



Understanding *E.coli* GASTROINTESTINAL INFECTION

What is an E.coli gastrointestinal infection?

Escherichia coli, most commonly called *E.coli*, refers to rod-shaped bacteria commonly found in the large intestines of humans and animals. Although most strains of *E.coli* do not cause serious illness, some strains can make people sick, causing severe stomach cramps, diarrhea, and vomiting.

In Canada, about 440 cases of intestinal *E.coli* infection are reported per year, costing Canadians \$440 million in lost productivity and health care.

What causes an E.coli gastrointestinal infection?

E.coli infections are generally caused by :

- eating contaminated food
- drinking contaminated water
- having direct contact with someone with an *E.coli* infection, or
- having contact with animals that are carrying the bacteria.

Food can become contaminated when handled by a person infected with *E.coli*, or through cross-contamination due to poor food handling practices.

Raw fruits and vegetables can become contaminated with *E.coli* when they are grown in fields that expose them to improperly composted manure, contaminated water, or infected farm workers.

Streams, rivers, lakes and water used to irrigate crops can become contaminated by human and animal feces

carrying *E.coli*. Municipal water systems generally use chlorine, ultraviolet light or ozone to kill *E.coli*. Private water sources such as wells are a greater concern for *E.coli* transmission because many wells do not have a disinfecting system.

How do I know if I have an E.coli gastrointestinal infection?

Some individuals infected with *E.coli* do not have symptoms and may inadvertently spread the bacteria to others. *E.coli* infections typically begin three or four days after exposure.

Typical symptoms of an *E.coli* infection are:

- severe stomach cramps;
- diarrhea (often bloody);
- vomiting; and fever

Diagnosing an *E.coli* infection can be complicated because there are many other infections that share the same symptoms. Doctors can confirm *E.coli* by taking a stool sample to identify toxins produced by the bacteria.

Seek medical attention immediately if your infant or young child develops signs of dehydration, bloody diarrhea, fever or persistent vomiting.

Risks of severe E.coli gastrointestinal infection

Dehydration is a potentially serious risk factor – especially in children, the elderly and those with suppressed immune

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systems. Symptoms of dehydration include decreased urination, dry mouth, dry throat, pallor and dizziness when standing. Children suffering from dehydration may cry with little to no tears, be lethargic or irritable.

Severe dehydration can be serious and may require re-hydration in a hospital. If you think you or someone under your care is dehydrated, contact your healthcare provider.

About 5 to 10 per cent of those who contract *E.coli* develop a condition called hemolytic uremic syndrome (HUS). HUS is a rare kidney and blood disorder which can be fatal. Symptoms of HUS can include confusion, abnormal bleeding or bruising and seizures. HUS can also result in

To avoid dehydration, individuals should drink plenty of fluids, consider oral rehydration solutions and consume drinks that do not contain caffeine or alcohol.

need for blood transfusion and kidney dialysis. Kidney damage from HUS can be permanent, so timely diagnosis and treatment is extremely important.

Treatment options for E.coli gastrointestinal infections

There is currently no treatment to cure an *E.coli* infection, but the infections generally settle on their own within a week or less. For most people, rest and intake of fluids to help prevent fatigue and dehydration are recommended.

Those who are infected are advised to avoid taking anti-diarrheal medication as diarrhea is the body's mechanism of clearing the infection and associated toxins.

Antibiotics are not recommended because they can increase the risk of HUS by increasing the amount of toxin released from bacteria.

Prevention is your best medicine, especially when considering going on vacation in an area where access to clean water may be an issue.

How to prevent E.coli gastrointestinal infections

- Hand washing is one of the best ways to prevent the spread of foodborne infections
- Use warm soapy water to clean knives, cutting boards, utensils, hands and any surfaces that may have come in contact with food – especially raw meats and fish
- Store raw meats in sealable containers on the lower shelf of the refrigerator to help prevent raw juices from contaminating other foods
- Keep raw meats away from other food when shopping
- Wash fresh fruits and vegetables with a dish brush before eating, but do not use soap or detergents
- Read labels for proper cooking and storage instructions
- Always check “best before” dates and discard any foods that have expired
- Refrigerate or freeze perishable food within two hours of cooking
- Freeze or eat leftovers within four days of cooking and be sure to reheat leftovers until steaming hot.
- Keep your refrigerator clean and at a temperature below 4 °C
- Keep cold foods at or below 4 °C
- Keep hot foods hot; at or above 60 °C

Reducing your risk of developing an E.coli infection when travelling

Traveler's diarrhea, which can be caused by *E.coli*, is the most common illness to affect those who travel abroad. Travelers are at higher risk when going to destinations with poor standards of hygiene and sanitation and/or eating at places with poor food handling practices.

To help prevent Traveler's Diarrhea:

- Discuss prevention and treatment options of traveler's diarrhea with your healthcare provider 6 weeks before your departure
- Consider medication or an oral vaccine to protect yourself against travelers' diarrhea prior to departure

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- Wash your hands with soap under warm running water for at least 20 seconds before eating, after using the bathroom or interacting with animals
- Use alcohol-based hand sanitizer if soap and water are not available
- Avoid high-risk foods and beverages like under-cooked meat or fish, fresh salads, raw vegetables, unpeeled fruits, cold sauces, unpasteurized dairy products and untreated water and ice cubes
- Avoid brushing your teeth with tap water – pour bottled water on your toothbrush

Preparing for your health care professional appointment

Good communication with your doctor is an important part of an effective health management strategy. If you think you may have an *E.coli* infection, visit your doctor. Before your appointment, write down:

- symptoms that you are experiencing and how long you have had them
- recent travels (close to home and vacation destinations)
- new foods eaten or restaurants visited
- a list of medications you are taking and why you are taking them
- family members who have had or are experiencing the same symptoms
- questions you want answered during the appointment

Partnering for best health

Working collaboratively with your health care professional will help you protect your body from digestive diseases and maximize your digestive health. When you report your health status completely, concisely and accurately, your physician can provide you with the best care and treatment plan. Be sure to stay informed on ways to maintain your health and well-being, track and record your symptoms, and write down questions and concerns to discuss at your next appointment.

This guide was made possible through an unrestricted educational grant from Janssen Inc.

CDHF App helps track information

The CDHF has developed a smart phone app for iPhone and Android called

Gi BodyGuard to help you quickly, easily and privately track and share your digestive symptoms with your physician.

Gi BodyGuard has a built-in symptom tracker (stool, pain, blood), food, fitness and medication trackers, a health history form and appointment/medication reminders. Using **Gi BodyGuard** is quick, easy and private.



As well, **Gi BodyGuard** lets you produce comprehensive reports so you can share important information with your physician during your next appointment. You can download **Gi BodyGuard** for free at:

<http://www.cdhf.ca/resources/Gibodyguard.shtml>

Learning more about digestive health.

The Canadian Digestive Health Foundation provides information, tools and support to help you take control of your digestive health with confidence and optimism.

To view on-line seminars, read personal stories and access helpful resources about protecting and enhancing your digestive health, please visit **www.CDHF.ca**

Please note: The information contained in this fact sheet is not a substitute for medical care and the advice of your physician. There may be variations in treatment that your physician may recommend based on your individual facts and circumstances. Always consult with your physician when you have concerns about your health.

The CDHF is the foundation of the Canadian Association of Gastroenterology.

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- Please send me information about protecting and improving my digestive health.

Over 20 million Canadians suffer from digestive disorders every year. The Canadian Digestive Health Foundation believes this is unnecessary and unacceptable.

We reduce suffering and improve quality of life by empowering Canadians with trusted, up to date, science-based information about digestive health and disease.

As the Foundation of the Canadian Association of Gastroenterology, we work directly with leading physicians, scientists, and other health care professionals to help you understand and take control of your digestive health with confidence and optimism.

Through research and public education, we aim to:

 **REDUCE**
the incidence and prevalence of digestive disorders

 **IMPROVE**
understanding of digestive health issues

 **SUPPORT**
those suffering from digestive disorders

 **ENHANCE**
quality of life for those living with digestive disorders

Request for support

The Canadian Digestive Health Foundation is a national charity governed by a volunteer board of directors. We rely on donations from the public and the generosity of our partners to develop and deliver our programs. Please consider including our Foundation as one of your chosen charities.

Contact us/Donate to

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