

DRINKING WATER

STILL CONSTRUCTION

You can use stills in various areas of the world. They draw moisture from the ground and from plant material. You need certain materials to build a still, and you need time to let it collect the water. It takes about 24 hours to get 0.5 to 1 liter of water.

Aboveground Still

To make the aboveground still, you need a sunny slope on which to place the still, a clear plastic bag, green leafy vegetation, and a small rock.

To make the still--

Fill the bag with air by turning the opening into the breeze or by "scooping" air into the bag.

Fill the plastic bag half to three-fourths full of green leafy vegetation. Be sure to remove all hard sticks or sharp spines that might puncture the bag.

CAUTION

Do not use poisonous vegetation. It will provide poisonous liquid.

Place a small rock or similar item in the bag.

Close the bag and tie the mouth securely as close to the end of the bag as possible to keep the maximum amount of air space. If you have a piece of tubing, a small straw, or a hollow reed, insert one end in the mouth of the bag before you tie it securely. Then tie off or plug the tubing so that air will not escape. This tubing will allow you to drain out condensed water without untying the bag.

Place the bag, mouth downhill, on a slope in full sunlight. Position the mouth of the bag slightly higher than the low point in the bag.

Settle the bag in place so that the rock works itself into the low point in the bag.

To get the condensed water from the still, loosen the tie around the bag's mouth and tip the bag so that the water collected around the rock will drain out. Then retie the mouth securely and reposition the still to allow further condensation.

Change the vegetation in the bag after extracting most of the water from it. This will ensure maximum output of water.

Belowground Still

To make a belowground still, you need a digging tool, a container, a clear plastic sheet, a drinking tube, and a rock.

Select a site where you believe the soil will contain moisture (such as a dry stream bed or a low spot where rainwater has collected). The soil at this site should be easy to dig, and sunlight must hit the site most of the day.

To construct the still--

Dig a bowl-shaped hole about 1 meter across and 60 centimeters deep.

Dig a sump in the center of the hole. The sump's depth and perimeter will depend on the size of the container that you have to place in it. The bottom of the sump should allow the container to stand upright.

Anchor the tubing to the container's bottom by forming a loose overhand knot in the tubing.

Place the container upright in the sump.

Extend the unanchored end of the tubing up, over, and beyond the lip of the hole.

Place the plastic sheet over the hole, covering its edges with soil to hold it in place.

Place a rock in the center of the plastic sheet.

Lower the plastic sheet into the hole until it is about 40 centimeters below ground level. It now forms an inverted cone with the rock at its apex. Make sure that the cone's apex is directly over your container. Also make sure the plastic cone does not touch the sides of the hole because the earth will absorb the condensed water.

Put more soil on the edges of the plastic to hold it securely in place and to prevent the loss of moisture.

Plug the tube when not in use so that the moisture will not evaporate.

You can drink water without disturbing the still by using the tube as a straw.

You may want to use plants in the hole as a moisture source. If so, dig out additional soil from the sides of the hole to form a slope on which to place the plants. Then proceed as above.

If polluted water is your only moisture source, dig a small trough outside the hole about 25 centimeters from the still's lip. Dig the trough about 25 centimeters deep and 8 centimeters wide. Pour the polluted water in the trough. Be sure you do not spill any polluted water around the rim of the hole where the plastic sheet touches the soil. The trough holds the polluted water and the soil filters it as the still draws it. The water then condenses on the plastic and drains into the container. This process works extremely well when your only water source is salt water.

You will need at least three stills to meet your individual daily water intake needs.

WATER PURIFICATION

Rainwater collected in clean containers or in plants is usually safe for drinking. However, purify water from lakes, ponds, swamps, springs, or streams, especially the water near human settlements or in the tropics.

When possible, purify all water you got from vegetation or from the ground by using iodine or chlorine, or by boiling.

Purify water by--

Using water purification tablets. (Follow the directions provided.)

Placing 5 drops of 2 percent tincture of iodine in a canteen full of clear water. If the canteen is full of cloudy or cold water, use 10 drops. (Let the canteen of water stand for 30 minutes before drinking.)

Boiling water for 1 minute at sea level, adding 1 minute for each additional 300 meters above sea level, or boil for 10 minutes no matter where you are.

By drinking nonpotable water you may contract diseases or swallow organisms that can harm you. Examples of such diseases or organisms are--

Dysentery. Severe, prolonged diarrhea with bloody stools, fever, and weakness.

Cholera and typhoid. You may be susceptible to these diseases regardless of inoculations.

Flukes. Stagnant, polluted water--especially in tropical areas--often contains blood flukes. If you swallow flukes, they will bore into the bloodstream, live as parasites, and cause disease.

Leeches. If you swallow a leech, it can hook onto the throat passage or inside the nose. It will suck blood, create a wound, and move to another area. Each bleeding wound may become infected.