



Seniors and Food Safety: Why are Seniors at Risk for Foodborne Illness?

Preventing Foodborne Illness

James L. Smith, a microbiologist with the U.S. Department of Agriculture, wanted to find the answer to the question of why seniors are more at risk for foodborne illness.

He reviewed data from foodborne outbreaks at nursing homes, and compared the immune and digestive systems of seniors and younger individuals, as well as evaluating the overall physical well-being of seniors. Here is what he found:



The Immune System and Aging

As we age, the ability of our immune system to function at normal levels decreases.

The immune system is one of the most important mechanisms for fighting disease and preserving health, so a decrease in the level of disease-fighting cells is a significant factor in the number of infections that may occur.

In addition to the normal decrease in the function of the immune system as part of the aging process, undergoing major surgery also affects the body's ability to fight infections.

To counteract the effects of aging on the immune system, long-term regular exercise is important.

The Gastrointestinal Tract and Aging

As we age, inflammation of the lining of the stomach and a decrease in stomach acid occur. Because the stomach plays an important role in limiting the number of bacteria that enter the small intestine, a decrease or loss of stomach acidity increases the likelihood of infection if a pathogen is ingested with food or water.

Also adding to the problem is the slowdown of the digestive process, allowing for the rapid growth of pathogens in the gut and the possible formation of toxins.

Malnutrition and Aging

You may be wondering what malnutrition has to do with foodborne illness. They are connected. Malnutrition leads to increased incidence of infections, including those resulting from foodborne bacteria.

Malnutrition occurs in seniors for many reasons. A decrease in the pleasure of eating may be one reason. Medication, digestive disorders, chronic illnesses, physical disabilities or depression may result in a loss of appetite.

Good nutrition is an important factor in maintaining a healthy immune system.

Julie Garden-Robinson, Ph.D., R.D., L.R.D.
Food and Nutrition Specialist

Source: Adapted with permission from FDA/ Center for Food Safety and Applied Nutrition, May 1999; www.cfsan.fda.gov/~dms/seniorsd.html
Developed in cooperation with AARP
This material is based upon work supported by the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture, under Agreement No. 2002-51110-01512.

Symptoms of Foodborne Illness

Common symptoms of foodborne illness include diarrhea, abdominal cramping, fever, sometimes blood or pus in the stools, headache, vomiting and severe exhaustion. However, symptoms will vary according to the type of bacteria and amount of contaminants eaten.

Symptoms may appear as early as half an hour after eating the contaminated food or they may not develop for several days or weeks. They usually last only a day or two, but in some cases can persist a week to 10 days. For most healthy people, foodborne illnesses neither are long-lasting nor life-threatening. However, they can be severe in seniors.

In Case of Foodborne Illness

If you suspect you or a family member has foodborne illness, follow these general guidelines:

1. Preserve the evidence. If a portion of the suspect food is available, wrap it securely, mark it with "danger" and refrigerate it. Save all the packaging materials, such as cans or cartons. Write down the food type, the date and time consumed and when the symptoms started. Save any identical unopened products.
2. Seek treatment immediately.
3. Call the local health department if the suspect food was served at a large gathering, from a restaurant or other food service facility, or if it is a commercial product.
4. Call the Food and Drug Administration Consumer Food Information Line at (800) 332-4010 if you have questions.

For more information about food safety, visit www.ag.ndsu.edu/food

NDSU Extension does not endorse commercial products or companies even though reference may be made to tradenames, trademarks or service names. NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsuoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.