



"Improve the economic well-being of agriculture and enrich the quality of farm family life."

Let's Talk About: *E. coli*

E. coli (Escherichia coli) is a bacteria found in the intestines of healthy humans and animals. However, certain strains of *E. coli* bacteria can lead to sickness when ingested. *E. coli* outbreaks often receive significant media attention leading to misunderstanding within the general public. The media often suggests that modern agricultural production has increased the prevalence of *E. coli*. This is far from the truth it is important for consumers to understand the sources of *E. coli*, the association between *E. coli* and agriculture, and ways to prevent *E. coli* ingestion.

American Farm Bureau Policy

The American Farm Bureau Federation ("AFBF") believes that "ensuring a safe, secure food supply is a critical concern when establishing domestic and international policy. We should continue to communicate accurate, timely information on food safety issues to the mainstream media and the general public." AFBF's goal is to "improve awareness and understanding of agriculture's commitment to providing a safe, high quality food supply at a reasonable price to the public."

Additionally the AFBF supports "utilization of USDA approved technologies, such as cold pasteurization and high pressure processing to eliminate *E. coli* and other pathogens from our food supply."ⁱ

Source of *E. coli*

- *E. coli* is contracted through consumption of contaminated food including meat, produce, and unpasteurized milk.
- Other sources of *E. coli* include contaminated water and unhygienic contact with people or animals.

E. coli and Agriculture

- The majority of modern agricultural operations do not use organic fertilizer (manure) as a plant nutrient. Manure is a documented source of *E. coli* contamination.ⁱⁱ
- The 2006 outbreak of *E. coli* in California spinach and the 2011 *E. coli* outbreak in German bean sprouts both originated on organic farms. However, when organic farmers abide by the USDA's National Organic Program regulations, the risk of *E. coli* contamination in organic grown produce is low.
- If *E. coli* contamination in U.S. agricultural products is suspected, but not yet confirmed, farmers can lose hundreds of millions of dollars in revenue while the actual cause of the *E. coli* outbreak is still under investigation.ⁱⁱⁱ

- During the 2011 outbreak of E. coli in Germany, farm prices for all kinds of vegetables dropped by two-thirds which collectively cost European produce farmers \$610 million per week.^{iv}
- The U.S. food safety system is well prepared to identify E. coli outbreaks, partly because of centralized electronic tracking and data-sharing network that quickly raises an alert on the location and number of illnesses.^v
- According to the USDA, levels of E. coli infections in 2015 were less than half of what they were in 1996. Additionally, “Beef companies have dramatically improved safety measures to reduce the economic impact of ground beef recalls when contamination is found.”^{vi}
- According to the Center for Disease Control the incidences of food borne illness have dropped “thanks to improved practices in the meat industry and greater understanding among consumers that eating raw or undercooked ground beef is dangerous.”^{vii}
- U.S. meat processors are required to test for O157:H7, the most common strain of harmful E. coli responsible for nearly all E. coli outbreaks in the U.S. over the past decade.^{viii}
- In 2013, the FDA proposed the FDA Food Safety Modernization Act (FSMA) which focuses on prevention and addresses the safety of foods produced.^{ix}
- In 2013, there were 1.15 illnesses caused by E. coli infections per 100,000 people.^x

Prevention

- Many of the estimated 76 million cases of food-borne illnesses, including E. coli, in the U.S. are contracted in the home, and many can be prevented through proper kitchen health, storage, and cooking.
- Avoiding risky food choices and preparation methods is the key in mitigating the risk of E. coli. The following must be taken into consideration:^{xi}
 - Cook all food to the recommended temperature for safe consumption.
 - Drink pasteurized milk and juices.
 - Wash raw produce thoroughly.
- Cleanliness in the kitchen can also greatly reduce exposure to E. coli. Utilize the following techniques in your home:
 - Wash all utensils, countertops, and cutting boards often.
 - Keep raw food separate from cooked foods.
 - Wash your hands after handling any raw food, using the bathroom, touching animals, or changing diapers.

ⁱ American Farm Bureau Federation. (2015). *Policies* (p.117). San Diego, CA.

ⁱⁱ Organic Trade Association. (2011). *Manure Facts*.

ⁱⁱⁱ Blythe, Bruce. The Packer. (2011). *It is the sprouts*.

^{iv} Doane’s Agricultural Report. (June 17, 2011). *News Briefs*.

^v Blythe, Bruce. The Packer. (2011). *It is the sprouts*.

^{vi} News Desk. Food Safety News. (2015). *Group Seeks to Reverse Slight Upward Trend in E. Coli in Ground Beef*.

^{vii} Heller, Marc. Watertown Daily Times. (2011). *Gillibrand offers food safety bill. . coli outbreak: Senator calling for expanded testing of meat in the United States*.

^{viii} Blythe, Bruce. Drovers Cattle Network. (2011). *Europe’s E. coli outbreaks puts U.S. meat under greater scrutiny*.

^{ix} U.S. Food and Drug Administration. 2013.

^x News Desk. Food Safety News. (2015). *Group Seeks to Reverse Slight Upward Trend in E. Coli in Ground Beef*.

^{xi} Mayo Clinic Staff. Mayo Clinic. (2009). *E. coli. Prevention*.