CONDITION

E coli enteritis

E coli enteritis is an intestinal infection caused by strains of E. coli bacteria that produce diarrhea.

WHAT IT IS
Intestinal infection caused by harmful E. coli strains

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Watery or bloody diarrhea, cramps, nausea, vomiting

WHAT CAUSES IT
Infection with diarrhea-causing E. coli strains

HOW IT IS DIAGNOSED
Stool PCR, culture, or Shiga toxin testing

MAIN TREATMENT
Fluids and supportive care

CAN IT BE CURED?
Yes - most infections clear with supportive care

IS IT AN EMERGENCY?
Sometimes - severe dehydration or HUS signs

LONG-TERM OUTLOOK
Most recover fully; complications can affect kidneys

Overview

Escherichia coli, usually shortened to _E. coli_, is a large group of bacteria. Many types normally live in the intestines without causing harm. E coli enteritis happens when a diarrhea-causing strain infects the digestive system.

Different strains cause illness in different ways. Some release toxins that trigger watery diarrhea. Others, called Shiga toxin-producing _E. coli_ or STEC, can cause bloody diarrhea and occasionally a serious complication affecting the blood and kidneys.

The infection usually spreads when tiny amounts of stool containing the bacteria reach someone's mouth. This can happen through contaminated food or water, contact with animals, or close contact with an infected person.

Most people recover with fluids, rest, and time. However, treatment choices matter because antibiotics and medicines that slow the bowel may be unsafe when STEC is suspected.

Symptoms

Symptoms can begin within a day or take several days to appear, depending on the strain. They may be mild or severe.

Common symptoms include:

Frequent diarrhea and vomiting can cause dehydration, meaning the body loses more water and salts than it takes in. Signs include a dry mouth, intense thirst, dizziness, dark urine, or urinating less often.

Young children may have fewer wet diapers, no tears when crying, unusual sleepiness, or a sunken soft spot on the head. Older adults may become weak or confused.

Blood in the stool does not prove that _E. coli_ is the cause. Other infections and bowel conditions can produce similar symptoms and may need different care.

- Watery or bloody diarrhea
- Strong stomach cramps
- Nausea or vomiting
- Loss of appetite
- A mild fever, although some people have no fever

Causes and risk factors

E coli enteritis is caused by strains of _E. coli_ that can damage the intestines or produce harmful toxins. STEC is especially important because it produces Shiga toxin, which can injure the bowel and, in some cases, the small blood vessels in the kidneys.

Possible sources include:

The bacteria spread through the fecal-oral route. This means that microscopic traces of infected stool are swallowed, often after inadequate handwashing or through contaminated food and surfaces.

Anyone can become infected. Young children, older adults, and people with weakened immune systems may be more likely to become seriously unwell. Travel to places with limited access to safe food, clean water, or sanitation can increase exposure to certain diarrhea-causing strains.

Having the infection once does not guarantee lasting protection against other strains.

- Undercooked ground beef or other contaminated food
- Unpasteurized milk, juice, or dairy products
- Raw produce, sprouts, or flour contaminated during production
- Drinking or swallowing contaminated water
- Contact with cattle, goats, sheep, or animal environments
- Close contact with someone who is infected

Diagnosis

Mild diarrhea that improves quickly may not require testing. Stool testing is more likely when diarrhea is bloody, severe, prolonged, linked to an outbreak, or affecting someone at higher risk of complications.

A stool sample may be checked using:

Some rapid stool panels detect several possible causes at once. A positive molecular result may need follow-up culture for public health investigation or to provide more information about the strain.

Blood tests can check kidney function, blood cell counts, and body salts if dehydration or hemolytic uremic syndrome is a concern. Public health teams may become involved when cases are connected to contaminated food, water, childcare, or an outbreak.

- A PCR or other molecular test that looks for bacterial genes
- A stool culture that grows and identifies the bacteria
- A test for Shiga toxin or the genes that produce it

Treatment and management

Replacing lost fluid is the main treatment. Small, frequent sips may be easier to tolerate when nausea is present. Oral rehydration solutions contain a balanced mixture of water, sugar, and salts. They are generally more suitable for significant diarrhea than very sweet drinks.

Babies should usually continue breast milk or their usual feeds unless a healthcare professional advises otherwise. Older children and adults can return to their usual food as appetite improves. A highly restricted diet is not normally needed.

Severe dehydration may require fluid through a vein in hospital. Hospital monitoring may also be needed if there are signs of kidney injury, anemia, or another complication.

Antibiotics like amoxicillin or doxycycline are not routinely used for every _E. coli_ infection. They may be considered for selected non-STEC infections, based on the person's symptoms, test results, and health risks.

Antibiotics should generally be avoided when STEC is known or suspected because they may increase the risk of hemolytic uremic syndrome. This is one reason to seek medical advice before using leftover or non-prescribed antibiotics for bloody diarrhea.

Medicines that slow bowel movement can also be harmful in STEC infection or bloody diarrhea. They may keep toxins in contact with the bowel for longer. A pharmacist or healthcare professional can advise whether a symptom-relief medicine is suitable.

Good handwashing remains important during recovery. The bacteria may still be present in stool after symptoms improve.

Complications

The most important complication of STEC is hemolytic uremic syndrome, or HUS. "Hemolytic" means red blood cells are being broken down, while "uremic" refers to waste building up because the kidneys are not working properly.

HUS may develop as diarrhea begins to improve. Warning signs include:

HUS requires urgent hospital care. Treatment may include careful fluid management, blood transfusions, and temporary dialysis, which filters the blood when the kidneys cannot.

Other possible complications include severe dehydration, disturbances in body salts, and inflammation of the bowel. Most people do not develop these problems. People who experience significant kidney injury may need follow-up after the infection has cleared.

- Urinating very little or not at all
- Unusual paleness or severe tiredness
- Unexplained bruising or tiny red-purple skin spots
- Blood in the urine
- Increasing sleepiness, confusion, or irritability
- Swelling around the eyes, hands, or feet

Prevention

There is no vaccine in routine use to prevent most E coli enteritis. Exposure can be reduced through food, water, and hand hygiene.

Wash your hands with soap and water after using the toilet, changing diapers, touching animals, or visiting farms. Wash before preparing food or eating. Alcohol-based hand sanitizer can be useful when soap and water are unavailable, but it does not replace thorough handwashing when hands are visibly dirty.

Cook ground meat thoroughly and use a food thermometer rather than relying only on color. Keep raw meat separate from ready-to-eat food, and clean utensils and surfaces after contact with raw ingredients.

Avoid unpasteurized milk, juice, and dairy products. Follow food-safety instructions for raw flour and dough, as flour can carry bacteria. Wash produce under running water, although washing cannot remove every germ.

Drink treated water and avoid swallowing water from pools, lakes, or streams. When water safety is uncertain during travel, use a reliable treated or sealed source.

If you have diarrhea, avoid preparing food for other people. Rules for returning to childcare, food handling, healthcare, or similar work may require symptom clearance or stool testing, depending on local public health requirements.

Living with it and what to expect

Many infections improve over several days, although the timing depends on the strain and severity. Tiredness and a reduced appetite can continue for a short period after diarrhea settles.

Fluids can be increased gradually, and normal activities can resume as strength returns. Because bacteria may remain in stool after recovery, careful handwashing continues to matter even when you feel well.

Most people recover without lasting effects. A smaller number have bowel symptoms, such as ongoing loose stools or abdominal discomfort, after the infection has cleared. These symptoms should be reviewed if they persist or interfere with eating, sleep, school, or work.

Recovery after HUS can take longer. Kidney function and blood pressure may need monitoring for months or years, even after a person feels well. The outlook is often good with appropriate care, but some people have lasting kidney problems.

When to get medical help

Seek prompt medical advice if you have bloody diarrhea, severe or worsening stomach pain, repeated vomiting, or diarrhea that is not improving. Earlier assessment is also sensible for a baby, an older adult, a pregnant person, or someone with a weakened immune system.

Get urgent same-day help for signs of dehydration, including:

Seek emergency care for signs of HUS or severe illness, such as no urine, unexplained bruising, marked paleness, swelling, confusion, collapse, or difficulty waking. Call your local emergency number if someone is unconscious, has trouble breathing, or appears severely dehydrated.

Routine follow-up may be needed if symptoms continue after the infection, if a public health team requests repeat testing, or if kidney function was affected. Return-to-work or childcare requirements should be handled through the relevant local service rather than assumed from symptom improvement alone.

- Very little urine or fewer wet diapers
- Persistent dizziness, marked weakness, or unusual sleepiness
- A very dry mouth or inability to keep fluids down
- A fast heartbeat or worsening confusion

Common questions

Is E coli enteritis contagious?

Yes. It can spread when traces of infected stool reach another person's mouth. Handwashing after toileting or diaper changes is especially important. Avoid preparing food for others while you have diarrhea.

How long does an E coli infection last?

Many people improve within several days to about a week, but some infections last longer. Tiredness or changes in bowel habits may continue after the main illness. Persistent, bloody, or worsening diarrhea needs medical review.

Can I treat E coli diarrhea with antibiotics?

Not without medical assessment. Antibiotics are not needed for many infections and may increase the risk of HUS when STEC is responsible. Testing and the pattern of symptoms help guide this decision.

Can I take medicine to stop the diarrhea?

Do not use bowel-slowing medicine for bloody diarrhea or suspected STEC unless a healthcare professional has confirmed it is appropriate. These medicines can increase the risk of complications in some infections.

What should I eat while recovering?

Drink enough fluid and eat according to your appetite. Small portions of familiar foods may be easier at first. Oral rehydration solution can replace water and salts lost through diarrhea. A strict "clear liquid" or highly limited diet is not usually necessary.

When can I return to work, school, or childcare?

This is affected by symptoms, your role, and local public health rules. Food handlers, healthcare workers, and people attending or working in childcare may need formal clearance or stool testing. Good handwashing remains important after symptoms stop.

Sources

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