Escherichia coli (E. coli)

What is E. coli?
E. coli is a bacterium that lives in the digestive tracts of humans and animals. There are over 700 strains of E. coli, and many of them are harmless. However, certain E. coli stains, referred to as enterohemorrhagic E. coli (EHEC), can cause bloody diarrhea, severe anemia, urinary tract infection, or kidney failure, which could ultimately lead to death.

What causes an E. coli infection?
People become infected with E. coli when they ingest food or water that has been contaminated by feces with the infectious E. coli strains. Common ways people become infected with E. coli are:

- **Contaminated meat**, which is the most common way people in the United States are infected.
- **Raw milk or dairy products**. Look for “pasteurized” milk and dairy products. Pasteurized simply means that the product has been cooked to a temperature high enough to kill off potential bacteria, viruses, protozoa, etc. that could make you sick.
- **Raw fruits and vegetables**, which have not been properly washed.
- **Untreated water** sources, including lakes and pools. It is important to avoid accidentally swallowing water while swimming and carry a water filter/purifier when backpacking or camping.

Symptoms:
Initial symptoms of E. coli usually appear within three to five days after ingestion of the bacterium; however symptoms may appear anywhere from one to ten days. Symptoms include:

- Nausea
- Vomiting
- Stomach cramps
- Diarrhea, typically bloody
- Urinary tract infections
- Severe anemia; bruising
- Kidney failure
- Pale Skin
- Weakness
- Mild fever ranging from 100F to 101F

Children are more likely than adults to have symptoms.

Diagnosis:
E. coli is diagnosed through testing the stool of the infected person.

Treatment:
Unfortunately, treatment for E coli infections is self-limited. Typically, individuals infected don’t realize E. coli caused their symptoms and often do not seek medical attention. However, E. coli should be treated by a physician, especially in high risk groups such as children and the elderly. In extreme cases, IVs are used to help prevent dehydration and replace lost fluids and electrolytes.
Prevention:
The CDC recommends the following to prevent E coli contamination:

1.) **Wash hands thoroughly** using warm water and soap before preparing or eating food, after using the bathroom or changing diapers, and after contact with animals or their environments.

2.) **Cook meats thoroughly.** Ground beef and meat that has been needle-tenderized should be cooked to a temperature of at least 160°F.

3.) **Avoid raw milk,** unpasteurized dairy products, and unpasteurized juices.

4.) **Avoid swallowing water** when swimming or playing in lakes, ponds, streams, swimming pools and backyard “kiddie” pools.

5.) **Prevent cross contamination in food** preparation areas by thoroughly washing hands, counters, cutting boards, and utensils after they touch raw meat.

References: [www.medicinenet.com](http://www.medicinenet.com) & Center for Disease Control ([www.cdc.gov](http://www.cdc.gov))

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