英語　English

# ハザードマップを活用するために

# Using the Hazard Map

## ～ハザードマップと一緒に保管してください～

## ～ Please store together with the hazard map ～

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タスケ三兄弟

## What is a Hazard Map?

A Hazard Map is a map that shows the predicted scope of damage caused in a natural disaster (heavy rain, flooding, landslides, high tide water, tsunamis, etc.).
The map provides information about evacuation routes and evacuation areas.
Municipalities prepare hazard maps to enable residents to evacuate quickly and appropriately if and when a disaster occurs.

## How to Use the Hazard Map

**(1) Check your own home**

On the hazard map are shown symbols and color-coding regarding natural disasters. Look for your own home and check what kinds of disaster risks there are for your neighborhood.

**(2) Check evacuation areas**

Using the map, regularly check the location of the evacuation center closest to your home.

**(3) Neighborhood residents get together and talk about natural disasters and evacuation methods**

Neighborhood residents hold meetings to discuss disaster prevention in the local area and voice their opinions about natural disasters particular to the area and roads that are dangerous to use at times of natural or man-made disasters and other disaster-related matters.

**(4) Think about your own evacuation route**

Actually walk to the evacuation area, checking for routes that are safe and easy to use in an evacuation. Choose roads with easily identifiable landmarks to enable safe evacuation, even at night.

**(5) Use the mass media to check weather information**

When there is a typhoon or heavy rain, carefully check the weather information on the television or radio.

**(6) Display the hazard map**

Display the hazard map in a place where you notice it easily to enable you to carry out disaster prevention activities smoothly should a disaster occur.

## Map Legend (meaning of symbols and color coding)

# Everyday Disaster Prevention Measuresw

**Regularly imagine various situations and think of actions to protect yourself in the event of an earthquake!**

### At home or work

Protect your head and evacuate to a safe place such as under a strong table. When the shaking subsides and it is safe, turn off the gas main.


### In facilities where there are many people

Act in a calm manner; do not panic and run for the exit. Follow the instructions of facility staff.

### On the train or bus

If you are standing, grasp the strap or handrail. If you are sitting, bend over and keep down in order to protect your head. Follow the instructions of the conductor.

### Outside buildings

Be careful of toppling brick walls or automatic vending machines, as well as falling signs or broken glass. Protect your head and seek shelter in a sturdy building.

### Near the sea

Move away from the sea. Evacuate to a safe place once the shaking subsides.

### Diving a car

Do not slam on the brakes but reduce speed gradually and stop the car on the left side of the road. Leave the keys in the ignition and the doors unlocked if you leave the car.

# Everyday Disaster Prevention Measures

## “Safety Actions 1-2-3”!

In the event of a major earthquake, the most important thing is for you to “Protect yourself.” “Safety Actions 1-2-3” are actions for protecting yourself.


## Prevent furniture from falling over!


Talk with family members and workmates about furniture items that could be dangerous in the event of an earthquake (items that “move,” “topple,” “fly,” “fall,” and “break”).
Secure furniture that topples over easily using fixings or hooks to prevent them from falling over.

## Decide Communication Methods!


Decide on a method for communication your safety status to family members when it is difficult to get through on the telephone (telephone message service for use in disasters, message boards for use in disasters, etc).

# Everyday Disaster Prevention Measures

## Decide on an evacuation site as a family!


Check evacuation center locations and safe evacuation routes as a family.

## Get information that is useful for disaster prevention!


Check methods for obtaining disaster prevention information, such as emergency earthquake flash reports, Hiroshima Prefecture's disaster-prevention website, and disaster prevention information e-mails.

## Prepare items to take with you in an emergency and store them somewhere they can be easily reached!

Pack an Emergency Bag and store it somewhere that can be easily reached. Review the contents twice a year.

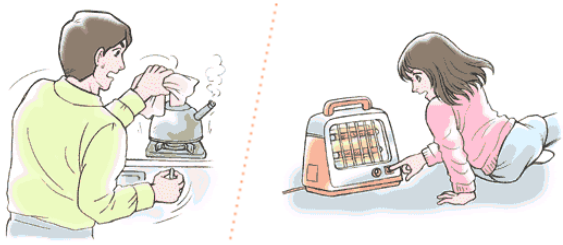
### List of Items to Take with You in a Emergency (Example)

| | | | |
|---|---|---|---|
| ☐ Drinking water | ☐ Shirts/sweaters | ☐ Tissues | ☐ Health insurance card |
| ☐ Enough food for your family for 3 days | ☐ Torches | ☐ Towels | ☐ Cash |
| ☐ First-aid kit | ☐ Radio | ☐ Candles | ☐ Bank passbook |
| ☐ Household medicines | ☐ Spare batteries | ☐ Matches | ☐ Seal |
| ☐ Underwear/socks | ☐ Cotton work gloves | | |

# Earthquake Disasters

## Earthquake! Let's act calmly, without panicking or getting excited

When an earthquake occurs, it is important to act calmly, without panicking or getting excited. So that you know what to do in an earthquake to protect your family and belongings, have drills regularly.



| Seismic intensity scale | Degree of shaking |
|---|---|
| Intensity 0 | Humans do not feel the shaking. |
| Intensity 1 | Some people inside buildings feel slight shaking. |
| Intensity 2 | Many people inside buildings feel shaking and lights and other suspended objects shake slightly. |
| Intensity 3 | Virtually all people inside buildings feel shaking. Plates and utensils in cupboards may make some noise. |
| Intensity 4 | There is a significant sense of fear and suspended objects sway quite a lot. Plates and utensils in cupboards make noise, and some unsecured objects may topple over. |
| Intensity 5 lower | Many people take actions to secure their safety. Many unsecured objects topple over, and window glass may shatter and fall. |
| Intensity 5 upper | There is an extreme sense of fear. Television sets may topple over. Many brick wall that are not reinforced collapse. Many gravestones topple over. |
| Intensity 6 lower | Wall tiles and window glass in a large number of buildings are damaged and fall. Some houses built of wood with low earthquake resistance will collapse. Cracks in the ground and landslides may occur. |
| Intensity 6 upper | Wall tiles and window glass in many buildings are damaged and fall. Some houses built of reinforced concrete with low earthquake resistance will collapse. Cracks in the ground and landslides may occur. |
| Intensity 7 | Even buildings with high earthquake resistance may lean over or sustain severe damage. Large cracks, landslides, and avalanches occur, and the topography may change. |

# Earthquake Disasters

## Earthquake! When indoors

When an earthquake occurs, window glass may break, roofs may fall, and brick walls may topple over. Protect your head with your bag or books, etc. When outside, seek shelter in a sturdy-looking building nearby or large park and wait for the shaking to subside.

**Points**

- When in an outdoors shop, listen to the person in charge and evacuate.
- Underground shopping arcades have exits spaced at 60m intervals and there guidance lights remain on even if there is a power blackout, so follow the instructions of the person in charge and evacuate.

- If you are in a movie theater, do not rush outside; crouch down between the seats, then follow the instructions of the person in charge and wait.
- If you are on a train station platform, protect your head while pressing against pillars or walls.
- If you fall off the station platform, call for help and have someone pull you up, or lie face-down between the tracks and the platform until the shaking subsides.

## Returning home from somewhere a long distance away

People whose school or workplace is far from home may encounter difficulties getting home. Keeping this in mind, think well about what places would be safe. If you return home, check to make sure that it is safe.

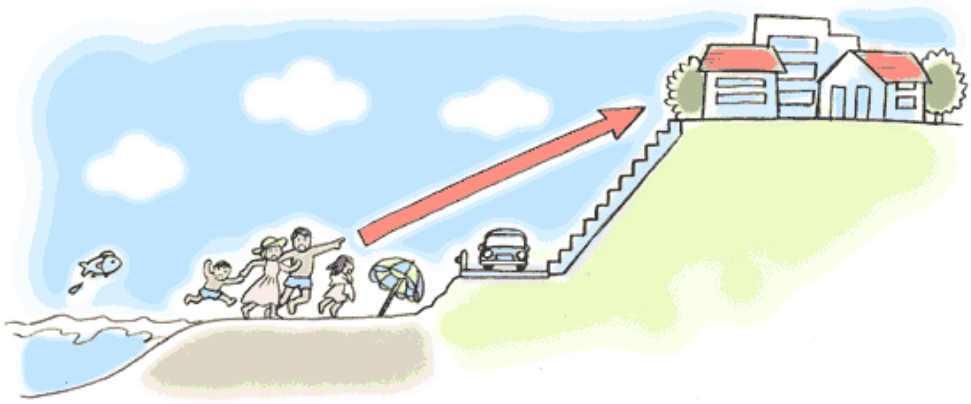

### Points

- Do not panic; act calmly.
- Obtain information from the radio and people around you.
- Keep something sweet (chocolate, caramel, etc.) to eat with you.
- If you know where your family is and it is safe, children should not make unreasonable efforts to return home. Have family members come to get you.
- In the case that you return home, tell your family and friends the route you use to get home.

# Tsunamis

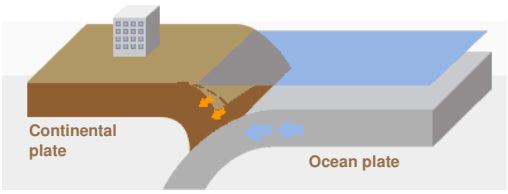
## Remain vigilant even after earthquakes! A tsunami may occur

Tsunamis may occur after an earthquake. A tsunami comes with the speed of a jet and advances with the speed of a bullet train. When an earthquake occurs, move away from the sea immediately and escape to high ground. If you stop to watch the tsunami approaching, it will be too late.

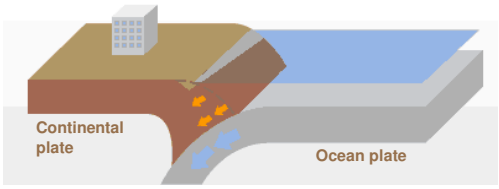


## Mechanisms for tsunami to occur

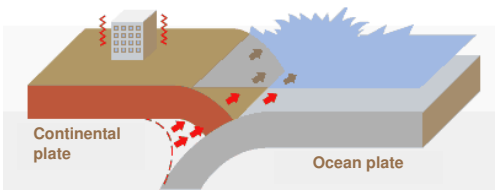
The edge of the ground surface is dragged down and bent by the movement of the ocean plate.




When the bending is at a maximum, the ground surface edge springs back in an attempt to return to its original form, pushing water upwards.




The water that has been pushed upwards spreads everywhere. If the ocean in deep, the water spread is horizontal and fast; if the ocean in shallow, the water spread is high and slow.



# Landslide Disasters

## If rain falls continuously, be very careful of landslides!

“Landslide damage” occurs when cliffs give way or the ground slides, resulting in earth and rocks flowing down.
When there have been continuous days of rain, the earth becomes loose and it is easy for landslide damage to occur.

## What is a mud and rock slide?

When the earth on a steep incline (cliff) is loosened by heavy rain or an earthquake and mud and rock suddenly come sliding down an incline, it is called a “mud and rock slide.” The displaced mud and rock can slide a distance as much as two to three times the height of the incline. There are approximately 86,000 locations nationwide where mud and rock slides could occur. Compared to other danger spots, this is an extremely large number.

### Warning signs a mud and rock slide may occur

- Small stone have begun to roll down the cliff.
- Water has begun to seep out of the cliff-face.
- Cracks appear in the face of the cliff.

# Landslide Disasters

## What is a landslide?

When slippery claylike soil on a gentle incline is soaked with rain, causing the soil to begin to slide, it is called a “landslide.” This occurs over a wide area and can bury houses, fields, and roads all at once. Initially the movement is only a few millimeters per day—too small to see with the human eye—but sometimes the mud suddenly moves several meters. Furthermore, if the mud from a landslide blocks a river, the river water quickly overflows, causing tremendous damage downstream.

### Warning signs a landslide may occur

- Well water starts to become cloudy
- Areas of the ground sag or are raised; cracks have appeared.
- A sudden change occurs in the volume of water in ponds or bogs.

## What is a mudslide?

Sudden flows of mud and rock down the slopes of valleys and mountains due to rain falling every day during the raining season or heavy rain brought by typhoons are called “mudslides.” “Mudslide wdisasters” often occur where there ate alluvial fans or fast-flowing rivers, and their high speed and strength destroy mean that they can be very destructive.

### Warning signs a landslide may occur

- The entire mountain is making a moan-like rumbling sound
- There is driftwood flowing in the river, or the river water has become cloudy
- The amount of river water is dropping, despite rain continuing to fall

# Water Damage

## Be very careful during typhoon season!

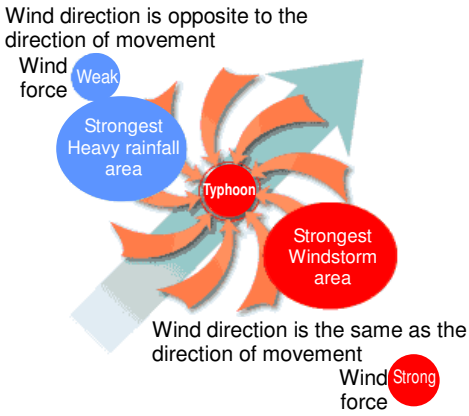
When heavy rain falls, a large volume of water flows into rivers. If there is too much water, the river embankments can collapse, allowing water to flow into the town.

## Guide to rainfall amounts

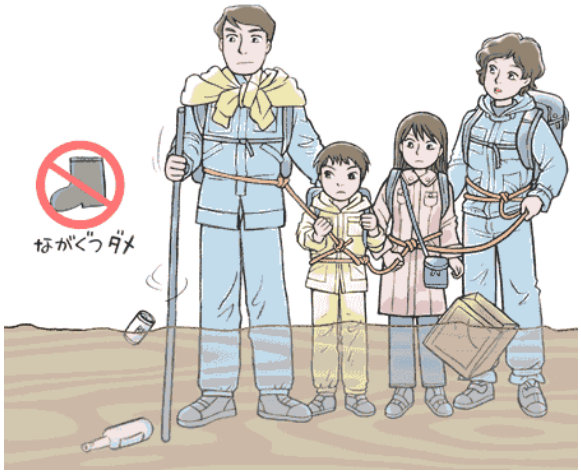
| | |
|---|---|
| **Slightly strong rain (10-20ml/hr)** | It is difficult to speak over the sound of the rain. There are puddles here and there on roads. |
| **Strong rain (20-0ml/hr)** | Water overflows from channels due to the strong rain. Small rivers begin to overflow, and small mud and rock slides begin to occur. |
| **Intensive rain (30-50ml/hr)** | The rain is like a bucket has been tipped over your head.<br>Roads become rivers and mud and rock slides occur easily. |
| **Extremely intensive rain (50-80ml/hr)** | The rain is like a roaring waterfall. Water overflows from man holes and rainwater enters basements and underground shopping arcades. A large amount of flood/mudslide damage occurs. |
| **Blistering rain (More than 80ml/hr)** | The rain is so strong it feels as if it is pushing down and becomes frightening. Houses and buildings may be damaged or washed away. |

## Impact differs according to the course of the typhoon

The strength of the wind and rain in a typhoon differ according to whether the place where you live is to the left or right of a typhoons' path. When the path of the typhoon has been announced, check to see which side your home is on.




## Points for evacuation




Because the flowing water can contain items that can cause injuries or suddenly become deep, be very careful when wading through flood water as you evacuate. Children should hold their parents' hands.

- Lace-up sports shoes are easy to walk in (never walk barefoot or in boots!)
- Tie yourselves together with rope, etc. to ensure no one gets lost.
- If the water is waist-high, do not attempt to evacuate; wait for assistance in a place high above the water.
  The depth of water in which people can walk is approximately 70cm for an adult male and approximately 60cm for an adult female.
- Because there is a possibility that there are dangerous objects beneath the surface of the water, use a long stick as a cane or hold onto a swimming tube to ensure your safety.