

! Emergency
P. 176

+ Sanitation
P. 198

✂ Life
P. 206

☎ Confirm Safety
P. 226

4

Survival Tips



In the event of a disaster, water supply, gas and power lines may all come to a stop. You will be unable to get your hands on almost all the things you need for daily life. You will have to live for about three days to one week on just limited resources. In this chapter, we have collected various types of knowledge and ingenuity that will be useful when a disaster occurs, and use illustrations to explain them in an easy-to-understand manner. Why not also take up the challenge of holding a practical workshop as explained at the end of the chapter?



! Cardiopulmonary Resuscitation (CPR)



1 Check to see if the person is conscious

In the event of a disaster, ambulances will probably be late in arriving. If you find a person who has collapsed, gently tap him on the shoulder and ask loudly, "Are you OK?" Check to see if he responds, can move his hands and feet, if he is in pain from injuries, and whether he is conscious or not.



2 Request cooperation from others around you

If there is no response, request the cooperation of people nearby by calling out in a large voice, "Someone, please come! There's a person here who needs help!" In addition, if the situation is safe, request someone to bring an AED (automatic external defibrillator) and give first aid.



3 Check for breathing

Closely observe the movements of the person's chest and abdomen, and confirm within 10 seconds if his breathing is irregular. When there is no movement of the chest or abdomen, you can determine that the person is not breathing normally, and then begin chest compressions.



4 Chest compression

Place your hands on the center of the person's chest, and press the chest down at least 5 centimeters for an adult. Do about 100 compressions per minute. When you are conducting both chest compressions and artificial respiration, conduct cycles of 30 chest compressions and 2 breaths.



5 Artificial respiration

Lift the person's chin to open the airway, and use the thumb and forefinger of your hand placed on his forehead to pinch his nose. Using a mouth-to-mouth resuscitation mouthpiece*, cover the mouth so no air leaks, and breathe in for about 1 second. Check to see that his chest rises when you do so.



AED

Press the power button of the AED. Apply the electrode pads to his chest, and if a shock is needed the AED will inform you with a voice prompt. Stand clear of the person and push the AED's button. Follow the device's instruction and immediately resume chest compressions.

* The risk of infection is said to be extremely low even when a mouthpiece is not used, however, from the perspective of preventing infection, it would be safer to use one.



! Stop Bleeding



Arterial bleeding

Blood spurts out



Venous bleeding

Constant flow of blood



Capillary bleeding

Blood oozes out slowly

Severe bleeding can be life threatening

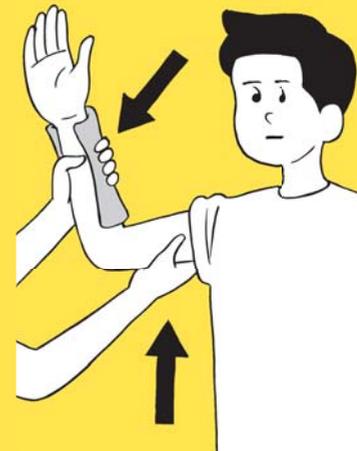
The total amount of blood in the human body makes up about 7 to 8 percent of the body's weight, and losing one-third of this blood can be life threatening. Arterial bleeding with bright red spurts of blood must be stopped immediately. Bleeding from capillary veins will, in most cases, stop naturally.

Details → p. 263



Direct pressure to stop bleeding

Directly apply sterile gauze or a clean cloth to the bleeding and compress strongly with your hand or a bandage. The size of the cloth should be large enough to completely cover the wound. In order to prevent infection, always wear rubber gloves or use a plastic bag, and be careful to not come in contact with the blood.



Indirect pressure to stop bleeding

When it is difficult to stop the bleeding through the direct pressure method, try indirect pressure. Temporarily stop the flow of blood by pressing down on the artery between the injury and the heart, compressing it against the bone. For bleeding from the lower portion of the arm, use your thumb to strongly press the artery at the center of the inner side of the upper arm. For leg bleeding, straighten the bleeding leg and strongly press down at the groin using your fist.



! First-Aid for Fractures and Sprains



Secure with a splint

Try not to move the part that has been broken and is painful. Prepare something that can serve as a splint to support the broken bone, and immobilize the injury by binding the splint and the joints on both sides of the fracture with a cloth, etc.



Triangular bandage

A triangular bandage can be used on any part of the body, and scarves, furoshiki, and large handkerchiefs can also serve as triangular bandages. Use it after rinsing the wound clean with water and applying a sterile gauze, etc. Do not tie the knot right over the wound.

! First-Aid for Cuts

Materials	Cloth, bandages, water, sterile gauze
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1 Prepare large pieces of cloth or bandages that can cover the wound.



2 If the wound has dirt or other debris, wash clean with water.



3 If the wound is bleeding, protect the wound by applying sterile gauze, etc.



4 Wrap a bandage.



! First-Aid for Burns



Cool minor burns with water

If the burn covers less than 10 percent of the body (the area of the palm of your hand is about 1 percent of the body surface), as soon as possible, cool with clean water for over 15 minutes until the pain eases.

Details → p. 262

Important points

Since tap water cannot be used when the water supply is cut off, use water from a plastic bottle, etc. When tap water can be used, run cool water over the burn for 15 to 20 minutes. Follow the points below when treating the burn.

- If the person is wearing clothes over the burn, do not remove, and cool over the clothes.
- When the burn covers a wide area, take care to not overly cool the body.
- Take care not to break blisters.
- Do not use medicine.

! Lighten the Burden of the Injured and Ill



Loosen clothing

Place the person in a comfortable position, ask if he is in pain, and if he wishes, gently loosen his clothes, belt, and other constricting items.



Maintain body temperature

If the person has the chills, a low body temperature, is pale, or has broken into a cold sweat, prevent heat loss by covering him with clothes, a blanket, etc.

Details → p. 194



! Safely Positioning the Injured or Ill



The basic position is laying face up

Laying the person on his back on a level place is the basic position to take. It is the most stable and relaxing position.



When the person is vomiting or has an injury to the back

Lay the person on his stomach, facing one side. Take care that he does not choke on his vomit.



When there is a head injury and breathing is labored

Lay the person on his back and use cushions, etc., to lift the upper body.



When there is abdominal pain or an injury to the abdomen

Raise the upper body with cushions, etc., and also place cushions under the knees to bend them.

When breathing is labored or there are chest pains

Put the person in a sitting position with his legs extended and place cushions, etc., between his legs and chest to support his upper body.



Is breathing but unconscious

To secure an airway, place the person on his side with his top leg bent at a right angle at the knee.



Heat stroke, anemia, hemorrhagic shock

Lay the person face up and place cushions under his feet to lift the legs up about 15 to 30 centimeters.

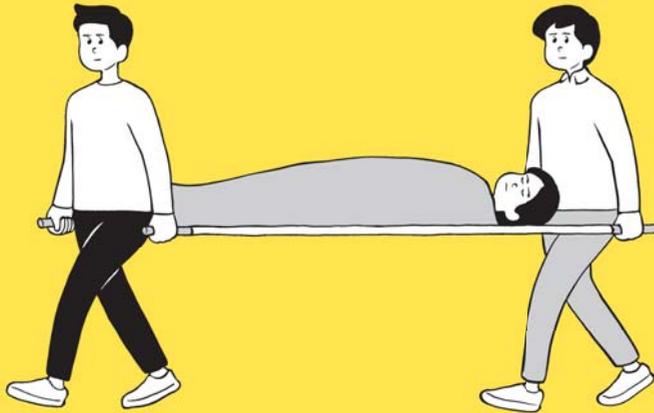


! Transporting the Injured or Ill



Carrying on your back

Lean the person on your back and catch his legs by passing your hands under his knees, and hold both of his arms firmly. This is not suited to injured people who have disorders of consciousness, broken bones, or internal injuries.



Using a stretcher, etc.

When carrying a person on a stretcher, have his legs point forward and try to avoid shaking the stretcher or causing it to vibrate. This is very important to prevent the condition of the victim from worsening. If there is no stretcher, it would be possible to use a strong plank, etc., instead.

! Bandage Substitutes

Materials	Gauze, tights
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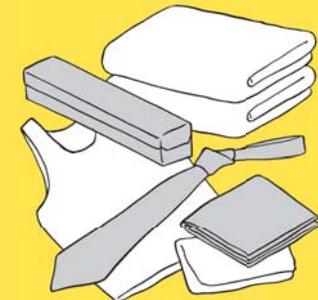
Use tights as a substitute for a bandage. First, place gauze, etc., over the wound and then cover with the body portion of the tights.

Wind the leg portion of the tights around the head and tie the ends. If this is washed and kept clean, it can be used repeatedly.

Other items that can substitute for bandages

Bandanna	Curtains
Handkerchief	Underwear
Tenugui towels	Disposable diapers
Necktie	Sanitary napkins
Towel	Plastic wrap

*only items that are clean



How to Use the Fire Extinguisher



1 First response firefighting is very important in a disaster. When using a fire extinguisher, first confirm the source of fire. Stand so the exit is behind you.



2 Remove the safety pin on the top of the extinguisher.



3 Hold the nozzle and aim it at the flame.



4 Squeeze the handle and spray the agent directly on the source of fire. If the flames reach the ceiling, stop trying to extinguish the fire and evacuate.

How to Use the Indoor Fire Hose

Note The No. 1 model fire hose is to be manned by more than one person. Here it is assumed that there are two people.



1 Press the start button. When the red light starts to blink, the pump will begin operating.



2 Open the cabinet and extend the hose.



3 The other person opens the valve.



4 Aim the nozzle at the source of the fire and spray water.



! How to Use the Standpipe

Note This is a fire extinguishing tool that uses the fire hydrant or drain valve in the road. Prior training is required to use it.

1



This is effective in places like narrow roads inaccessible by fire trucks. First, insert the key, bend your knees to take a low position, and lift the lid.

2



Join the standpipe to the water outlet. Turn the spindle driver, and after confirming that water is flowing, extend the hose joined to the pipe.

3



Join the hose to the nozzle. Insert it firmly until you hear a noise.

4

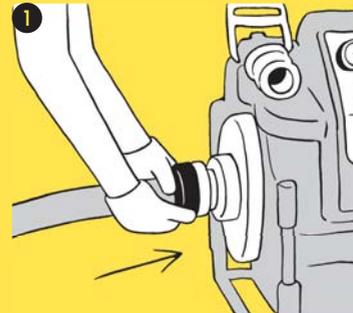


Straighten the hose, and after signaling, spray the water. Point the nozzle at the target, and hold it firmly at the height of your hip.

! How to Use the Portable Fire Pump

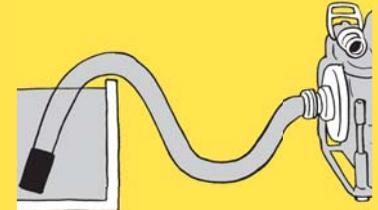
Note This is to be manned by more than one person. Prior training is required to use it.

1



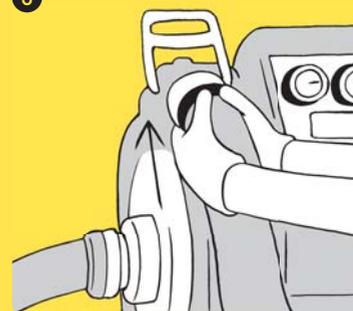
This is a fire pump of a size that can be carried by people. First, close the drain cock and water hose outlet valve, and attach the suction pipe to the pump's water inlet.

2



Place the suction pipe in a fire cistern, pool, etc.

3



Start the pump, attach the hose to the outlet, and extend the hose to the source of fire.

4



Spray water in the direction of the fire source.



! Warm Yourself with Newspapers



Make something to wear

Newspapers can be useful when you aren't wearing enough to keep warm. Place several layers of newspapers on your shoulders, binding them at the front with tape, etc.



Layer with socks

When your feet are cold, wrap newspaper over your socks, and put on another pair of socks over them.



Use with a plastic bag

Crumple newspaper into balls, place them in a large plastic bag, and put your feet inside. It will be warmer if you loosely close the mouth of the bag.



Make a "haramaki" belly warming band

You can also warm your body by wearing a belly band. Use two sheets of newspaper and plastic wrap. Fold the newspaper in half and wrap around your abdomen, and then wind plastic wrap on top.

Other useful items

To wear:

- Fruit protection net
- Handkerchief
- Aluminum foil
- Bubble wrap
- Plastic wrap

To put on the floor:

- Cardboard
- Styrene foam

Use the effects of color to adjust your body temperature

It is said that when people look at warm colors like red, their temperatures rise, and when they see cool colors like blue, their temperatures drop. Try using this effect in selecting your clothes or the color of partitions at the evacuation center.

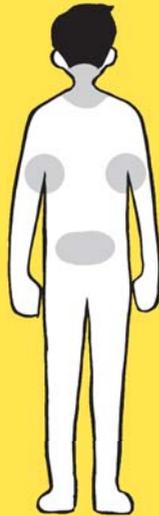


! Adjust Your Body Temperature

You can adjust your body temperature by heating or cooling the back of your neck, under your arms, and above your tailbone. Use this method to keep warm or prevent heat stroke.

Back of the neck

Just wrapping a muffler around the point on the back of your neck that improves blood circulation will significantly help maintain your body temperature. It would also be effective to cool this point when it's hot.



Underarms

Because there is a large artery near the surface, warming or cooling this area will have effects on your whole body.

Above the tailbone

Adjusting the temperature above the tailbone is an easy way to adjust your body temperature.



Make a hot water bottle

Materials	Plastic bottle, water, hot water, funnel, container such as a bucket, towel
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Mix equal portions of tap water and boiling water to make lukewarm water about 60 degrees Celsius. Pour this into a strong plastic bottle, and wrap in a towel to prevent low-temperature burns.



Warm/cool your neck

Wrap a muffler or towel around your neck when you are cold. If you are hot, place an ice pack behind your neck and wrap a towel, etc.



Warm/cool your underarms

Your whole body will be warmed if you place a plastic bottle with hot water under your arm. You should place cold packs under your arms when it's hot.



Warm the area above your tailbone

Your whole body will be warmed if you apply a body warmer to the area above your tailbone. If you can obtain a body warmer, you should first use it on this area.



! Protect Your Feet



Protect your feet and shoes from water

Materials Plastic bag, string

In a disaster-stricken area where it is difficult to walk, you will need to protect your feet. To keep your shoes from getting wet, cover each shoe with a plastic bag and tie it up with string around the ankles.



Protect your feet and shoes from rubble

Materials Plastic bag, board, string

After placing plastic bags over your shoes as explained above, place something hard like a board under your shoes and tie it with a string so it doesn't loosen.

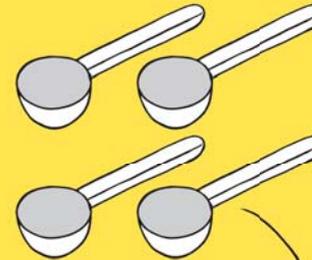
Why protect your feet?

In the event of a disaster it would be very important for you to not injure yourself. The disaster-stricken area will be strewn with rubble, have puddles of water, and will be harder to walk through than you can imagine. In order to prevent injury from nails and sharp materials, you should learn in advance how to protect your feet.

! Prevent Dehydration

Materials Water, sugar, salt

4 tbsp. sugar



0.5 tsp. salt



1 liter water

In order to prevent dehydration, it would be good to prepare an oral rehydration solution, which has an absorption rate that is about 25 times higher than water. The only things necessary are water, sugar and salt. Dissolve 4 tablespoons of sugar (about 40 grams) and 0.5 teaspoons of salt (about 4 grams) in 1 liter of water.



⊕ How to Store Water



Store as drinking water

When storing water, fill tap water up to the mouth of a clean container such as a plastic bottle. If you store it away from direct sunlight, it can be used as drinking water for about three days. However, you will have to change the water every day if the water has passed through a water purifier as this will have removed chlorine and its disinfecting effects.



Store as domestic water

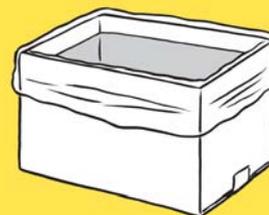
The bathtub at general households can hold about 180 liters of water. If water is stored in the bathtub, it can be used for domestic purposes such as laundry, cleaning, toilets and sprinkling.

⊕ How to Carry Water



Items to carry water easily

A polyethylene tank and carrying cart will be convenient in carrying water from a water supply point. Putting water in plastic bottles and carrying them in backpacks, etc., will also help when walking over rough roads.



Using plastic bags and cardboard boxes

Materials | Cardboard box, plastic bag, adhesive tape

When you do not have a polyethylene tank or plastic bottles, spread a polyethylene bag inside a cardboard box, and firmly reinforce this by taping cloth adhesive tape on the bottom and sides before use.



Using plastic bags and furoshiki wrapping cloth

Materials | Plastic bag, furoshiki wrapping cloth

Place water in a plastic bag and tie the mouth. Place this in the center of a furoshiki wrapping cloth that has its adjacent corners tied together. If two people each hold one of the knots, the water can be easily carried.



⊕ How to Use the Toilet When Water Supply Is Cut Off



Western toilet

For a western toilet, if the toilet can be flushed even though the water supply is interrupted, you can do this by pouring about a bucket of water into the toilet bowl. Don't flush urine every time, and don't flush down toilet paper but throw it away as trash.



Japanese toilet

For a Japanese toilet, if the toilet can be flushed even though the water supply is interrupted, you can do this by pouring a bucket of water all at once into the toilet bowl while pressing down the flush lever. Don't flush down toilet paper but throw it away as trash.

⊕ How to Make an Emergency Toilet



Existing toilet that can't be flushed

Materials	Plastic bags, newspaper
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Lift the toilet seat, and cover the toilet bowl with a plastic bag. Use a second plastic bag to cover the toilet seat, and place torn pieces of newspaper in the bag.



Portable emergency toilet

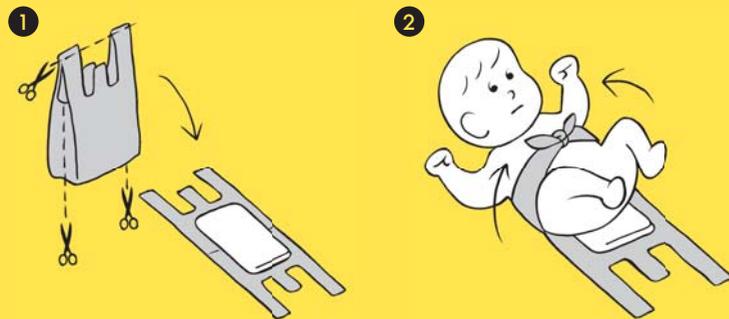
Materials	Large bucket (or cardboard box), plastic bags, newspaper
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Place two plastic bags inside the large bucket or cardboard box, and place torn pieces of newspaper in the bag. After using the toilet, remove the top plastic bag and take it to a designated area.



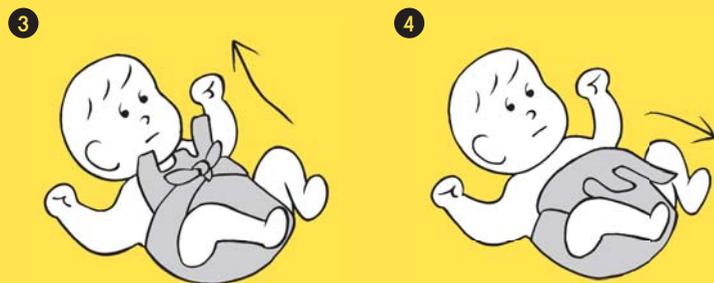
⊕ How to Make Emergency Diapers

Materials Plastic supermarket bag, cotton cloth (or towel), scissors



Cut the top of the grip portion and both sides of a large plastic supermarket bag, and open it. Fold a clean cotton cloth or towel on top of this.

Lay the baby down with his bottom on top of the cloth, and tie the upper grip portions over his stomach.

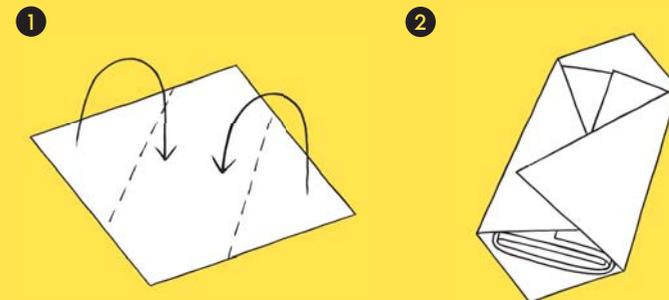


Lift the lower grip portions and pass them under the tie around the baby's stomach.

Fold the surplus part of the bag down.

⊕ How to Make a Cloth Sanitary Napkin

Materials Towel handkerchief, tissue paper (or cloth)



Fold the two diagonal corners of a towel handkerchief (a clean, cotton towel handkerchief would be best) to a size that fits your underwear.

If tissue paper or cloth is available, put some inside. You can rest assured at night if the napkin is worn with the wider side in the back.

Other items that can replace sanitary napkins

- Wrap your underwear with plastic wrap.
- Use folded pieces of toilet paper or tissue paper.
- If you have just one napkin left, place toilet paper on top of it.
- Use clean towels or cloth that can be thrown away after use.



+ Keep Clean with Little Water



Wipe your body with a small amount of water

Materials | Towel, no-rinse or non-residue soap

If you wipe your body with a towel using a no-rinse or non-residue soap (can be purchased at a drug store, etc.), you can keep clean with little water.



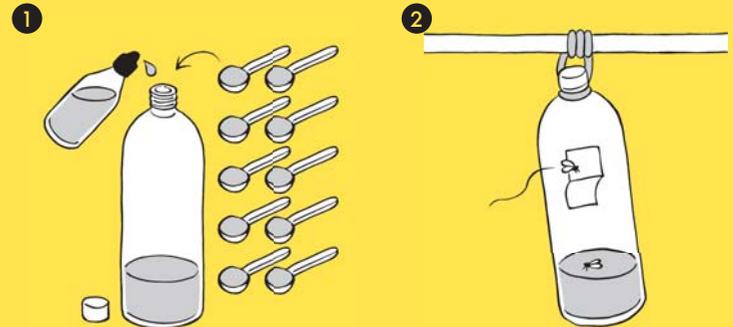
Brush your teeth without a toothbrush

Materials | Gauze, tissue paper

Wrap a piece of gauze about 15x15cm large, or tissue paper around your finger, and scrub your teeth until they feel clean. Also wipe your gums and tongue, and then rinse your mouth with water.

+ Make a Fly Trap

Materials | Japanese sake, sugar, vinegar, plastic bottle, string, box cutter



Place 70 cc of sake, 100 g of sugar, and 50 cc of vinegar in a plastic bottle, screw on the cap, and shake to mix.

Open about a 3cm hole in the upper half of the bottle, and hang the bottle by a string under the eaves, from a laundry pole, etc. Flies attracted by the smell will go into the bottle and not be able to get out.

Why is a fly trap necessary?

It is predicted that there will be an outbreak of flies in the summer. In order to maintain a sanitary environment not only at home, but at the evacuation center or temporary housing as well, it is recommended that you get rid of flies by making a fly trap.



✂ How to Make an Emergency Lantern



Use a plastic bag

Materials Flashlight, white plastic bag, scissors

Cover the flashlight with a white plastic bag and tie the grip portion around it. The light will gently spread through the whole bag.

Use a plastic bottle

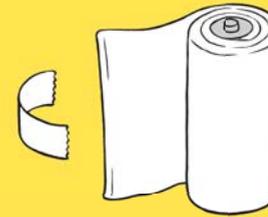
Materials Flashlight, plastic bottle, water, scissors



1 Cut an empty plastic bottle at a point about 5 cm higher than the flashlight, and make cuts 1 to 2 cm long at four places along the rim.

2 Stand the flashlight inside the cut plastic bottle, and on top of it place another plastic bottle containing water.

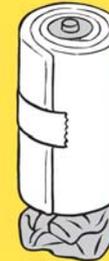
✂ Change the Size of the Battery



Change an AA battery into a C battery

Materials AA battery, cloth, cellophane tape

Cut cloth such as towels or handkerchiefs to match the height of the AA battery, and wrap it around the battery. When the diameter becomes 2.6 cm, tape it with cellophane tape.



Change an AA battery into a D battery

Materials AA battery, cloth, aluminum foil, cellophane tape

Cut cloth such as towels or handkerchiefs to match the length of the AA battery, and wrap it around the battery. When the diameter becomes 3.4 cm, tape it with cellophane tape. Adjust the length of the battery using crumpled aluminum foil.

Substitutes for aluminum foil

Anything that can pass an electric current can be used. If you don't have aluminum foil, try using some other everyday item.

- Stack and tape together seven 1 yen coins
- Stack and tape together seven 10 yen coins
- (Do not combine 1 yen and 10 yen coins.)





How to Make Plates and Eating Utensils

Make a plate from a plastic bottle

Materials Plastic bottle, box cutter, scissors

1



Use a box cutter to cut the top off of a 2-liter plastic bottle. Be careful not to cut your hands.

2

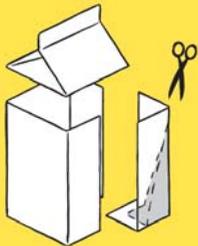


Cut the bottle along its length. The bottom of the bottle will be too stiff to cut with the box cutter, so use a large pair of scissors.

Make a spoon from a milk carton

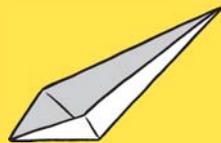
Materials Milk carton, scissors

1



Cut off the top triangular portion of the milk carton, and cut the carton into four pieces by cutting along its length down the center of each side.

2

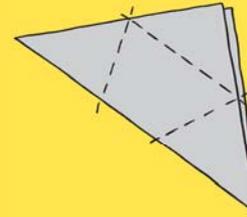


Fold the cut portion and cut along the dotted lines in the illustration, to make a spoon. By changing the angle of the cut, the depth of the spoon can be changed.

Make a dish from newspaper

Materials Newspaper, plastic bag

1



Fold a newspaper into a triangle, and fold along the dotted line in the drawing to make a cup with a bottom.

2

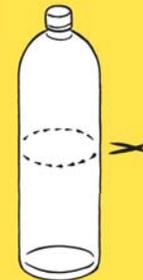


Place a plastic bag over the folded newspaper and tie the bottom of the bag. This can be used as plate or a cup.

Make a cup out of a plastic bottle

Materials Plastic bottle, scissors (box cutter)

1



Cut the upper portion of the plastic bottle using a box cutter or scissors.

2



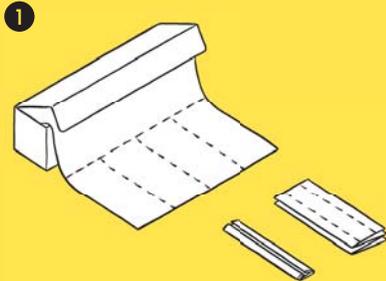
Make the cut edge as smooth as possible to prevent injury.



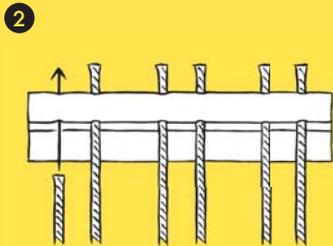


How to Make an Emergency Cooking Stove

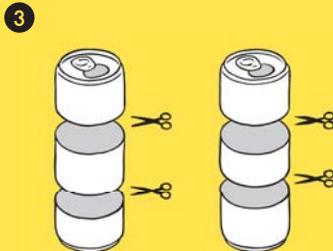
Materials Aluminum cans, aluminum foil, string, toothpicks, scissors, vegetable oil



1 Take 17 cm of aluminum foil, and fold the sheet into four, and then fold both sides to meet in the center.



2 Use a tooth pick to open holes in the foil in a total of 6 places: two in the center, and two each at about 2 cm from the left and right sides. Insert 10 cm long pieces of string, and set them to emerge about 3mm from the top of the aluminum foil. If you don't have any string, twisted pieces of tissue paper can also be used.



3 Using a pair of sharp scissors, cut two aluminum cans at points 5 cm from the top and 4 cm from the bottom. Wear work gloves when you cut the cans and be careful. The 4 cm piece will be the burner and the 5 cm piece will be the trivet where pots or pans are placed



4 Bend the aluminum foil with the wicks into a triangle, and place this inside the 4 cm aluminum can. Place vegetable oil inside and let the wicks absorb the oil.



5 Complete the cooking stove by evenly spacing the 5 cm aluminum cans around the 4 cm can.



6 Adjust the position of the 5 cm cans to fit the size of the pot or pan.

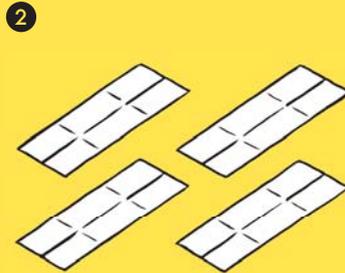


✂ Making Partitions

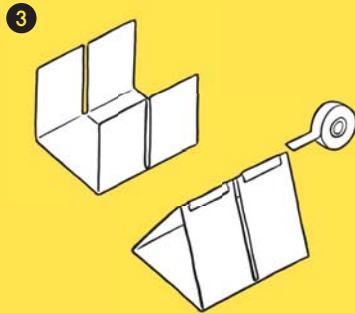
Materials Cardboard box, tape, scissors



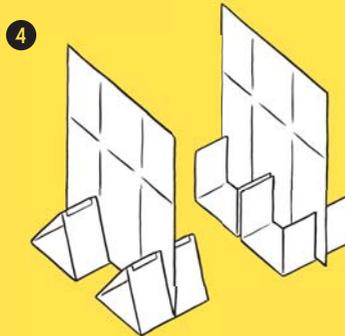
1 Open up a sturdy cardboard box, and cut so that the corner portion comes in the center of the left and right sides.



2 The resulting four portions will become the stands for cardboard box partitions.



3 Make triangular shapes out of these portions and tape together at the top, to create the stands.



4 Insert other opened cardboard boxes (partitions) into the stands. The space between the stands is adjusted to fit the size of the partition box.

212

✂ How to Make a Knapsack

Materials Long pants, string (about 2 meters long)



1 Use the string to tie the bottom portion of the two legs of the pants. Tie the string so that the two ends are equal in length.



2 Fold the pants at around the knees, and pass the string through the belt loops.



3 Make the leg portions the shoulder straps of the knapsack so it can be carried on your back. Firmly tie the string that has been passed through the belt loop to prevent the contents from spilling out.



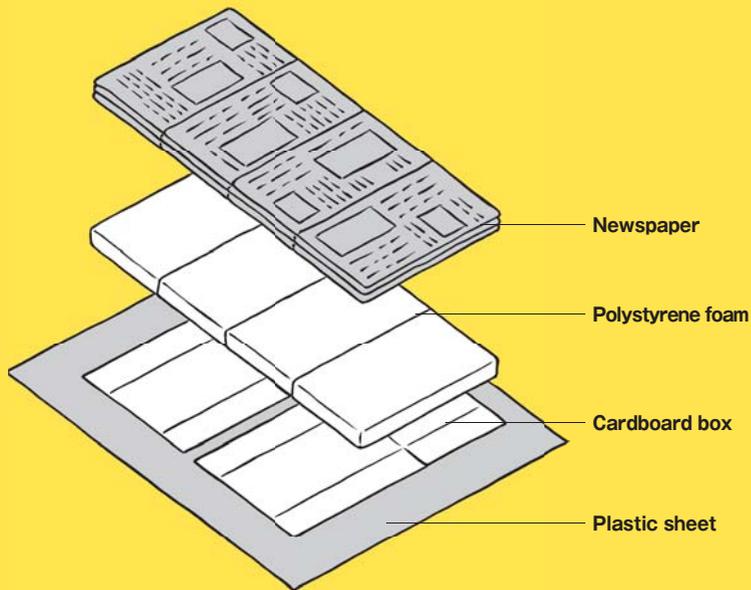
213

4



✂ How to Make a Bed

Materials Large plastic sheets, cardboard boxes, polystyrene foam, newspaper



Place the plastic sheet on the floor, and place cardboard boxes and polystyrene foam on top of it. This will create a bed that is cushiony and has thermal insulation effects for protection from cold coming from the floor. Cover with newspapers.

✂ How to Make Cushions and Pillows

Make a cushion from a plastic bag

Materials Plastic bag, string



Fill one-third or one-half of a plastic bag with air. The bag can be easily filled by raising the bag and quickly lowering it. Adjust the amount of air to your preference, and close the mouth of the bag.

Use a ball as a pillow

Materials ball



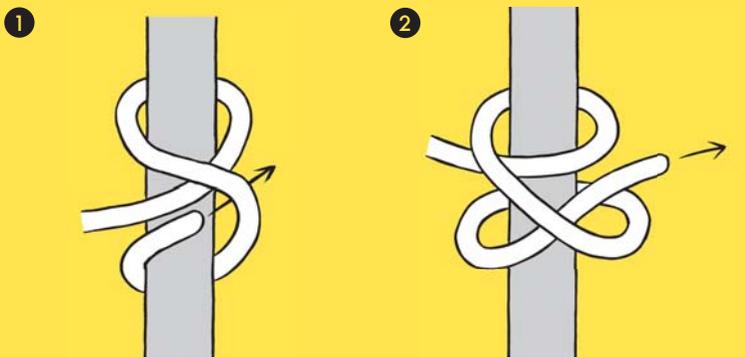
If the evacuation center is a school or gymnasium, use the balls there as pillows. Insert the inflator that is stored with the balls into the ball's hole. Remove air until you achieve the height preferred for use as a pillow.



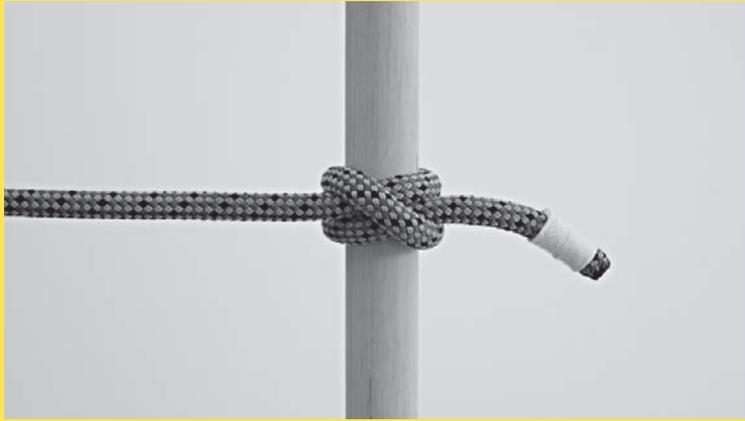
✂ How to Tie Ropes



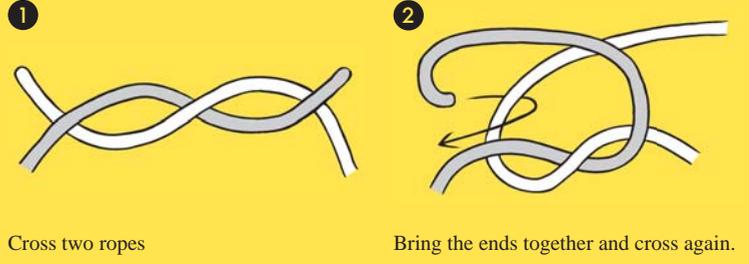
Clove hitch	Used to tie a rope to a column or pole. It is good for knots in crafts and tying small things.
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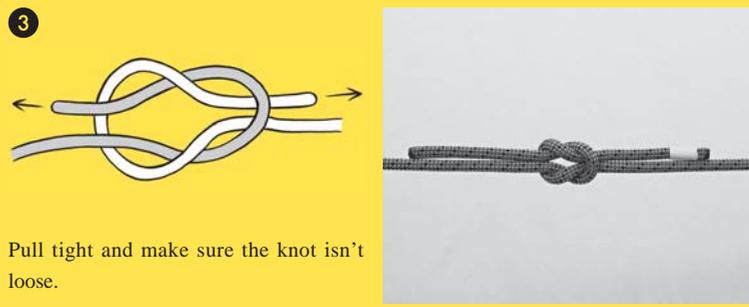
1 Place the rope around the pole twice. Tuck the first loop under the rope.
 2 Pull the ends to firmly tighten the knot.



Square knot	Can be used to extend the length of a rope by tying ropes of equal thickness together, etc. Can also be used in tying triangular cloth.
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1 Cross two ropes
 2 Bring the ends together and cross again.



3 Pull tight and make sure the knot isn't loose.

Use of ropes
 If you have poles or rods and rope, you can make a clothes line that will be useful at evacuation centers or emergency housing, or in making partitions to protect your privacy.



✂ Exercises for Evacuation Life

These are exercises that people living in evacuation centers or temporary housing can do to help maintain or restore their physical and mental capabilities.

Stretch exercises (3 minutes)



Joint circles and bends/extensions (3 minutes)



Children Playing

A major disaster will leave mental scars on both adults and children. But while children may be smiling or quiet even when they are under great stress, it does not mean that they are okay. By playing, children will be able to reconfirm their feeling of safety, rid themselves of the stress of evacuation life, and express feelings that they are hiding deep inside (sorrow, anger, remorse, loneliness, etc.). If children can play well under the close watch of supporters, they will be able to sense that they are controlling their feelings. Devise ways for children to play that matches their age.



Hand games (small children)

Do simple hand games like “head, shoulder, knees and toes” or hand clapping games.



Rock-Paper-Scissors train

A rock-paper-scissors game that can be played by many children. First, two children do rock-paper-scissors, the one who loses stands behind the winner, and the winner does this with another person, and so on, to form “trains.”



Physical activities

Dodgeball, baseball using hands to hit the ball, jump rope, etc.



Crafts

Making things with origami, newspaper, clay, etc.



Games that don't need props

Quizzes, tag, hide-and-seek, red rover, freeze tag, statues, follow the leader, etc.



Other

Reading picture books, playing with dolls (puppets), games such as shogi, go, cards, etc.





Good Ways to Use Everyday Items

Newspapers



As a splint for fractures

Layer newspapers like a board and place this on the broken bone up to the joints on both sides.



Place in clothes for thermal insulation

If newspapers are placed between your under and outer wear when it is cold, a layer of air will be formed to keep you warm.



Use as a cover

If there are no blankets or comforters, just covering yourself with newspapers can make a big difference in keeping you warm.



Make playthings

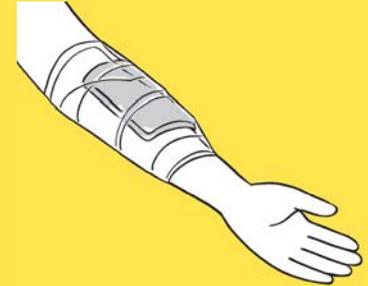
Crumple one sheet of newspaper into a ball, and layer newspapers over this. Adjust the shape and secure firmly with tape.

Plastic Wrap



Use to keep warm

Fold two newspapers and wrap around your abdomen. Wind plastic wrap around this. This will help retain body heat and keep you warm.



Protect a wound after the bleeding has been stopped

After stopping the bleeding, wind the plastic wrap around the wound. Plastic wrap can effectively protect the wound because it is very airtight.



Attaching a splint

Plastic wrap is effective in attaching a splint, such as a rod or board, to a broken bone. Thoroughly wind the plastic wrap to keep the splint from moving.

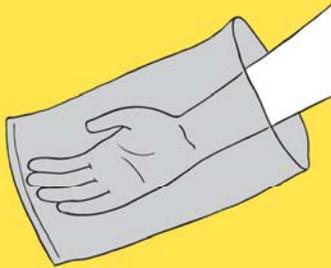


Cover dishes

When water supply is interrupted, it is difficult to wash dishes. If food is placed on dishes that have been covered with plastic wrap, you will not have to wash the dishes.

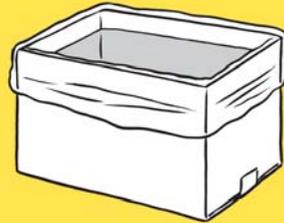


Plastic Bags



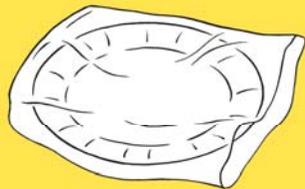
Protect yourself from infection

In order to prevent infection from treating a wound, it is important to avoid touching blood by using rubber gloves, etc. A clean plastic bag can also be used.



Transport water in a hygienic way

If you don't have a clean plastic tank or plastic bottle, water can be transported in a hygienic way by covering a container with a plastic bag.



Cover dishes

If you cover dishes you can reduce the number of items that need to be washed. You will also run out of paper dishes if you dispose of them each time they are used, so cover them with a plastic bag.



For the toilet

When you can't use the toilet because the water supply is interrupted, use plastic bags filled with newspaper.

Refer → p. 201

Large handkerchief



As a mask

Dust is expected to fly during a disaster. Make a simple mask by covering your nose and mouth with a large handkerchief.



Attaching a splint

A large handkerchief is effective in attaching a splint, such as a rod or board, to a broken bone. Tie in several places to keep the splint from moving.



As an arm sling

After attaching a splint to a broken arm, an arm sling, using a triangular cloth, should be used to immobilize the arm. A handkerchief can be used in place of the triangular cloth.



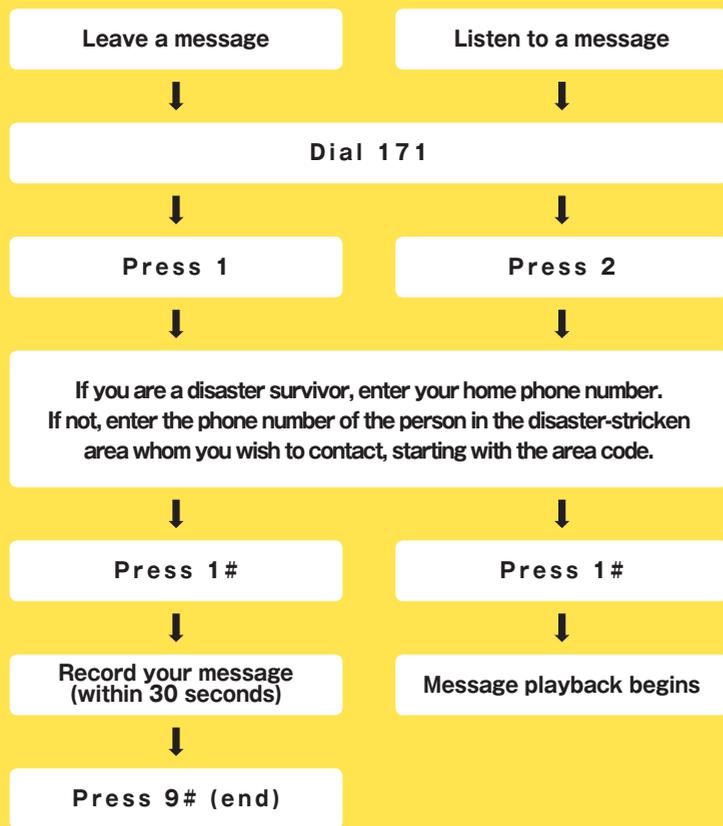
Stop bleeding

When bleeding from an artery, use as a compression bandage to stop the bleeding.

Refer → p. 179

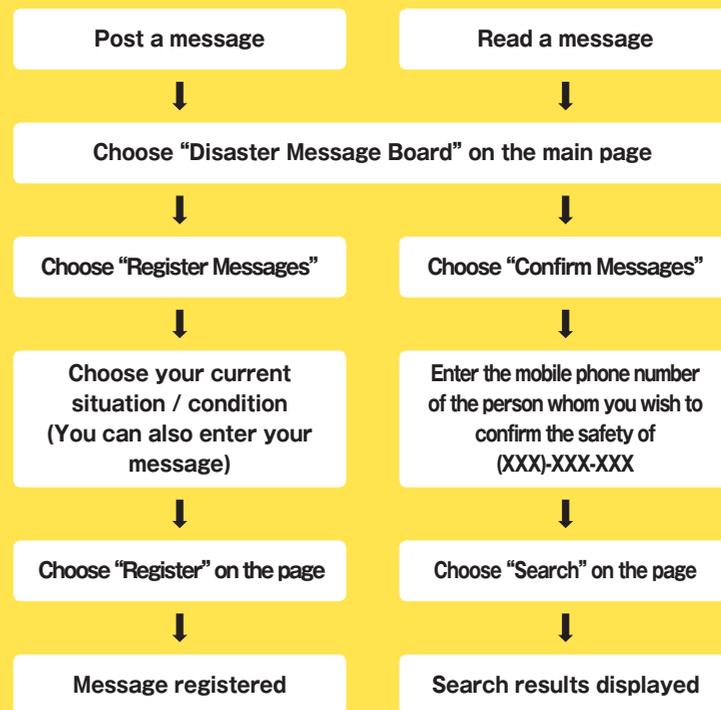


Disaster Emergency Message Dial



Dial 171 and follow the voice guidance (in Japanese) to leave or play back messages. Because each recording is up to 30 seconds, prepare a brief message that contains necessary information only. Each message will be saved for 48 hours. You can practice using the service on days such as the 1st and 15th days of each month.

Disaster Message Board (Mobile Phones)



This message board service is provided by mobile phone carriers to enable people to confirm the safety of each other via text messages. To use the service, visit the portal site of your carrier from your mobile phone. You can practice using the service on days such as the 1st and 15th days of each month. [Details](#) → p. 272





Take Action to Get Your Family Prepared



Try the disaster preparedness steps outlined in this manual with your family. Here is an example of how you could use one weekend day to prepare for a disaster with your family, while also having fun.



10:00

Convene: 15 minutes

Gather your family and have each member talk about what they know about disasters and disaster prevention and what they hope to accomplish over the course of the day.



10:15

Imagine what will happen when a disaster occurs: 30 minutes

If a major earthquake occurs, what will happen to your family? To learn more about what the situation will be like, read Chapter 1 of this manual "Simulation of a Major Earthquake" with your family. Then walk around your home and have each member of your family imagine what it will be like.

Check points

- Where is a safe place to protect yourself?
- What will happen to the furniture and home appliances in the living room?
- What if you're sleeping in the bedroom?
- What if you're in the restroom or taking a bath?



10:45

Role-playing: 15 minutes

After you have imagined what the moment will be like, practice the actions outlined on pp. 17-25, assuming that a major earthquake has just occurred.



11:00

Use the map to verify your evacuation area: 30 minutes

See the accompanying map and actually go to the evacuation area in your neighborhood. Also, confirm matters such as a safe meeting place and how you will contact each other in case mobile phones and other services are interrupted. Take down this information on the pages of this manual set aside for notes. You can also use the Bosai the Rhino cartoon flip book (bottom right corner of each page) to confirm the actions you should take when a major earthquake occurs.

Things to confirm

- Your evacuation area and evacuation routes Details → p. 115
- Where to meet up Take notes → p. 292
- How family members will contact each other Details → p. 128
- Contact information for you and your family Take notes → p. 294





11:30

Discuss what your family needs to prepare for a disaster: 30 minutes

Discuss what items your family need to stockpile, and make a shopping list. See the household stockpile (pp. 86-91) and furniture stabilizing measures (pp. 96-99) sections and find the disaster preparedness measures that best suit your family. In the afternoon, take time to go shopping. Prepare a list of items necessary for your family, such as emergency supplies and furniture stabilizing devices. The pages set aside to take notes in this manual will be helpful.

Check points

- List of emergency stockpile items for your family
- List of items to be put in emergency bags
- Furniture stabilizing measures for each room of your home



12:00

Lunch and shopping: 3 hours

Have lunch and then go and buy necessary items.



15:00

Prepare: 1 hour

Decide where to locate stockpiles and emergency bags, and arrange them accordingly. Stabilize the furniture so that they will not fall, topple over, or slide. Confirm that you have not missed anything by referring to the furniture stabilizing checklist (pp. 100-103).

Check points

- Confirm the location of stockpiles
- Confirm the location of emergency bags
- Stabilizing measures appropriate for your furnishings and home appliances



16:00

Wrap-up: 15 minutes

To wrap up the day, have each member of your family give one to two minutes of feedback. Share your frank thoughts with each other so that everyone in your family will be safe if a disaster strikes.





Hold a Community Event to Prepare for a Disaster



We will introduce how to hold a hands-on event where participants can have fun learning knowledge that will be truly helpful in the event of a disaster. Why not invite neighbors or hold an event at school, and build a solid community prepared for a disaster?

Participants	3-30 people
What to bring	This manual
Hours	1.5-3 hours
Preparation	Person who will serve as a moderator A space large enough to accommodate the participants
Tools	Scissors, box cutters, glue, pliers, nippers
Materials	Table with a lot of materials on it (Refer to pp. 234-235 for exercise samples and materials to prepare.)

Program 1: Imagine the moment

Read the experience of survivors: 15 minutes

First, have all the participants read the experience of earthquake survivors. It is important that everyone is aware of what it is really like to experience an earthquake.

Experience → p. 72

Opening: 15 minutes

Ask the participants to separate into teams consisting of four or less people each. If possible, place people who have never talked to each other on the same team. After they are divided into teams, have the members of each team share their names, occupations, and what they thought about the experience of survivors, allowing each to talk for about three minutes.



Program 2: Hands-on experience

This is the main event. Use this manual to practice solving problems that will occur when a disaster strikes.

Practice solving problems that occur when a disaster strikes: 15 minutes for each exercise



1. Present a problem

The moderator presents the first problem.

Exercise samples → pp. 234-235



2. Teams look for solutions

Members of each team cooperate with each other to solve the problem, using the contents of this manual and various materials.



3. Each team presents a solution

When the problem is solved, a team member raises his/her hand and the moderator examines the solution. Once all teams find the answer, move on to the next problem. Spend about 15 minutes on each problem.



Shuffle team members and closing: 15 minutes

Getting to know many people is another objective of this event. After the exercises, shuffle the team members. Once each new team is formed, members talk for three minutes each, giving their names, occupations and their thoughts on the event.



Exercise samples (pp. 192-217)

Problem There is no D battery. Make a substitute using an AA battery.
Materials Flashlight that works on a D battery, AA battery, cloth, aluminum foil
Answer p. 207

Problem There is no toilet. Make an emergency toilet using materials available here.
Materials Bucket, plastic bags, newspaper
Answer p. 201

Problem You have come to an evacuation center. Let's make a bed and pillow.
Materials Cardboard, newspaper, polystyrene foam, large plastic sheets, ball
Answer pp. 214-215

Problem We need dishes and spoons to distribute meals. Let's make them.
Materials Plastic bottles, milk cartons, newspaper
Answer p. 208

Problem Let's learn how to tie ropes tightly. Tie a clove hitch and square knot.
Materials Ropes
Answer p. 216

Problem There is no light due to a power failure. How can we make a light?
Materials Flashlights, white plastic bags, plastic bottles, water
Answer p. 206

Problem It's getting chilly. Think about how we can warm ourselves with newspapers.
Materials Newspaper, plastic bags, plastic wrap
Answer p. 192

Having these versatile materials at the event could be helpful.

- Newspaper
- Cardboard
- Plastic bags
- Plastic bottles
- Paper cartons
- Paper
- Cloth
- Plastic wrap
- Aluminum foil
- Sterile gauze
- Rubber bands
- Paper clips
- Garbage bags
- Ropes
- Clothes you no longer wear

If you prepare ample amounts of versatile materials, such as those listed above, event participants might be able to come up with their own versions of helpful items. Cooperate with the members of your team and look into various solutions.

