food handling practices can lower the risk of foodborne illness. Many foodborne illnesses are caused by unsafe food handling practices in the home. Some food handling practices that can lower the risk of food safety problems in the home are washing hands, thoroughly rinsing vegetables and fruits, preventing cross-contamination, cooking foods to safe internal temperatures, and storing foods safely for the recommended time. These practices are highlighted by the four basic food safety principles which work together to reduce the risk of foodborne illness. These principles are:

- **Clean.** Clean hands, food contact surfaces, and vegetables and fruits.

- **Separate.** Separate raw, cooked, and ready-to-eat foods while shopping, storing, and preparing foods.
- **Cook.** Cook foods to a safe temperature.
- **Chill.** Refrigerate perishable foods promptly.

Some foods pose high risks for foodborne illness and should be avoided. These include raw (unpasteurized) milk, cheeses, and juices; raw or undercooked seafood, meat, poultry, and eggs; and raw sprouts.

MyPlate Messages Promoting Stomach Health

Several of the MyPlate messages can help promote stomach health.

Build a Healthy Plate

- Adults 50 years of age and older are encouraged to consume foods fortified with vitamin B12, such as fortified cereals, or take a dietary supplement containing vitamin B12.
- Keep your food safe to eat.
 - Follow the four food safety principles: clean, separate, cook, and chill.

Sources

Bernstein M, Luggen A.S. Nutrition for the Older Adult. Sudbury, MA: Jones and Bartlett; 2010.

Brown JE. Nutrition in Older Adults. In: Nutrition Through the Life Cycle 4th ed. Belmont, CA: Wadsworth, Cengage Learning; 2011.

Chernoff R. Geriatric Nutrition, 3rd ed. Sudbury, MA: Jones and Bartlett; 2006.

Rolfes S, Pinna K, Whitney E. Understanding Normal and Clinical Nutrition, 7th ed. Belmont, CA: Thomson Wadsworth; 2006.

United States Department of Agriculture. Dietary Guidelines for Americans 2020-2025.

United States Department of Agriculture. ChooseMyPlate.gov. Accessed at www.choosemyplate.gov

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/ expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President for Agricultural Programs and has been prepared and distributed at a cost of 20 cents per copy. Revised 04/2021 GH.