

About cholera

1. What is cholera?

Basic: Cholera is an acute diarrheal disease that can, in severe cases, rapidly lead to dehydration – a loss of water from the body - and death if appropriate treatment – Oral Rehydration Therapy - is not provided immediately. It affects both children and adults and can kill within hours.

Detail: Cholera is caused by the bacterium *Vibrio cholerae*, which colonizes the small intestine and produces a toxin that leads to massive secretion of water and salts. This huge amount of fluid from the intestinal cells is much more than the intestine can reabsorb and so the fluid comes pouring out as watery diarrhoea. The loss of fluids is so great that the patient can quickly become severely dehydrated, go into shock, and die within a few hours. The diarrhoea fluid is teeming with huge numbers of the bacteria and these can rapidly spread to others, leading to epidemics.

How common is cholera?

According to WHO - there are an estimated 1.3 million to 4.0 million cases of cholera, and 21,000 to 143,000 deaths worldwide annually due to cholera.

2. Signs and Symptoms - What are the signs of cholera – what happens to you?

Symptoms can range from mild to very severe diarrhoea, sometimes with vomiting.

In severe cases, diarrhoea is copious - like *rice-water* - and very frequent and can cause dehydration, shock and death within a few hours – if left untreated.

This is usually without fever.

It takes between 12 hours and 5 days for a person to show symptoms after consuming contaminated food or water

Cholera can kill quickly through dehydration but rapid re-hydration treatment saves lives.

3. Does everyone infected with cholera show symptoms?

No, most people infected with cholera (about 75% or 3 out of 4) do not develop any symptoms, although the bacteria are present in their faeces and are shed (excreted) back into the environment, potentially infecting other people.

Among people who develop symptoms, the majority have mild or moderate symptoms, while a minority develop acute watery diarrhoea with severe dehydration. This can lead to death if left untreated.

4. Who is most susceptible?

Anyone can be infected with cholera - through drinking water or eating food contaminated with the cholera bacteria (germs) from the faeces (or vomit) of infected people.

Household contacts of cholera patients are at increased risk of developing the disease.

In areas where cholera is common, children aged <5 years have the highest rates of infection, but all age groups are at risk.

People with low immunity – such as malnourished children or people living with HIV – are at a greater risk of death if infected.

5. Why does cholera cause such rapid de-hydration?

Severe symptoms of cholera cause a rapid loss of body fluids through – copious and frequent diarrhoea with or without vomiting. The loss of fluids can be as much as 1 litre per hour leading to dehydration. These fluids contain minerals and salts needed for the body to function. (2.5% the fluid content of an adult man's body / hour – a 5% loss can cause fatigue and dizziness - dehydration)

6. Why does Cholera kill so quickly?

The loss of minerals, salts and other vital chemicals through dehydration – stops the body functioning correctly.

Human beings need water for survival. Without water major body functions like circulation, excretion and respiration cannot take place. It is therefore critical that the water must be replaced quickly.

7. Why does Cholera kill so quickly, even in Health Centres?

If patients are very de-hydrated when they reach the Health Centre then it can be difficult to save them. Hence need for rapid re-hydration and treatment seeking.

Treatment of Cholera

8. How is Cholera treated?

Cholera is easily treatable by re-hydration (replacing lost water) Oral Rehydration Therapy (ORT) starting immediately and continuing on the way to a health centre for further treatment.

Up to 80% of cases can be successfully treated with ORT.

ORT can be with Oral Rehydration Salts (ORS) (WHO/UNICEF ORS standard sachet) or other homemade or local equivalents such Sugar Salt Solution (SSS) or Coconut Water.

Adult patients may require up to 6 litres of ORS to treat moderate dehydration on the first day.

For patients with severe dehydration, when they arrive at a treatment centre rapid administration of intravenous fluids is needed.

Mass administration of antibiotics is not recommended, as it has no proven effect on the spread of cholera, and may contribute to anti-microbial drug resistance.

9. What should I do for someone who shows the signs of cholera?

Oral Re-hydration Therapy - ORT (treatment) should be started immediately - at home – with ORS / SSS , Coconut water or other local equivalent, as soon as you notice the signs and symptoms – acute watery diarrhoea with or without vomiting. Then you should seek treatment as soon as possible by going to the nearest health facility – continuing to give ORT on the way.

10. How to make ORS?

If ORS sachets are not available, Sugar Salt Solution (SSS) can be made by dissolving 6 teaspoons of sugar and half a teaspoon of salt in one litre of safe (boiled or treated) drinking water – with a squeeze of lemon or lime if handy. If no spoons are handy – then a 5 finger scoop of sugar and 3 finger pinch of salt can be dissolved in a large cup of safe water.

Coconut water is a good natural substitute for ORS – if coconuts are available locally.

11. How to treat before going to Health Centre?

Start ORS immediately and go to the health centre ASAP.

12. Is Coconut water useful as per tradition?

Yes Coconut water is an excellent natural substitute for ORS.

13. Is warm water + lime SSS useful?

Yes – see how to make ORS.

14. What to do if Coconut water doesn't work?

Go to the nearest health centre ASAP.

Preventing the Spread of Cholera

15. How does cholera spread?

Cholera is an faecal oral disease, caught by drinking water or eating food contaminated with the cholera bacteria (germs) from the faeces (or vomit) of infected people.

Transmission occurs mostly in areas where there is unsafe water, poor sanitation and poor hygiene, which allows the cholera germs to get into drinking water and food.

In simple terms - cholera is spread by drinking and eating faeces!

16. How can cholera be prevented?

Cholera can be prevented by drinking safe water, using latrines, practicing Hand Washing With Soap (HWWS) after touching faeces and before touching food, and good food and water hygiene.

Cholera can be prevented by stopping faeces getting into drinking water and food.

17. Could a community have everything needed to prevent cholera themselves?

Yes it's possible for a community to protect themselves from cholera by drinking only safe water:

- from safe protected water sources,
 - by treating water by boiling, or with household water treatment products e.g. Aquatabs / WaterGuard
 - by hygienic water handling and safe storage
- and by using latrines, practicing HWWS, and good food hygiene

18. Why is cholera more frequent in the rainy season?

Cholera often starts at the end of dry season when water sources are scarce and highly contaminated. Then when the rains come infected faeces from open defecation are washed into water sources – rivers, ponds, shallow wells etc. Cholera can be prevented by properly disposing of faeces.

19. Is it advisable to handle cholera patients?

Caregivers, should not be afraid to handle cholera patients, but should take care to wash their hands thoroughly with soap, after handling patients and contact with their faeces or vomit soiled bedding etc.

All soiled bedding, clothes and surfaces should be carefully disinfected. Cholera germs can easily be destroyed by household disinfectants such as chlorine bleach.

People should not share food or drink from the same cups and plates as cholera patients.

20. How should corpses of those that have died of cholera be handled?

If someone dies of cholera their bodies should NOT be handled. Anyone who has had contact with the corpse should, disinfect any soiled clothing and wash their hands with soap thoroughly.

The local health authorities (nearest clinic or health post) should be contacted ASAP to arrange for safe burial and disinfection of the household.

Disinfection of Water, Hands, Households and Health Facilities / Cholera Treatment Centres (CTC) – during cholera outbreaks.

21. How is water disinfected for drinking if Aquatabs or WaterGuard are not available?

Drinking Water. According to SPHERE Standards, the most commonly used and most widely known set of humanitarian standards, drinking water with low turbidity (< 5-10 NTUs) should contain at least **0.5 ppm** (= 0.5 mg/litre) Free Residual Chlorine. While running a specific health centre for cholera (e.g. Cholera Treatment Centre) it is advisable to work with 1 ppm FRC concentrations.

To make it simple: put a table spoon of powdered chlorine, e.g. HTH-Calcium Hypochlorite, in a 5 cubic meter container/reservoir/truck/bladder. You can check the final FRC concentration with a simple pool-tester and adapt if necessary the amount of powder added. Turbidity should be measured with a turbidity meter, e.g. a simple plexiglass-turbidity meter. Adding the chlorine powder while filling the container guarantees proper mixing in the water. After 30 minutes the water is ready to drink.

22. How is water disinfected for handwashing?

For washing hands. Use **0.05% FRC**, higher concentrations are not advisable because they damage your skin. The same concentration is used for washing dishes, glasses, forks / knives / spoons etc.

23. How are Surfaces, Clothes, Latrines, Beds etc disinfected?

For general disinfection - use 0.2% FRC,
Take care - this chlorine concentration is corrosive, wear gloves!

24. How are bodily fluids – faeces vomit etc., dead bodies, and shoes / boots disinfected.

Use **2% FRC,**
Take great care - this chlorine concentration is highly corrosive, wear gloves!

Careful: with FRC concentrations: **0.5 ppm** (drinking water) is thousand times more diluted than **0.05%** (washing hands)

Other General Questions

25. Where does cholera come from?

History: Cholera has been known for 1000's of years. But during the 19th century, cholera spread across the world from its original reservoir in the Ganges delta in India. Six subsequent pandemics killed millions of people across all continents. The current (seventh) pandemic started in South Asia in 1961, and reached Africa in 1971 and the Americas in 1991. Cholera is now endemic in many countries.

26. How is cholera different from other diseases like fever etc.?

Cholera does not usually cause a fever. Anyone with acute diarrhoea, vomiting and a fever should be given ORT and taken immediately to the nearest health facility and tested for other diseases – such as Typhoid and Malaria. Children, especially, often have acute diarrhoea and vomiting with fevers – such as malaria – and need diagnosis and treatment without delay.

27. Can ablutions be done with chlorinated water?

Safe tap water is ‘chlorinated’ – so water that has been treated with chlorine based household water treatment products such as Aquatabs / WaterGuard is just like tap water. When this has been explained to “Imams” who may have objected to using chlorinated water for ablutions, they have accepted it.

When cholera prevention methods are explained to Imams and other religious leaders, they can be active partners in cholera prevention by preaching about good hygiene, hand washing, sanitation and safe water to their congregations.

28. Does breastfeeding prevent cholera?

Exclusive breastfeeding for the first 6 months of life protects babies from all diarrhoeal diseases including cholera.

Infants with diarrhoea should continue to receive breast milk and other foods on demand.

Vaccination and Immunity

29. If I have had (been infected with) cholera before am I now protected / immunised against further infection?

No - People can be re-infected with cholera if they are exposed to the bacteria again.

30. Is there a vaccine for cholera?

Yes – vaccines are useful in short-term, but doesn’t prevent other diarrhoeal diseases.

Currently there are three WHO pre-qualified oral cholera vaccines (OCV): Dukoral®, Shanchol™, and Euvichol-Plus®. All three vaccines require two doses for full protection.

Based on the available evidence, the August 2017 WHO Position Paper on Vaccines against Cholera states that: OCV should be used in areas with endemic cholera, in humanitarian crises with high risk of cholera, and during cholera outbreaks; always in conjunction with other cholera prevention and control strategies; vaccination should not disrupt the provision of other high priority health interventions to control or prevent cholera outbreaks.

31. What can be done to eliminate cholera altogether?

The Global Task Force on Cholera Control (GTFCC) brings together all multi-sector technical partners from around the world to support countries in their fight against cholera, offering an effective and well-coordinated platform whose secretariat is hosted by the World Health Organization (WHO).

Launching the strategy titled *Ending Cholera: A Global Roadmap to 2030*, the GTFCC partners aim to reduce global cholera deaths by 90%. With the commitment of cholera-affected countries, technical partners, and donors, as many as 20 countries could eliminate disease transmission by 2030.

The Global Roadmap is based on three strategic axes:

- I. Early detection and quick response to contain outbreaks at an early stage;
- II. A multi-sectoral approach to prevent cholera in hotspots in endemic countries (including improved water, sanitation, and hygiene (WASH) and through use of oral cholera vaccines (OCV));
- III. An effective mechanism of coordination for technical support, resource mobilization, and partnership at local and global levels – with the GTFCC providing a strong framework to support countries in intensifying efforts to control cholera.

<https://www.who.int/cholera/publications/global-roadmap-summary.pdf>

See also:

<https://www.who.int/news-room/fact-sheets/detail/cholera>

<https://www.stopcholera.org/content/frequently-asked-questions>

https://www.who.int/cholera/task_force/technical-note-WASH-IPC-CTCCTU-2019.pdf?ua=1