

## **E.coli's Many Disguises**

The latest outbreak of *E.coli* O157:H7 in seemingly the most unlikely of places --- bagged spinach --- again underscores the fact that the deadly pathogen can turn up virtually anywhere. The recent outbreak in ten states has been linked to one death and over 100 illnesses. According to federal health officials, the death occurred in Wisconsin, with outbreaks also in Connecticut, Idaho, Indiana, Michigan, New Mexico, Oregon, Utah, Ohio and Kentucky.

Federal officials are not certain of the source of the outbreak. Until the source is ascertained, they are advising people throughout the nation to avoid bagged spinach products.

At Auburn University, Dr. Jean Weese, an Alabama Cooperative Extension System food scientist and professor of nutrition and food science, says the outbreak once again drives home the fact, however unsettling, that *E.coli* can strike under a variety of disguises besides undercooked ground beef.

“People most commonly link *E.coli* to undercooked ground beef, but it can turn up virtually everywhere --- from water used to irrigate produce in the field, from organically grown food products and even from products grown in soil where wild animals have defecated.”

Even if these problems were eliminated, the potential for contamination still exists further along the food chain, explains Janet Johnson, a regional Extension agent specializing in food safety. One common source of outbreak is cross-contamination at the processing

plant, she says. Exposure occurs when the product --- possibly raw spinach in this case -- comes in contact with unwashed hands or poorly sanitized equipment. “You do have more control during food processing because workers are under strict regulations to wash their hands after visits to the bathroom,” Johnson says. “But the fact remains that they sometimes don’t --- or they don’t wear gloves when they’re required to.” Restaurants are not immune either. Much like processing plants, they have rules for food handlers that are sometimes ignored by food handlers. Consequently, Johnson says, an element of risk will always be associated with foods, especially raw foods like spinach. This, she says, is why consumers ultimately must take responsibility for their own safety --- the reason why, for now, raw spinach is better prepared and eaten only in the home. This way, consumers can better ensure that spinach is free of the potentially fatal *E.coli O157:H7* and other pathogens.

The operative advice here is “to wash, wash, wash,” Johnson says. “Every time you wash produce, you’re removing potentially harmful pathogens,” Johnson says. “No, you won’t remove them entirely, but the more you manage to remove, the fewer bacteria you’ll risk ingesting and, consequently, the less exposed you will be to *E.coli* or any other pathogen.” It’s a view also shared by one of Johnson’s coworkers, Regional Extension Agent Patti West. “Washing is good, because a lot of bacteria can be removed by flowing water,” West says. Soaking, on the other hand, is self-defeating, because it gives the bacteria a chance to get into every nook and cranny, which makes them even harder to remove.”

As an added precaution, Johnson advises washing produce not once but twice --- washing it, letting the water drain and washing it again.

Households with children, elderly individuals or anyone who is ill should take special precautions, “because all of them are more susceptible to the pathogen’s effects,” West says. “That even goes for people with bad colds,” she adds. “Any kind of illness depresses your immune system and makes you more susceptible to any type of infection.” *E.coli O157:H7* causes diarrhea, often with bloody stools. Although most healthy adults can recover completely within a week, some people can develop a form of kidney failure called hemolytic uremic syndrome. This syndrome is most likely to occur in young children and the elderly, and it can lead to serious kidney damage and even death. For more information on food safety concerns contact your local County Extension Office or contact Angela Treadaway your Regional Extension Agent in Food Safety/Preservation/Preparation at 205-410-3696.