



Family and Consumer Sciences Extension

-Reducing the Risk of Foodborne Illness 2004

Putting Knowledge to Work for Georgia Families

The University of Georgia

Cooperative Extension Service

The Problem

- An estimated 76 million Americans become ill from foodborne illness each year, resulting in 325,000 hospitalizations and 5,000 deaths (1). The Economic Research Service (ERS) estimates the cost of foodborne illness from five foodborne illnesses alone at \$6.9 billion per year (2).
- According to the USDA Economic Research Service, the estimated costs for a single case of salmonellosis is \$ 2,126, but this increases to \$13,117 for cases involving hospitalization. The economic burden of acute listeriosis in the U.S. is estimated at \$2.3 billion. ERS estimates that, each year in the U.S., foodborne *E. coli* O157:H7 disease costs \$659.1 million to society and foodborne *E. coli* non-O157 STEC disease costs \$329.7 million for a combined total of \$988.8 million (2).
- In the latest data available from CDC, Georgia had the highest incidence of salmonellosis of all 9 sites monitored by CDC's Food Net system (3).
- Infants, young children, the elderly and those with weakened immune systems are most at risk of serious complications. These may include kidney failure, seizures, strokes, heart complications and death.
- Georgia currently does not have state-mandated training and certification of restaurant foodservice personnel, but easily accessible voluntary training at the local level is in demand. Employee turnover rates are very high so the need is continual.
- In a recent in-home study of consumer food handling practices, only 52% washed hands prior to food preparation, with less than 5% washing as recommended. Only 3% used a thermometer to determine doneness of a hamburger, with only 1% using it correctly. Chicken was undercooked 82% of the time, and other practices indicated a high rate of unsafe behaviors (4).
- Children may not be taught adequate ways to reduce foodborne illness at home, yet these children are the future food handlers in our society.

Research-based Solutions

- Food handler training programs improve knowledge of the causes of foodborne illness and recommended food handling practices.
- By identifying and controlling critical steps in food preparation, a high percentage of foodborne illness can be prevented.

Extension's Role

- Provide consistent, accessible food safety and sanitation education for foodservice employees and both youth and adult consumers.
- Provide education in safe food handling and implementation of HACCP (Hazard Analysis Critical Control Point) systems for food service managers; offer *ServSafe*[®] certification.
- Provide training that fulfills state requirements for employee training in the school nutrition program, personal care homes, child care facilities and other institutional settings.

Extension's Contribution to Solving the Problem

- More than 43,100 educational contact hours in food handler education were provided to 3,060 foodservice personnel. This includes 12,930 educational contact hours provided to 974 foodservice managers who received the *ServSafe*[®] manager training and 30,230 educational contact hours provided to 1,394 foodservice workers who received the *ServSafe*[®] employee training.
- Nearly 9,500 educational contact hours of food safety education were provided to 6,608 consumers, families, and youths. Seventy three percent of them were at risk or low-income Georgians.
- Food safety related educational events such as health fairs reached more than 351,000 Georgians.
- Over 1,400 educational contact hours in home food preservation were provided to 140 program participants.

- Media was a major strategy for food safety education: 22 exhibits reached over 32,900 observers; three food safety articles in newsletters reached over 1,050 readers; 75 radio spots were broadcast to a listening audience of over 3.6 million people; newspaper columns went to a circulation of nearly 2.2 million readers; six television programs were targeted to over 430,000 viewers.

Impact on Georgians

- Ninety six percent of the food service employees who participated in the *ServSafe*® food safety education program improved their knowledge. The participants significantly improved their knowledge in five food safety areas: recognizing hazardous food situations, receiving and storing food safely, preparing and serving food safely, preventing contamination and personal hygiene. The *ServSafe*® Employee Training program certified 1,137 foodservice workers in 2004.
- Additionally, the participants who completed the *ServSafe*® food safety program emphasized their preparedness to secure the safety of food. For instance, after training, a participant said, “..hold all employees to the standards that I already knew and to the standards that I learned today. They are to follow these safe-food practices 100% of the time without fail.”
- The *ServSafe*® Manager Training program certified 628 food service managers in 2004. Most of the food service managers who completed the *ServSafe*® training planned to implement recommended food handling practices in their food establishments. For example, 95% of the participants said that they plan to monitor food temperatures regularly in cold and hot holding; 96% planned to have written standards for personal hygiene; 95% planned to train and monitor employees to recognize food spoilage and unsafe foods; and 96% planned to train and monitor employees on cleaning and sanitizing equipment and dishware. At the end of the training, participants committed to apply gained knowledge to train others, for example a manager said “*This class has really inspired me to be more conscious about temperature, receiving, and food handling. I will make sure this information is passed on and hopefully inspire others, as I have been.*”
- Eighty-one percent of the consumers and families who participated in food safety education programs said that it was helpful for them to learn about food safety practices. Most of the participants said that they intend to adopt recommended food safety practices. For example, 86% said that they intend to wash their hands with warm running water and soap for at least 20 seconds before working with foods; 93% said that they intend to keep raw meats separate from other foods to prevent cross contamination; 81% said that they intend to keep foods like milk and eggs at or below 40°F; and 68% said that they intend to use a food thermometer to decide whether meat is done when they cook meat, poultry or fish.

Sources

1. Mead, P.S., et al. (1999). Food-Related Illness and Death in the United States. *Emerging Infectious Diseases*, Vol. 5 (5): 607-625.
2. Economic Research Service/U.S. Dept. of Agriculture. 2003. Economics of Foodborne Disease. <http://www.ers.usda.gov/Briefing/FoodborneDisease/>
3. Centers for Disease Control and Prevention. 2003. Preliminary FoodNet Data on the Incidence of Foodborne Illnesses - Selected Sites, United States, 2002. *Morbidity and Mortality Weekly Report*, Vol. 52 (15): 340-343.
4. Anderson, J.B. 2002. What consumers say they do...What they actually do: A comparison. Proceedings, Thinking Globally, Working Locally: A Conference on Food Safety Education. http://www.fsis.usda.gov/orlando2002/presentations/janderson/janderson_text.htm

Contacts

Dr. Elizabeth L. Andress, Professor and Extension Food Safety Specialist, eandress@uga.edu
 Dr. Judy Harrison, Professor and Extension Food Safety Specialist, judyh@uga.edu
 College of Family and Consumer Sciences (706) 542-3773,
 or your local Cooperative Extension Service office