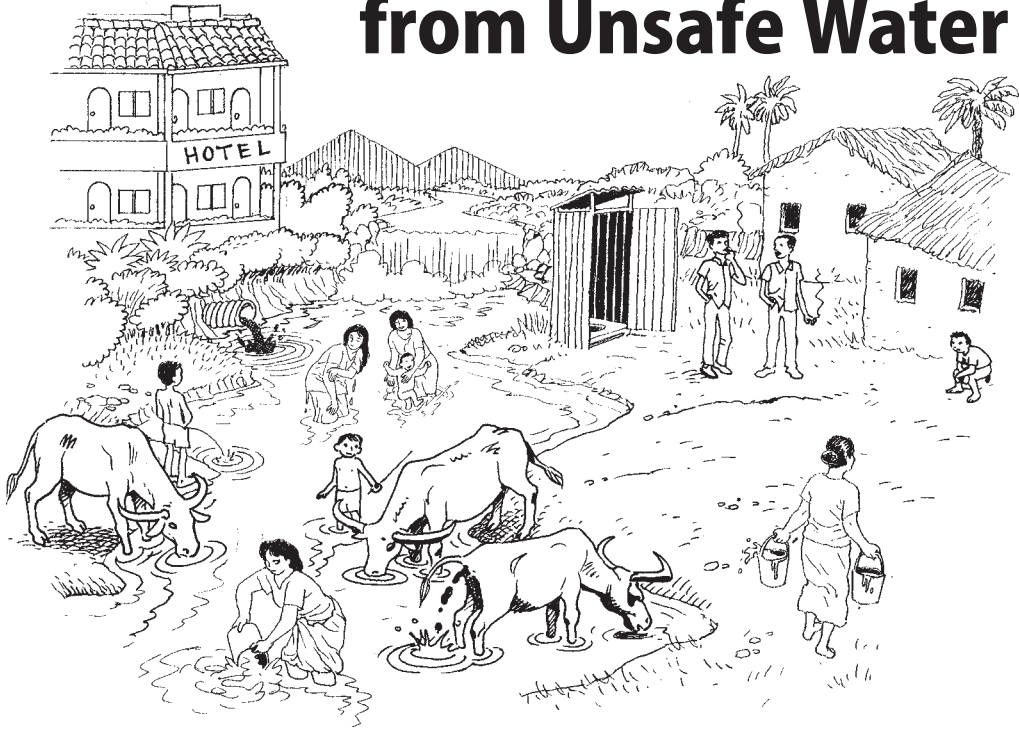


5 Health Problems from Unsafe Water

In this chapter:	page
Enough water is as important as safe water	46
Women’s burden	46
What makes water unsafe?	47
Timothy’s story	47
How germs and worms spread disease	49
Activity: How diarrhea diseases spread	50
Diarrhea diseases	51
Treatment for diarrhea diseases	51
How to make rehydration drink	53
Activity: Stop the spread of diarrhea	54
Guinea worm	55
Blood flukes (schistosomiasis, bilharzia, snail fever)	56
Preventing the spread of germs and worms	57
Toxic pollution in water	59
Drawing for discussion:	
How do toxic chemicals get in the water?	59
Preventing toxic pollution	60
Story: Arsenic in “safe” water	61
The right to enough safe water	62
Story: Partnership improves the water supply	62
Bottling and selling the right to water	63

Health Problems from Unsafe Water



No one can live without water. To be healthy, people need enough water and they need the water to be safe. Water is not safe when germs and worms from human and animal wastes (urine and feces) get into it. The germs and worms can be passed through the water or from one person to another, causing many serious health problems and affecting a whole community.

Chemicals from agriculture, industry, and mining, and trash dumping can also make our water unsafe and cause illnesses such as skin rashes, cancers, and other serious health problems.

Not having enough water for drinking, cooking, and washing can lead to sickness. Especially when there is no way to wash hands after using the toilet, diarrhea diseases spread quickly from person to person. A shortage of water for personal cleanliness can also lead to infections of the eyes and skin. Lack of water can cause **dehydration** (losing too much water in the body) and death.

Not having enough water may be due to **drought** (dry weather for a long time), the high cost of water, or because water has not been well **conserved**.

Contamination of water can make the effects of water scarcity worse, and likewise, water scarcity can make contamination more serious. (For information on protecting water sources and making water clean and safe, see Chapter 6. For safe sanitation, see Chapter 7.)

Enough Water is as Important as Safe Water

Many people do not have enough water to meet their daily needs. When there is not enough water to wash, people can get infections such as **scabies** and **trachoma**. Not having enough water to drink and wash with can also cause infections of the bladder and kidneys, especially in women. (To learn more about these illnesses, see *Where There Is No Doctor*, *Where Women Have No Doctor*, or another general health manual.) In hospitals and other health centers, if there is not enough water for washing, infections can spread from person to person. Especially for children, not having enough water can mean dehydration and death.

Women's burden

When water is scarce, the people who collect and carry water — usually women and children — have to travel long distances and carry very heavy loads. This leads to injuries to their necks, backs, and hips. Collecting water often takes so much time and strength that they and their families use much less water than they would if it was plentiful. The search for water can take so much time that the other work women do to support family health, including caring for children and tending crops, does not get done.



Water can prevent and treat many illnesses

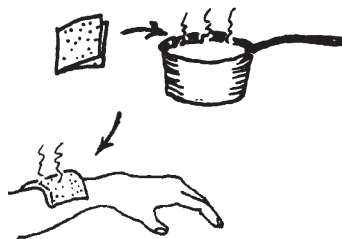
Water is used to reduce fevers and to clean wounds and skin infections. Drinking a lot of water helps to prevent and treat diarrhea, urinary infections, coughs, and constipation. Washing hands with soap and water after using the toilet and before eating or handling food also helps prevent many illnesses.



Cleaning wounds with soap and water helps prevent infections.



Treat minor burns by holding them in cold water.



Hot soaks and compresses treat abscesses, boils, sore muscles and stiff joints.

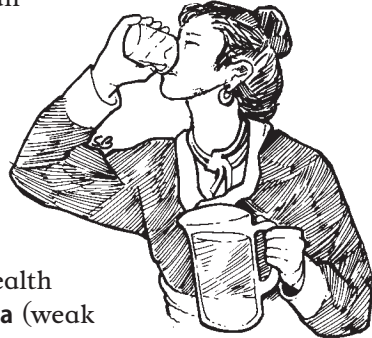
What Makes Water Unsafe?

Water is unsafe when it contains germs, worms, or toxic chemicals (for more about toxics, see Chapters 16 and 20). Germs (tiny living things, too small to see, that cause many kinds of illness) and worms, such as whipworm, hookworm, and roundworm, cause many serious illnesses.

Germs and worms live in human and animal waste (urine and feces) and can cause serious and long-lasting illnesses when:

- there is not a good way to get rid of human and animal wastes.
- water supplies are not protected and kept clean.
- there is not enough water to wash.

Some of the illnesses they cause, such as cholera, spread quickly and can cause many deaths. Other illnesses from germs and worms can cause years of sickness and lead to other health problems such as dehydration, infections, **anemia** (weak blood), and malnutrition. Because the most common sign of illnesses from germs and worms is diarrhea, these illnesses are sometimes called diarrhea diseases.



Timothy's story

Njoki lived in a village with her one-year-old son Timothy. Like the other villagers, she collected water from a tube well built many years before by a development group. Back then, when the pump would break, the development workers brought new parts to repair it. But after the development workers left, no one in the village knew how to repair the pump or where to get parts. And they had no money to buy parts anyway.

So when the pump broke, the women had to go collect water from a water hole outside the village. The water hole was also used by animals, and was contaminated with worms and germs. After drinking water from this hole, Timothy became sick with severe watery diarrhea. He grew weaker and weaker. Njoki had no money to take him to the health center many hours away. Within a few days, Timothy died.

Dehydration from diarrhea diseases is the most common cause of death for children in the world. The discussion of how people get diarrhea diseases continues on the next page.

Understanding why Timothy died

The “But why...?” activity (see pages 7 and 12) can help to understand the different causes of Timothy’s illness and death.

What caused Timothy’s death? Diarrhea and dehydration.

But why did he have diarrhea? There were germs in the water.

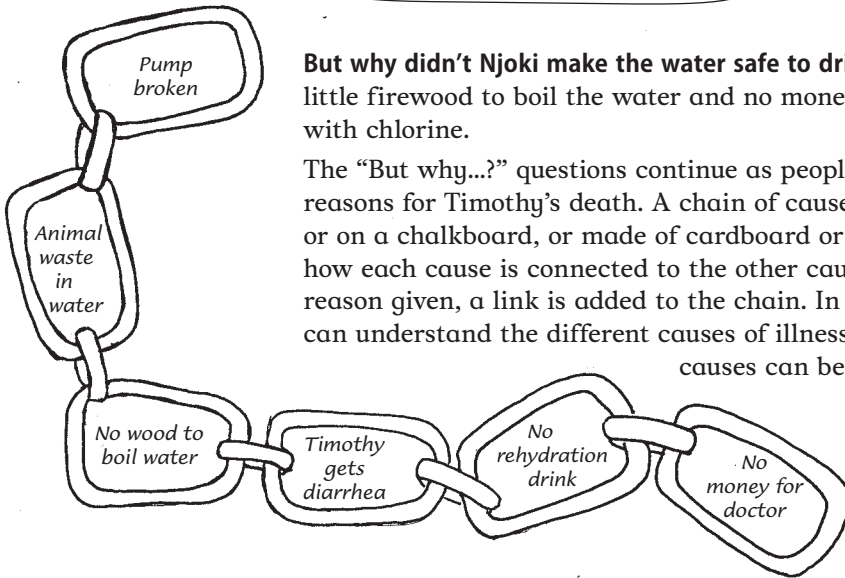
But why were there germs in the water? It was an unprotected water hole contaminated with germs and worms.

But why did Timothy drink from an unprotected water hole?

The village pump was broken.

But why couldn’t it be repaired?

Continue the “chain” until you run out of questions. You can also return to an earlier link and ask for more underlying causes. For example:



But why didn’t Njoki make the water safe to drink? There was little firewood to boil the water and no money to disinfect it with chlorine.

The “But why...?” questions continue as people come up with reasons for Timothy’s death. A chain of causes drawn on paper or on a chalkboard, or made of cardboard or flannel, can show how each cause is connected to the other causes. For each reason given, a link is added to the chain. In this way, people can understand the different causes of illness, and how these causes can be prevented.

Timothy dies

A simple story about how germs travel



1. A man has diarrhea outside.



2. A dog eats the man’s feces.



3. A child plays with the dog and gets feces on his hands.

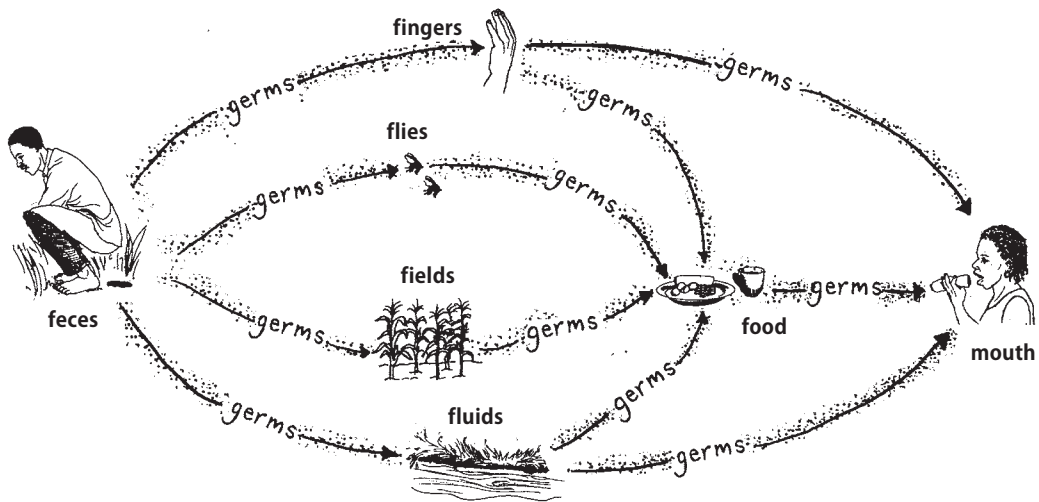


4. The child starts to cry and his mother comforts him. He wipes his hands on her skirt.

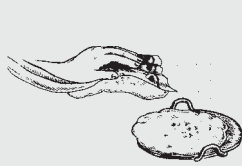
How germs and worms spread disease

Sometimes it is easy to know where germs and worms are, especially on unclean things such as feces, rotting foods, dirty toilets, and so on. But sometimes they are in places that look clean, like clear water, or on our hands.

Germs and worms can pass from person to person through touch, and through the air with dust or when people cough or sneeze. They can spread through food and drinking water, or be carried by flies, other insects, and animals. They may also live on uncooked or poorly cooked food. Some worms can be passed by drinking, stepping into, or washing with contaminated water, or eating uncooked shellfish or plants from contaminated water. Germs and worms that cause diarrhea travel on these paths:



One way to remember the paths germs travel is they are all words beginning with the letter F : fingers, flies, feces, fields, foods, and fluids (water).



5. The mother cooks. The germs on her skirt get on her hands. She serves the food with her hands.



6. The family eats the food.



7. Later, the whole family has diarrhea.

How diarrhea diseases spread

This activity helps to show how germs that cause diarrhea pass from person to person. People make drawings and put them together to form a story.

Time: 1 to 1½ hours

Materials: Small drawing paper, large drawing paper, colored pens or markers, sticky tape, sample drawings

- 1 Form groups of 5 to 8 people. Each person draws a picture that shows something about how she thinks people get diarrhea. Each drawing should show just one part of the story of how diarrhea spreads. If a person has difficulty drawing, she can write a word instead or get help from someone else. It may help to have sample drawings to stimulate group discussion.
- 2 Each person shows her drawing in her small group. The other people in the group tell what they see. This is so every person understands the drawings.
- 3 Each group puts their drawings in an order that makes a story about how germs spread. If the group sees there are drawings missing, they make new drawings to fit the story. When the drawings are in order, tape them to a larger piece of paper. Draw arrows between the drawings to make a chart that tells a story of how germs spread.
- 4 Each group shows its chart to the other groups. The group showing the drawings tells the story of how diarrhea passes from one person to another.
- 5 The whole group discusses the activity. Is every group's story the same? How are the stories different? Why? Talk about the ways diarrhea spreads. How do economic and social conditions put people at risk? What behaviors and beliefs put people at risk? What other ways do diseases spread that were not illustrated in the activity?



Diarrhea diseases

Most diarrhea diseases are caused by a lack of water for personal cleanliness, toilets that are not clean and safe, and contaminated water and food.



Signs

The most common sign of diarrhea disease is frequent, runny or liquid feces. Other signs include fever, headache, trembling, chills, weakness, stomach and intestinal cramps, vomiting, and swollen belly. What treatment to give depends on the kind of diarrhea a person has.

These signs can help you know which diarrhea disease a person has:

- **Cholera:** diarrhea like rice water, intestinal pain and cramping, vomiting.
- **Typhoid:** fever, severe intestinal pain and cramping, headache, constipation or thick diarrhea (like pea soup).
- **Giardia:** diarrhea that looks greasy, floats, and smells bad, intestinal pain, low fever, vomiting, gas, burps sometimes smell like rotten eggs.
- **Bacterial dysentery (Shigella):** bloody diarrhea 10 to 20 times a day, fever, severe intestinal pain and cramping.
- **Amebic dysentery:** diarrhea 4 to 10 times a day, often with white mucus, fever, intestinal pain and cramping, and diarrhea right after eating.
- **Roundworm:** swollen belly, weakness, large pink or white worms that may come out in feces or through the mouth and nose.
- **Hookworm:** diarrhea, weakness, anemia, pale skin. Children with hookworm may eat dirt.
- **Whipworm:** diarrhea, thin pink or grey worms in feces.

To learn more about treating diarrhea diseases and worm infections, see Chapters 12 and 13 in *Where There Is No Doctor*.

Treatment for diarrhea diseases

Diarrhea is best treated by giving plenty of liquids and food. In most cases, but not all, no medicine is needed. (For more information, see a health worker or a general health book such as *Where There Is No Doctor*.)

- **Amebic dysentery** is best treated with medicines.
- **Typhoid** is best treated by antibiotics because it can last for weeks and lead to death.
- **Cholera** is best treated with rehydration drink, lots of fluids, and easy-to-digest foods to replace nutrients lost through diarrhea and vomiting. Medicines may be used to prevent cholera from spreading.

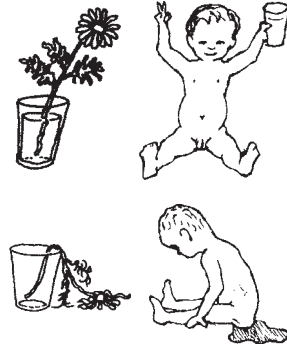
If a person has bloody diarrhea, fever, or is very sick, he or she needs to go to a health center right away.

Diarrhea and dehydration

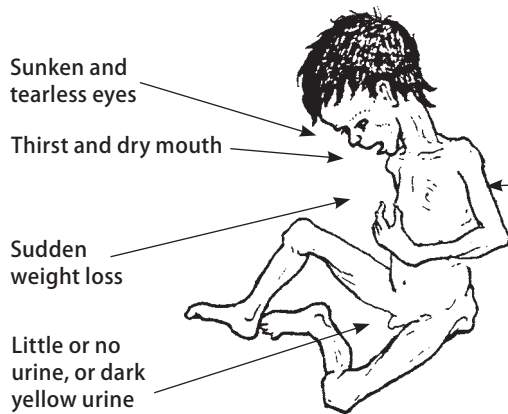
Many people die from diarrhea diseases, especially children. Most often, they die because they become dehydrated.

People of any age can become dehydrated, but serious dehydration can happen very quickly to small children and is most dangerous for them.

Any child with watery diarrhea is in danger of dehydration. Give lots of liquids and take young children with signs of dehydration to a health center right away.



Signs of dehydration



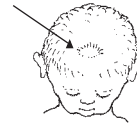
Sunken and tearless eyes

Thirst and dry mouth

Sudden weight loss

Little or no urine, or dark yellow urine

Sagging of the soft spot in infants



Loss of stretchiness of the skin

Lift the skin between two fingers, like this



If the skin does not fall right back to normal, the child is dehydrated.



To prevent or treat dehydration

When a child has watery diarrhea or diarrhea and vomiting, **do not wait for signs of dehydration. Act quickly.**

- **Give lots of liquids to drink**, such as a thin cereal porridge or gruel, soup, water, or rehydration drink (see next page).
- **Keep giving food.** As soon as the sick child (or adult) can eat food, give frequent feedings of foods he likes. To babies, keep giving breast milk often — and before any other foods or drinks.
- **Rehydration drink** helps prevent or treat dehydration. It does not cure diarrhea, but may support the sick person until the diarrhea stops.

How to make rehydration drink

Here are 2 ways of making rehydration drink. If you can, add half a cup of fruit juice, coconut water, or mashed ripe banana to either drink. These contain potassium, a mineral that helps a sick person accept more food and drink.

Give a child sips of this drink every 5 minutes, day and night, until he begins to urinate normally. A large person needs 3 or more liters a day. A small child usually needs at least 1 liter a day, or 1 glass for each watery stool. Keep giving the drink often, and in small sips. Even if the person vomits, not all of the drink will be vomited. After one day, discard the drink and make a new mixture if necessary.

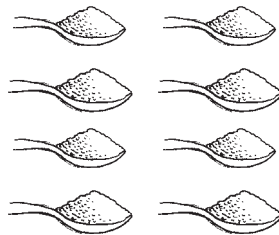
Made with powdered cereal and salt.

(Powdered rice is best. But you can use finely ground maize, wheat flour, sorghum, or cooked and mashed potatoes.)

In 1 liter of clean WATER put half of a level teaspoon of SALT,



and 8 heaping teaspoons of powdered CEREAL.



Boil for 5 to 7 minutes to form a liquid gruel or watery porridge. Cool the drink quickly and begin to give it to the sick person.

CAUTION: Taste the drink each time before you give it to make sure that it has not spoiled. Cereal drinks can spoil within a few hours in hot weather.

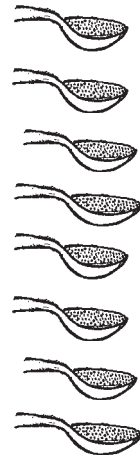
Made with sugar and salt.

(You can use raw, brown or white sugar, or molasses.)

In 1 liter of clean WATER put half of a level teaspoon of SALT,



and 8 level teaspoons of SUGAR. Mix well.



CAUTION: Before adding the sugar, taste the drink and be sure it is less salty than tears.

IMPORTANT: If dehydration gets worse or other danger signs appear, get medical help.

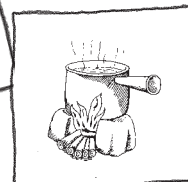
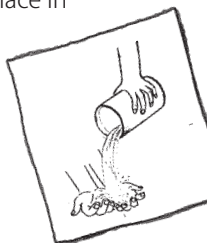
Stop the spread of diarrhea

This activity uses the stories from the activity “How diarrhea diseases spread” (page 50) to show how to prevent diarrhea from being spread.

Time: 30 minutes to 1 hour

Materials: large sheet of drawing paper, colored pens or markers, sticky tape, pictures from the activity “How diarrhea diseases spread” (page 50)

- 1 Work in the same small groups as in the previous activity, “How diarrhea diseases spread.” Each group looks at the pictures from “How diarrhea diseases spread.” They then talk about how to stop the spread of disease by washing hands, using toilets, protecting food and water, and so on. Each of these actions is a barrier that blocks the spread of diarrhea.
- 2 When the group has agreed on what barriers will stop the spread of germs, have the group draw pictures that show the different ways to stop the spread of diarrhea diseases.
- 3 The group then talks about how to change the story from “How diarrhea diseases spread” to “Stop the spread of diarrhea.” Where do the new drawings fit in the story so that they will stop the spread of illness? The new drawings are taped in place in the old story to show how the story can change.
- 4 Each group shows its new stories. The whole group talks about which disease barriers they use and which ones they do not use. Do all the disease barriers work all the time? Why, or why not? Why is it hard to use some of these barriers? How can the community work together to make sure that diarrhea diseases do not spread?



Guinea worm

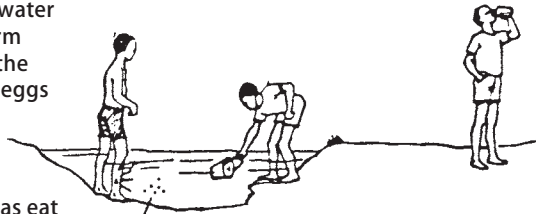
Guinea worm is a long, thin worm that lives under the skin and makes a painful sore on the body. The worm, which looks like a white thread, can grow to be more than 1 meter long. Guinea worm is found in parts of Africa, India, and the Middle East.

Signs

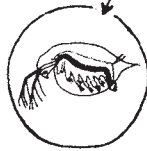
A painful swelling usually on the ankle or leg, but can develop elsewhere on the body. A few days to a week later, a blister forms which then quickly bursts open and forms a sore. This often happens when standing in water or bathing. The end of a white thread-like guinea worm can be seen poking out of the sore. The worm works its way out of the body over the next week. If the sore gets dirty and infected, or if the worm is broken by trying to pull it out, the pain and swelling spread and walking can become very difficult.

Guinea worm is spread from person to person like this:

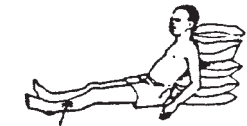
1. An infected person with an open sore wades into a water hole. The worm pokes out of the sore and lays eggs in the water.



2. Tiny water fleas eat the worm eggs.



3. Another person drinks the water and swallows the fleas and the worm eggs in the water.



4. Some of the eggs develop slowly into worms under the skin. After a year, a sore forms when a worm breaks through the skin to lay eggs.

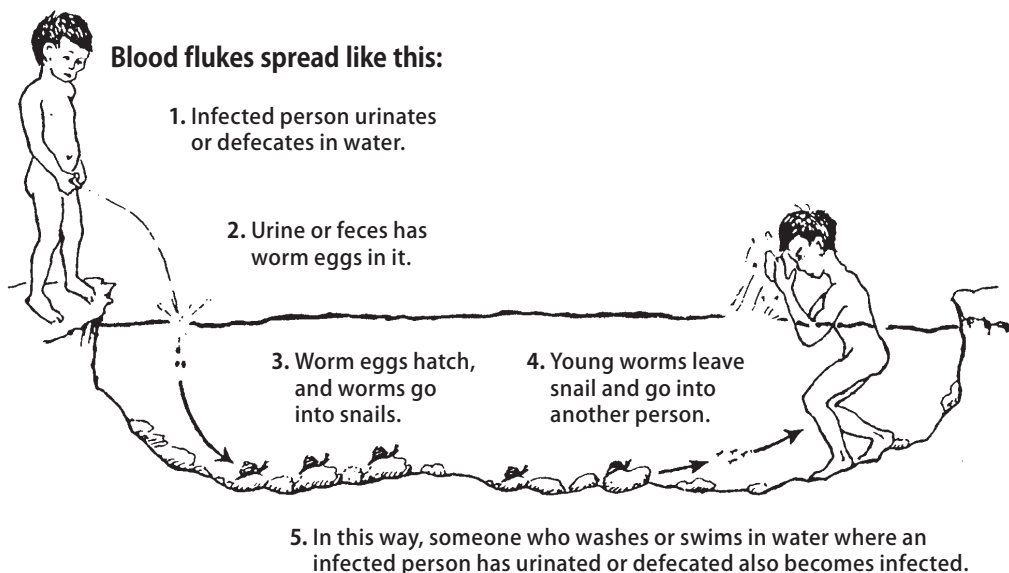
To treat guinea worms, see a health worker or a general health book such as *Where There Is No Doctor*. Also, take steps to prevent new contact with worms.

To prevent guinea worms, protect water sources (see pages 75 to 85) and filter water (see pages 94 to 97). If nobody wades or bathes in water used for drinking, the infection cannot be passed on and will eventually disappear from the area.

Blood flukes (schistosomiasis, bilharzia, snail fever)

This infection is caused by a kind of worm that gets into the blood through the skin after wading, washing, or swimming in contaminated water. The illness can cause serious harm to the liver and kidneys, and may lead to death after months or years. Women have a greater risk of infection from blood flukes because they spend a lot of time in and around water — collecting it, washing clothes, and bathing children.

Sometimes there are no early signs. A common sign in some areas is blood in the urine or in the feces. It can also cause genital sores in women. In areas where this illness is very common, even people with only mild signs or belly pain should be tested.



Treatment

Blood flukes are best treated with medicines. See a health worker about which medicines to use, or a general health book such as *Where There Is No Doctor*. Genital sores and blood in the urine are also signs of sexually transmitted infections (STIs). Some women will not seek treatment because they are afraid they will be blamed for having an STI. Lack of treatment can cause other serious infections and can make women infertile (unable to become pregnant).

Prevention

Blood flukes are not passed directly from one person to another. For part of their life, the blood flukes must live inside a certain kind of small water snail. Community programs can be organized to kill these snails and prevent blood flukes. These programs work only if people follow the most basic preventive step: never urinate or defecate in or near water.

Preventing the Spread of Germs and Worms

While germs and worms are found everywhere, there are simple steps that every person can take to help prevent illness. To stop the spread of germs and worms:

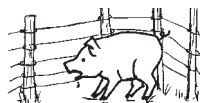
- **Protect water sources and use clean water** for drinking and washing. Unless you know water is safe, it is best to treat it (see pages 92 to 99).



- **Always wash hands after using the toilet, and before handling food.** Use clean water and soap if available. If not, use clean sand or ash. **Cut fingernails short.** This will also help keep hands clean.

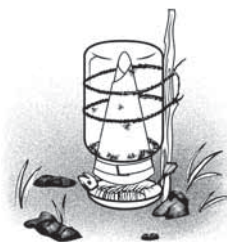


- **Use a toilet.** This puts germs and worms out of contact with people. If there is no toilet it is best to defecate far from water sources, in a place where feces will not be touched by people or animals. Cover feces with dirt to keep flies away.
- **Use clean and safe methods of preparing and storing food.** Wash fruits and vegetables, or cook them well before eating them. Feed left-over food scraps to animals, or put them in a **compost** pile or toilet. Get rid of spoiled food, keep meat and seafood separate from other foods, and make sure meat, eggs, and fish are cooked well before eating. Wash dishes, cutting surfaces, and utensils with hot water and soap after using them, and allow them to dry well in the sun if possible.
- **Keep animals away** from household food and community water sources.
- **Wear shoes** to prevent worms from entering through the feet.
- **Make fly traps and cover food** to prevent flies from spreading germs. Toilets that control flies or stop them from breeding can also help (see Chapter 7).



How to make a fly trap from a jar or bottle

- 1 Tape or glue paper to make an open cone, then fit the cone inside a plastic or glass jar or bottle.
- 2 Seal around the opening of the bottle so there is no space between the cone and the bottle.
- 3 Hang the bottle from string or wire, or attach it to a stick in the ground.
- 4 Put some sweet bait, like fruit or fish, just under the trap. Flies will land on the food and then fly through the cone and into the bottle.
- 5 To empty the trap, turn it mouth up, remove the cone, fill with water to make sure the flies are dead, and then empty it into a toilet or compost pile.



To reduce flies, hang this trap near toilets and places where food is prepared.

Washing hands

One of the best ways to prevent health problems from germs and worms is to wash hands with soap and water **after** defecating or cleaning a baby's bottom, and **before** preparing food, feeding children, or eating.



Keep a source of clean water near your home to make hand washing easier. But washing with water alone is not effective enough. Use soap to remove dirt and germs. If no soap is available, use sand, soil, or ashes.

Rub hands together with soap and flowing water from a pump, tap (faucet), or tippy tap. If there is no flowing water, use a washbasin or bowl.

Lather soap (or rub sand or ashes) all over your hands and count to 30 as you rub them. Then rub your hands together under the water to rinse off. Dry with a clean cloth or let your hands dry in the air.



The tippy tap: A simple hand-washing device

The tippy tap allows you to wash your hands using very little water. It also allows the user to rub both hands together while water runs over them. The tippy tap is made of materials that are freely available and can be put wherever people need to wash their hands, for example, near the cooking stove, at the toilet, or in a market.

How to make a plastic tippy tap

To make this tippy tap you need 1) a plastic bottle with a screw-on cap (the sort soda drinks come in), and 2) a drinking straw, or the tube from a ballpoint pen, or some other small, stiff, hollow tube. The bigger the bottle, the better, because it does not need to be filled as often.

1 Clean the bottle.

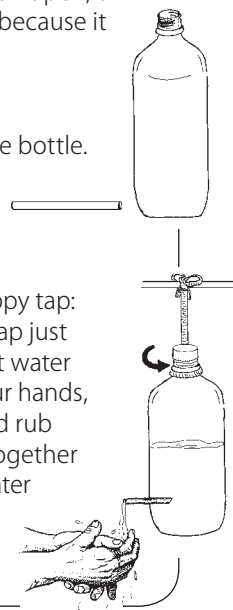
2 Using a heated piece of wire, make a small hole in the lower part of the bottle.

3 If you do not have a drinking straw, clean the inside tube from a ballpoint pen. Cut it off at an angle, and push it through the hole in the bottle. The tube should fit tightly.

4 Fill the bottle with water and replace the cap. When the cap is tight, no water should flow through the tube. When the cap is loose, water should flow out in a steady stream. When you are sure that it works, hang it or place it on a shelf where people can use it for hand washing. Keep soap nearby, or thread a bar of soap with string and tie it to the bottle.



5 To use the tippy tap: Loosen the cap just enough to let water flow. Wet your hands, add soap, and rub your hands together under the water until they are clean.



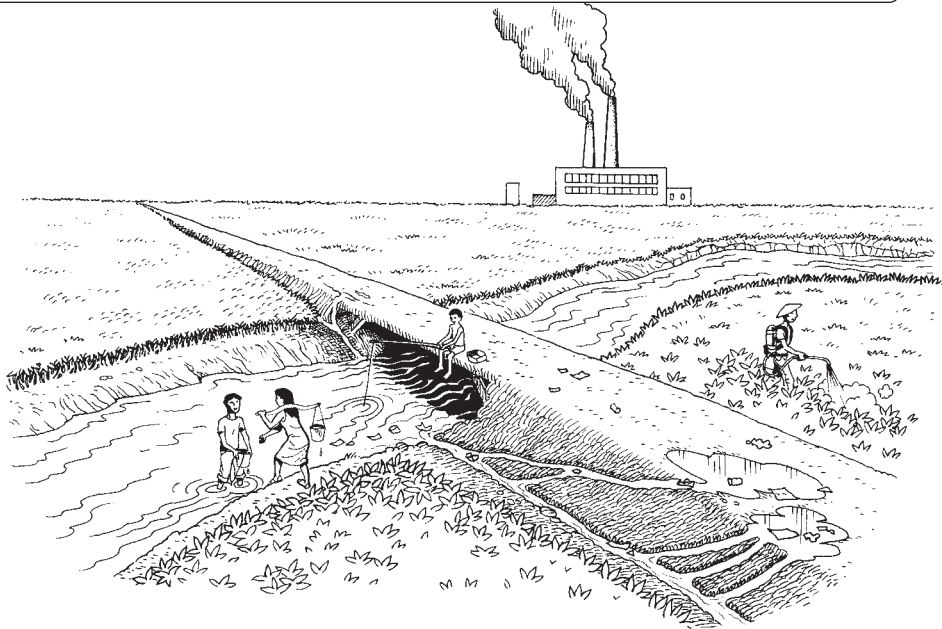
Toxic Pollution in Water

Agriculture, mining, oil drilling, and many other industries dump chemical wastes into water sources. This makes the water unsafe to drink or to use for preparing food, for bathing, or for irrigation.

In some places, water may be contaminated by toxics that naturally exist in the earth, such as arsenic (see page 61) and fluoride (a natural substance that causes brown spots on teeth and severe bone weakness). As the **groundwater** is used up, the risk of natural toxics grows because they are concentrated in the water that is left.

Whether they are from industry or from the earth itself, toxic chemicals are usually invisible and difficult to detect. Testing water in a laboratory, possibly at a university, can help detect both natural toxics and chemicals from industry. If possible, try to get the water to the laboratory within 6 hours of collecting it.

Drawing for discussion: **How do toxic chemicals get in the water?**



Questions for discussion:

- In what ways do you see toxic chemicals getting into the water?
- What can be done to protect water from toxic pollution?
- How might drinking this water or eating fish from it affect people's health?

Preventing toxic pollution

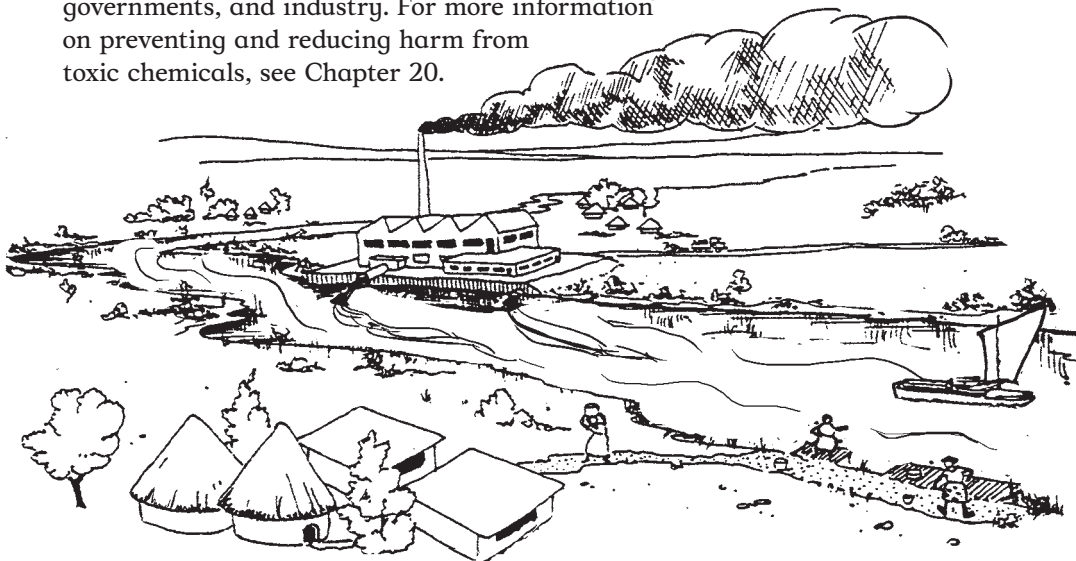
The only way to make sure water is free of toxic chemicals is to prevent pollution at the source. If you think your water is contaminated, you can organize your community to map water sources and find problems with your water supply (see pages 68 to 70), and then to take steps to stop the pollution. But the only way to know for certain what chemicals are in water is to test it at a laboratory (see page 70).

IMPORTANT: Remember: making water safe from worms and germs will NOT make it safe from chemicals. And protecting water from chemicals will NOT make it safe from germs and worms.

To prevent contamination from toxic chemicals:

- Roads and bridges can be planned with drainage channels to carry pollution from cars and trucks away from waterways.
- Planting trees along roadways will also prevent some pollution of water sources because the trees will absorb some pollution from the air.
- Industry must pollute less. Factories can treat their wastes, and large and small businesses can use clean production methods (see page 458).
- Mining and oil drilling should not be done where they will place water quality at risk (see Chapters 21 and 22).
- Farmers need to reduce or eliminate their use of chemical pesticides and fertilizers, and make sure chemicals do not enter water sources. They can replace chemicals with natural pest controls and natural fertilizers (see Chapter 15).
- Governments can make and enforce laws to prevent water pollution. Also see Appendix B for international laws protecting water.

Preventing toxic pollution of water requires action by communities, governments, and industry. For more information on preventing and reducing harm from toxic chemicals, see Chapter 20.



Arsenic in “safe” water

For centuries, most people in Bangladesh drank surface water from carefully protected ponds. But to bathe and wash dishes and clothes, they used rivers, ditches, and other unprotected water sources. This water was often contaminated with germs, causing diarrhea, cholera, hepatitis, and other health problems. So the government worked with international agencies to build shallow tube wells all over the country. Public health campaigns encouraged people to use the “safe” groundwater from tube wells instead of surface water.

Soon there were fewer health problems from germs. But a large number of toxic poisonings started to be reported around 1983. Many people got very sick with skin sores (lesions), cancer, heart disease, and diabetes. Many people died. No one knew what was causing these illnesses. By 1993, scientists agreed some illnesses were caused by arsenic in the groundwater. Nobody had tested the groundwater for arsenic. However, almost half the tube wells draw water with too much arsenic in it.

How did the arsenic get into the water? Scientists do not agree about why there is so much arsenic in the groundwater in Bangladesh. Arsenic naturally existed in the groundwater before. But some say it was made worse when big farms drew so much water for irrigation that they changed the flow of the water underground and made the arsenic concentrate (get stronger).

About 40,000 people in Bangladesh are now sick from arsenic poisoning, mostly women, poor people, and domestic workers. Arsenic-related health problems take years to develop, so many more people will become sick. Better water is the only way to treat the health problems from too much arsenic.

This disaster got worse for so long, and remained without much study or remedy, because the people suffering are among the world’s poorest. If water in the capitol city of Dhaka was contaminated (it is not) or the sickness was happening in a wealthy country, action would have happened more quickly.

The poisoning in Bangladesh shows the dangers of polluting water. It also shows the importance of testing water sources and acting quickly if there is any doubt about water safety.

To remove arsenic from drinking water

A simple filter has been developed in Bangladesh that uses iron nails to take arsenic out of the water (see page 97 and Resources). This reduces the number of poisonings, but it does not solve the problem of contaminated water.

The Right to Enough Safe Water

Around the world people are working to protect their right to health, including the right to a good supply of safe water. Private companies say they can provide better service than governments and still make a profit. But when private companies take control of water services (called water privatization), prices often go up, forcing people to use less water than they need for good health. Many people then have no choice but to collect water wherever they can for free, even if the water is contaminated with germs, worms, or toxic chemicals. This leads to serious health problems.

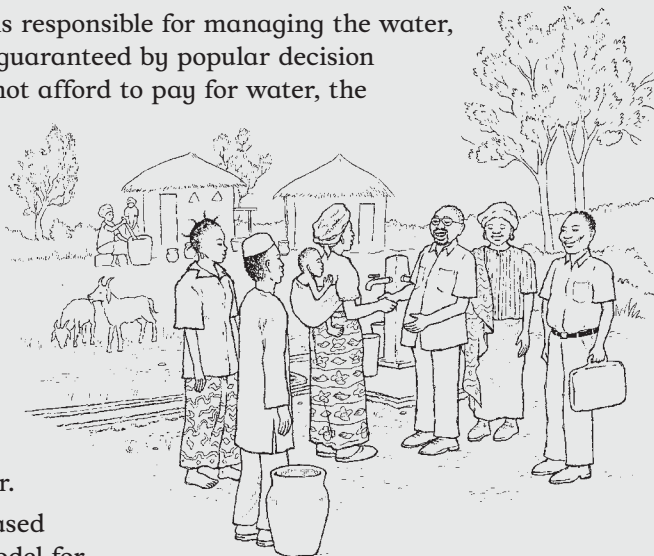
Governments and communities must work together to improve and extend water systems so they provide a safe and sufficient supply of water, especially for those most in need.

Partnership improves the water supply

In Ghana, West Africa, community groups have taken control of their water supply. In the town of Savelugu, the government-owned Ghana Water Company supplies piped water, and community members are responsible for pricing, distribution, and repair of the water system. They call this a “government-community partnership.”

Because the community is responsible for managing the water, safe and sufficient water is guaranteed by popular decision making. If some people cannot afford to pay for water, the community pays for their water until they can afford to pay. People’s needs are met not because they have money to pay, but because they are part of the community. The Ghana Water Company benefits because the community always pays them for supplying the water.

Savelugu’s community-based system is being used as a model for towns throughout Ghana. By managing their own water system, the people of Savelugu have shown that privatization is not the only way to provide water. Since their government-community partnership began, there is less illness, and everyone has enough water.



Bottling and selling the right to water

When people do not trust that water from their taps is clean, those who can afford to, buy bottled water. If there are germs in tap water, drinking safe bottled water is a way to avoid illness. But just because water is sold in a bottle does not mean it is safe. In many cases, bottled water is just tap water in a bottle, but sold at a much higher price. The best way to support the health of both people and the environment is to improve water quality and reliability by improving the public water supply.

When you consider the health problems caused by making the plastic bottles water is sold in, as well as filling, transporting, and disposing of them, the cost of bottled water is higher than providing safe water for everyone.

Companies sell bottled water because it is very profitable. They often advertise their water products in ways to make people think that publicly supplied water is not healthy or “good enough.”

Multinational companies that sell water, like Coca Cola, often harm the local economy by driving local soft drink companies out of business. Sometimes they use so much water they harm people by creating a shortage of water for drinking, household needs, irrigation of crops, and other local activities (see story on page 67).

Safe, healthy piped water systems are one of the most important ways to improve health for everyone. In Europe and North America, safe water systems are the very foundation of public health. There is no reason why people in less wealthy countries should suffer from a lack of safe water and be forced to buy expensive bottled water.

Having enough clean water to live a healthy life is a human right. Protecting and fulfilling people’s right to water is best achieved by publicly managed or community controlled water systems. To make sure government provides good service, community members are increasingly involved in overseeing water utilities. This helps make sure they are managed with people’s health as the top priority.

