

CHOLERA

Cholera is a bacterial disease usually spread through contaminated water. Cholera causes severe diarrhea and dehydration. Left untreated, cholera can be fatal within hours, even in previously healthy people.



Several countries in Southern Africa are experiencing the most serious outbreak of cholera for many years. The World Health Organisation (WHO) has called the current outbreak in Malawi “the deadliest in the country’s history”. It has also spread to Mozambique, Zambia, Zimbabwe and South Africa. The outbreak coincides with the storm season, which has brought floods in Mozambique, Zambia and South African and has severely impacted people’s access to decent drinking water, sanitation and hygiene.

The current outbreak began in March 2022, at the end of the last cyclone season. As of 5 March 2023:

- Malawi registered 50 981 accumulated cases and 1 605 deaths across all 29 health districts.
- In Mozambique, cholera has now spread to more than 18 districts, with 41 deaths and more than 7 300 cases reported.
- In Zambia six districts have ongoing cholera outbreaks in two provinces. By 4 March 2023, the country had recorded a cumulative 212 cases, including five deaths.
- In South Africa, six cases were reported by the first week of March 2023.

Most people exposed to the cholera bacterium (*Vibrio cholerae*) don’t become ill and don’t know they’ve been infected. But because they shed cholera bacteria in their stool for seven to 14 days, they can still infect others through contaminated water.

Symptoms

- **Diarrhea.** Cholera-related diarrhea comes on suddenly and can quickly cause dangerous fluid loss — as much as about 1 liter an hour. Diarrhea due to cholera often has a pale, milky appearance that resembles water in which rice has been rinsed.
- **Nausea and vomiting.** Vomiting occurs especially in the early stages of cholera and can last for hours.
- **Dehydration.** Dehydration can develop within hours after cholera symptoms start and range from mild to severe. A loss of 10% or more of body weight indicates severe dehydration. Signs and symptoms of cholera dehydration include irritability, fatigue, sunken eyes, a dry mouth, extreme thirst, dry and shriveled skin that's slow to bounce back when pinched into a fold, little or no urinating, low blood pressure, and an irregular heartbeat.
- **An electrolyte imbalance** follows severe diarrhoea and is due to a rapid loss of minerals in your blood that maintain the balance of fluids in your body. This can lead to serious signs and symptoms such as:
 - **Muscle cramps.** These result from the rapid loss of salts such as sodium, chloride and potassium.
 - **Shock.** This is one of the most serious complications of dehydration. It occurs when low blood volume causes a drop in blood pressure and a drop in the amount of oxygen in your body. If untreated, severe hypovolemic shock can cause death in minutes.



Causes

Contaminated water supplies are the main source of cholera infection. The bacterium can be found in:

- **Surface or well water.** Contaminated public wells are frequent sources of large-scale cholera outbreaks. People living in crowded conditions without adequate sanitation are especially at risk.
- **Seafood.** Eating raw or undercooked seafood, especially shellfish, that comes from certain places can expose you to cholera bacteria. Most recent cases of cholera in the United States have been traced to seafood from the Gulf of Mexico.
- **Raw fruits and vegetables.** Raw, unpeeled fruits and vegetables are a frequent source of cholera infection in areas where there's cholera. In developing countries, uncomposted manure fertilizers or irrigation water containing raw sewage can contaminate produce in the field.
- **Grains.** In regions where cholera is widespread, grains such as rice and millet that are contaminated after cooking and kept at room temperature for several hours can grow cholera bacteria.



Risk factors

Everyone is susceptible to cholera, with the exception of infants who get immunity from nursing mothers who have previously had cholera. Still, certain factors can make you more vulnerable to the disease or more likely to have severe signs and symptoms. Risk factors for cholera include:



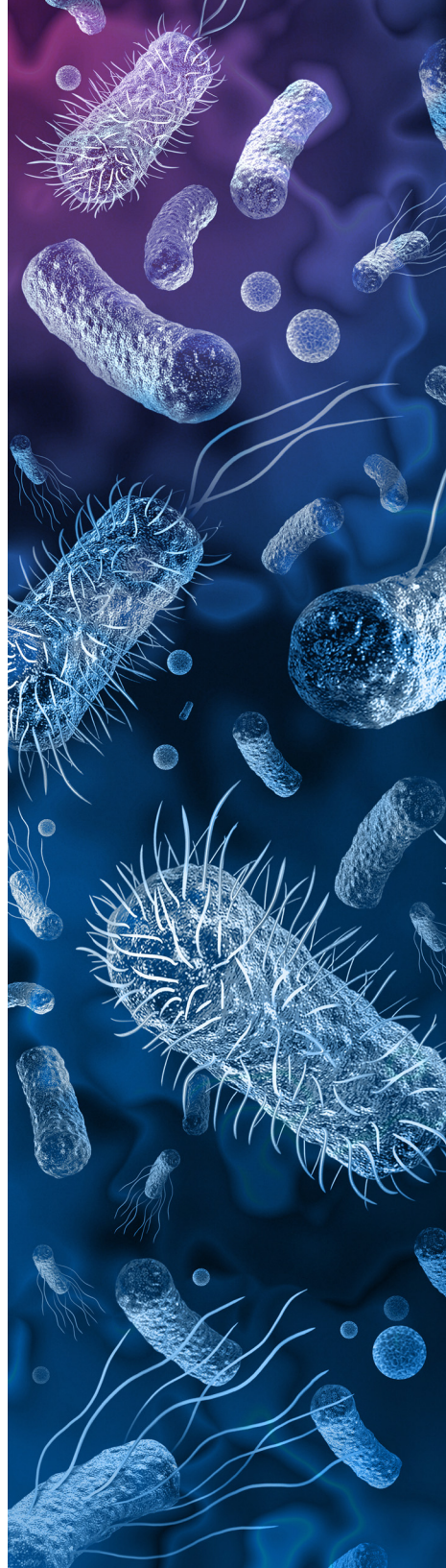
- **Poor sanitary conditions.** Cholera is more likely to flourish in situations where a sanitary environment — including a safe water supply — is difficult to maintain. Such conditions are common to refugee camps, impoverished countries, and areas afflicted by famine, war or natural disasters.
- **Reduced or nonexistent stomach acid.** Cholera bacteria can't survive in an acidic environment, and ordinary stomach acid often serves as a defense against infection. But people with low levels of stomach acid — such as children, older adults, and people who take antacids, H-2 blockers or proton pump inhibitors — lack this protection, so they're at greater risk of cholera.
- **Household exposure.** You're at increased risk of cholera if you live with someone who has the disease.
- **Type O blood.** For reasons that aren't entirely clear, people with type O blood are twice as likely to develop cholera compared with people with other blood types.
- **Raw or undercooked shellfish.** Although industrialized nations no longer have large-scale cholera outbreaks, eating shellfish from waters known to harbor the bacteria greatly increases your risk.

Complications

Cholera can quickly become fatal. In the most severe cases, the rapid loss of large amounts of fluids and electrolytes can lead to death within hours. In less extreme situations, people who don't receive treatment can die of dehydration and shock hours to days after cholera symptoms first appear.

Although shock and severe dehydration are the worst complications of cholera, other problems can occur, such as:

- **Low blood sugar (hypoglycemia).** Dangerously low levels of blood sugar (glucose) — the body's main energy source — can occur when people become too ill to eat. Children are at greatest risk of this complication, which can cause seizures, unconsciousness and even death.
- **Low potassium levels.** People with cholera lose large quantities of minerals, including potassium, in their stools. Very low potassium levels interfere with heart and nerve function and are life-threatening.
- **Kidney failure.** When the kidneys lose their filtering ability, excess amounts of fluids, some electrolytes and wastes build up in the body — a potentially life-threatening condition. In people with cholera, kidney failure often accompanies shock.



Prevention

If you're traveling to areas known to have cholera, your risk of contracting the disease is extremely low if you follow these precautions:

- **Wash your hands with soap and water frequently**, especially after using the toilet and before handling food. Rub soapy, wet hands together for at least 15 seconds before rinsing. If soap and water aren't available, use an alcohol-based hand sanitizer.
- **Drink only safe water**, including bottled water or water you've boiled or disinfected yourself. Use bottled water even to brush your teeth. Hot beverages are generally safe, as are canned or bottled drinks, but wipe the outside before you open them. Don't add ice to your drinks unless you made it yourself using safe water.
- **Eat food that's completely cooked and hot** and avoid street vendor food, if possible. If you do buy a meal from a street vendor, make sure it's cooked in your presence and served hot.
- **Avoid sushi**, as well as raw or improperly cooked fish and seafood of any kind.
- **Stick to fruits and vegetables that you can peel yourself**, such as bananas, oranges and avocados. Stay away from salads and fruits that can't be peeled, such as grapes and berries.



When to see a doctor

If you develop severe diarrhea after visiting an area with active cholera, and think you might have been exposed to cholera, seek treatment right away. Severe dehydration is a medical emergency that requires immediate care.

Source:

mg.co.za/special-reports/2023-03-10-en-d-water-and-sanitation-crisis-to-tackle-c-holera-in-southern-africa