

Health Science

Water Safety

Methods Used to Make Water Safer

Filtration: Solid particles can be removed from water by passing it through a filter such as a sieve, paper, cloth or sand.

Sedimentation: Water is placed in a container and allowed to settle for a day or more. This allows some of the solid particles to settle at the bottom of the container.

Both of these methods remove solids from the water but do not kill bacteria or remove other harmful substances.

Other methods must be used to **purify** water.

Purifying water

Boiling: Water is heated in a pot or kettle until it bubbles and starts to steam and change to water vapour. The water should be boiled for at least 5 minutes to kill harmful bacteria.

Chlorination: 2 drops of household bleach are added to 1 litre of clean water, which is covered and left to stand for at least half-an-hour. Chlorine is used to purify water in water treatment plants and swimming pools.

In the Turks and Caicos the sea water is made drinkable through desalination; the process of converting sea water to fresh water.

Waterborne Diseases

Water can contain germs which spread diseases from person to person. These diseases are called **waterborne diseases**. Some waterborne diseases are cholera, typhoid and poliomyelitis.

Disease	Symptoms	Treatment
Typhoid	Headache, high temperature, sickness and diarrhoea.	A doctor treats the patient with antibiotics. People should be vaccinated in areas at risk.
Cholera	Sudden sickness and diarrhoea – faeces almost like water.	The patient is given liquids to prevent dehydration. Don't give solid food. Keep the patient warm in bed and call the doctor.
Poliomyelitis	Fever, bad headache, pain and stiffness of neck and back. In bad cases the patient can't walk or breathe without help.	There is no cure. Children must be vaccinated.
Hepatitis A	Yellow skin, tiredness, fever.	No special treatment except rest. Most patients recover within a few months.

How can we prevent the spread of these diseases?

Boiling: Water is heated in a pot or kettle until it bubbles and starts to steam and change to water vapour. The water should be boiled for at least 5 minutes to kill harmful bacteria.

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