

Safe Water

How much you need, where to find it and how to make it safe to drink.

How much water

- Drinking: at least 2–3 litres per person per day, more in heat, for children, pregnant or breastfeeding women and sick people.
- Store: 4 litres (1 US gallon) per person per day for drinking and basic hygiene. Aim for at least 3 days; 2 weeks if possible.
- Humanitarian minimum for all household uses: 15 litres per person per day.

Where to find water

Best: stored bottled water, rain water collected on a clean surface, protected wells and springs. Inside the home: hot water tank, ice cubes, canned fruit and vegetable liquid.

WARNING Avoid flood water, stagnant water, and water near toilets, latrines, fuel, chemicals or dead animals. Never drink water from radiators, toilet bowls or swimming pools.

Make water safe: use one of these methods

1. Boiling (best)

1. Let cloudy water settle, then pour off the clear water or filter it through a clean cloth.
2. Bring to a rolling boil for 1 minute. Above 2,000 m (6,500 ft) boil for 3 minutes.
3. Let it cool. Store in a clean, covered container.

2. Household bleach (chlorine)

Use only plain, unscented bleach with 5–9% sodium hypochlorite. Check the label.

Bleach strength	Per 1 litre	Per 1 US gallon (3.8 L)
About 6%	2 drops	8 drops (1/8 teaspoon)
8.25%	1–2 drops	6 drops

1. If the water is cloudy, very cold or coloured: double the dose.
2. Stir and wait 30 minutes.
3. It should smell slightly of chlorine. If not, repeat the dose and wait another 15 minutes.

DANGER Never use scented, colour-safe or 'with added cleaners' bleach. Never drink bleach.

3. Water purification tablets

Follow the instructions on the packet exactly. Dose and waiting time differ by brand.

4. Solar disinfection (SODIS): when you have nothing else

1. Use a clear plastic (PET) bottle, 2 litres or smaller, with no scratches or labels.
2. The water must be clear. Fill the bottle and close it.
3. Lay it on its side in full sun for 6 hours, on a roof or metal sheet if possible.
4. If the sky is more than half cloudy, leave it for 2 days in a row. Does not work in continuous rain.

WARNING Boiling, bleach and sunlight kill germs but do NOT remove chemicals, fuel or heavy metals. If water may be chemically polluted, find another source.

Storing water

- ☐ Use clean food-grade containers with lids
- ☐ Keep away from sunlight, heat, fuel and chemicals
- ☐ Pour or use a tap. Do not dip hands or cups into stored water
- ☐ Clean containers with 1 teaspoon of bleach per litre of water, shake, wait 30 seconds, rinse with safe water
- ☐ Replace stored tap water every 6 months

Dehydration: know the signs

- Adults: thirst, dark urine, little urine, dizziness, headache, tiredness.
- Children and babies: dry mouth, no tears, few wet nappies, sunken eyes, unusual sleepiness.
- Danger: confusion, fainting, very fast breathing, no urine for 8 hours: get medical help now. Give oral rehydration solution (see First Aid pack).



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Sources:

- CDC: Making Water Safe in an Emergency ([cdc.gov/healthywater/emergency](https://www.cdc.gov/healthywater/emergency))
- WHO / Eawag-SODIS: Solar water disinfection ([sodis.ch](https://www.sodis.ch))
- Sphere Handbook 2018: WASH minimum standards ([spherestandards.org](https://www.spherestandards.org))
- Ready.gov / FEMA: Build a Kit, Make a Plan ([ready.gov](https://www.ready.gov))

Important: General information only. Not a substitute for trained medical help or official instructions. Always follow local authorities and emergency services.

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