

A Citizens' Guide to Disaster Prevention

Preventive Measures against Disasters

We can come together and meet the challenge of minimizing disaster damage through our previous experiences!



Storms and Floods

Landslides

Earthquakes

Tsunami

Fires

Snow Damage

Preparation/Medical Emergencies

A Citizens' Guide to Disaster Prevention

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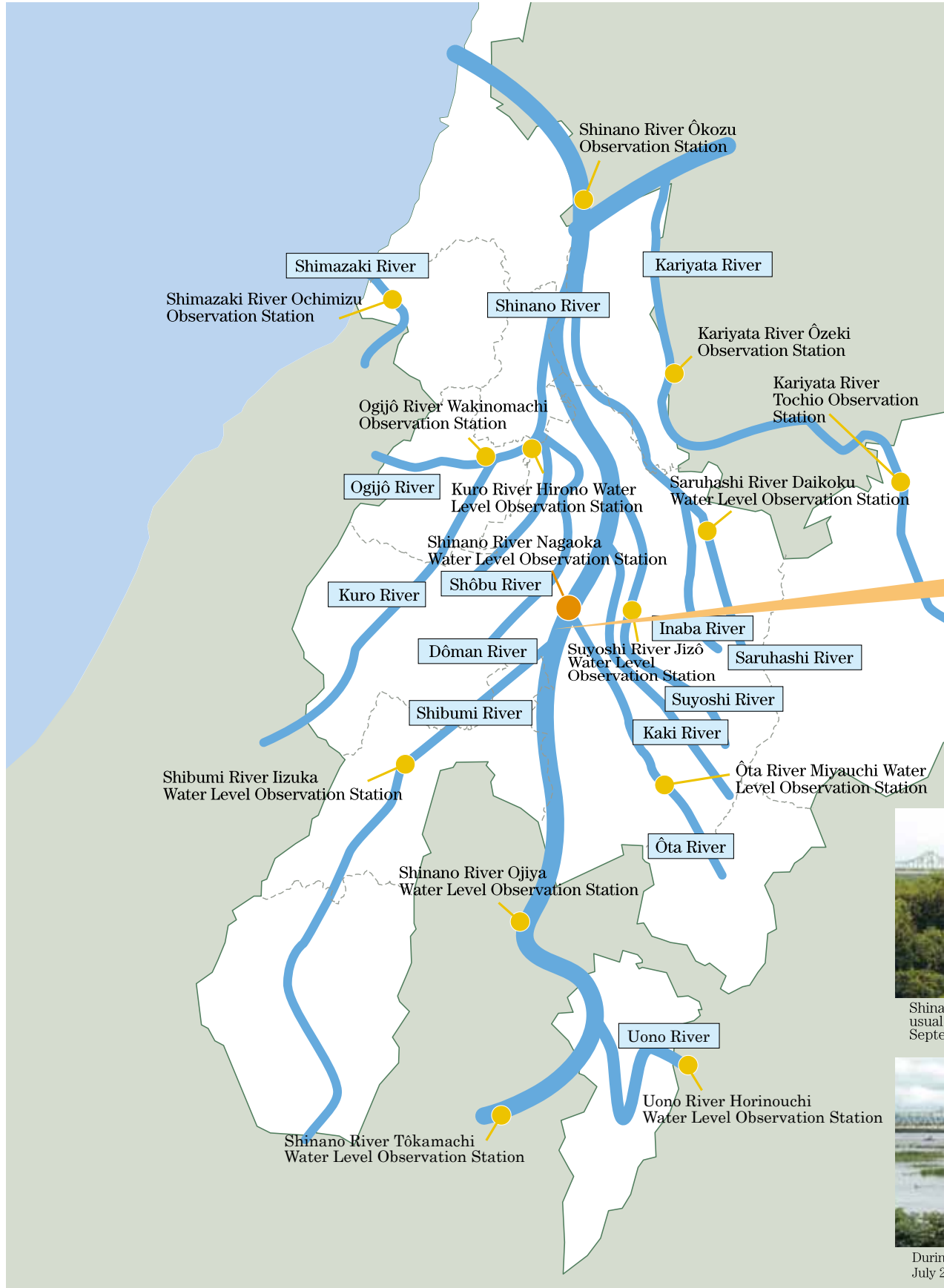
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For nuclear disasters, please refer to the separate Nuclear Disaster Prevention Guidebook.

For locations of evacuation shelters in Nagaoka City, please refer to the separate pamphlet Evacuation Shelters in Nagaoka City.

Major Rivers and Water Level Observation Stations in Nagaoka City

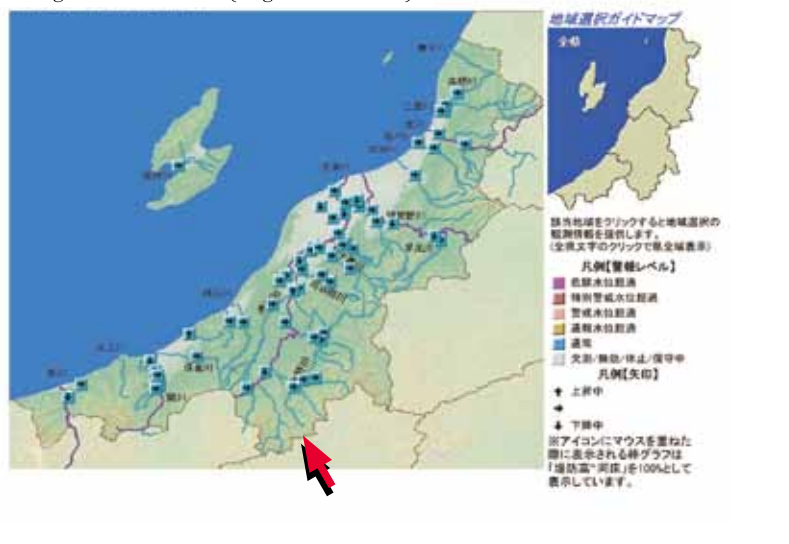
This map shows the major rivers flowing through Nagaoka City and the locations of the water level observation stations where warning water levels and special higher warning water levels have been designated by the national or prefectural government offices.



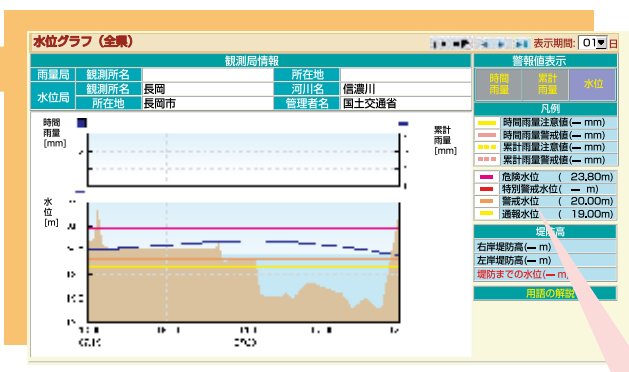
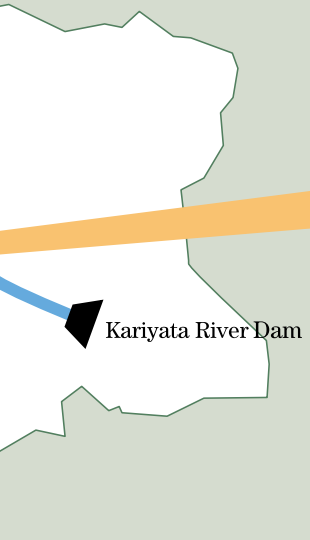
- Storms and Floods
- Landslides
- Earthquakes
- Tsunami
- Fires
- Snow Damage
- Preparation
- Medical Emergencies

The City of Nagaoka is always on the alert for floods by monitoring daily water levels of the city's rivers. Information about changes in water levels is available on a website named "The Information System for Disaster Prevention of Rivers in Niigata Prefecture." The measurements are taken from the observation stations shown on the map. When stormy weather is forecast due to approaching typhoons or rain fronts, it is advisable to check the water levels of rivers near your home or work place.

Change of Water Levels (Niigata Prefecture)



(Source: The Information System for Disaster Prevention of Rivers in Niigata Prefecture Website)



- **Critical Water Level** (Hazardous level of overflowing) ■
There is a possibility of flooding.
Evacuation recommendations are issued at this water level.
- **Special Warning Water Level** (Level to judge the necessity of evacuation) ■
Precaution against possible flooding should be seriously taken.
Orders to Prepare for Evacuation and Orders for the Elderly and Others Needing Assistance to Begin Evacuating are issued at this water level.
- **Warning Water Level** (Level for warning against flooding) ■
Flood control organizations should start patrolling at this water level.
- **Cautionary Water Level** (Level for flood control corps to be ready for dispatch) ■
Flood control organizations should start getting ready for flood control operations at this water level.

Information on the water levels of major rivers controlled by the national or local governments is available through your personal computer or cell phone.

The Information System for Disaster Prevention of Rivers in Niigata Prefecture

[PC] <http://doboku-bousai.pref.niigata.jp/kasen>
[Cell Phone] http://doboku-bousai.pref.niigata.jp/kasen_m



Kariyata River near Chōsei Bridge during high flow conditions on September 12, 2006



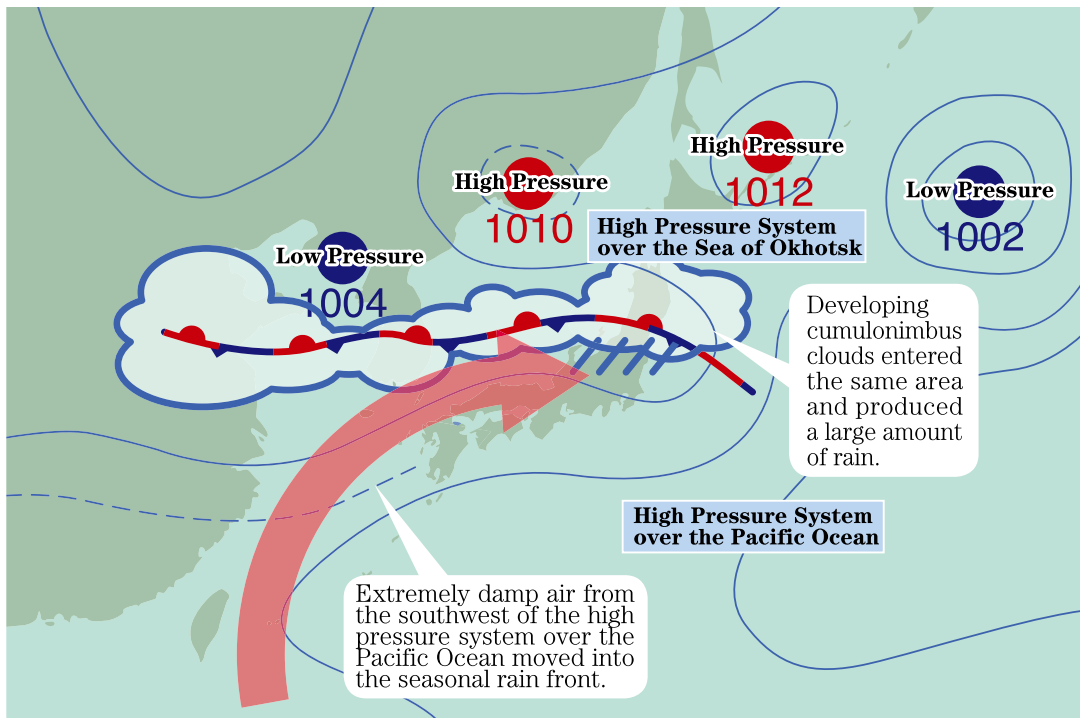
Kariyata River during High Flow on September 20, 2006

Frightening Localized Downpours in the Summer

Rainfalls that started on July 12, 2004, turned into a record-breaking downpour over the Chûetsu Region of Niigata Prefecture and extended into Fukushima Prefecture. The prefectural weather station at Kariyata River Dam recorded a maximum of 51 millimeters of heavy precipitation per hour. Furthermore, in the Tochio District, located on the upper stream of the Kariyata River, the precipitation in about half a day reached a volume equivalent to nearly two months of precipitation during an average year.

Because of this downpour, on the 13th, both the Kariyata and Saruhashi Rivers broke through and the surrounding areas were hit by violent turbid floodwaters filled with mud and sand. Nagaoka City suffered severe damage from these floods, resulting in four deaths in the Nakanoshima and Tochio districts, complete or partial destruction of 480 houses, and 2,878 flooded houses.

The July 2004 Niigata-Fukushima Downpour (The 7.13 Flood Damage)



(Source: The Meteorological Agency Website)

This weather map shows the typical pattern for the generation of downpours in Niigata Prefecture.

Near the end of the rainy season, the seasonal rain front is pushed to the north by high pressure systems over the Pacific Ocean. At the same time, in some instances, warm and very damp air from the southwest of the high pressure system collides with the seasonal rain front. If this warm air creates a large amount of cumulonimbus clouds, it generates localized heavy rainfalls.

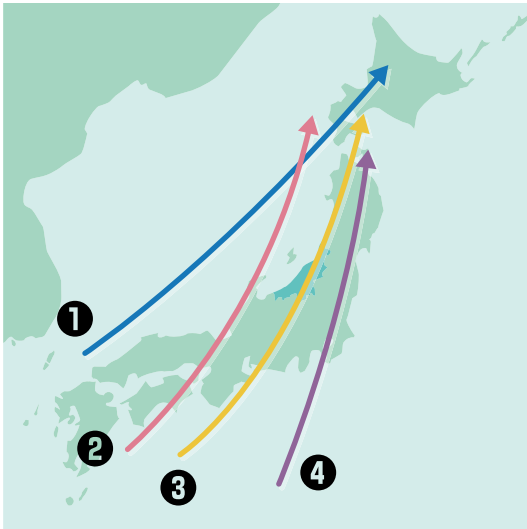
The heavy downpour of July 13, 2004, as shown in the weather map above, as well as the Niigata-Fukushima Heavy Downpour of July 2011 and the heavy downpour of July and August 2013 actually followed this pattern.

This weather map is indicative of approaching dangers. You are advised to be prepared to evacuate in an emergency.

Precipitation per Hour	Type of Rainfall
10~20 mm	The ground is covered entirely with puddles. It is difficult to hear conversations indoors. If these conditions continue, due attention is advised.
20~30 mm	Pouring rain causes overflow from the sewage systems and small-scale landslides begin.
30~50 mm	Rain is coming down in buckets. People in areas where landslides or collapses of cliffs are likely to occur should be prepared to evacuate.
50~80 mm	Heavy rainfall continues to fall with a sound like a waterfall. Debris flows, which may cause tremendous damage, are likely to occur.
More than 80 mm	People may feel a kind of suffocating oppression and fear. There is a high possibility that heavy rainfall may cause massive damage. Close watch is required.

The Courses of Typhoons and Effects on Niigata Prefecture

The direction of the wind and the type of precipitation are largely influenced by the course of a typhoon. Although the position of rain clouds around the typhoon can influence the course, in general, there are four patterns as follows:



(Source: The Niigata Local Meteorological Observatory Website)

1 Moving northeast over the Sea of Japan:

This pattern is likely to cause strong winds from the southwest. Due to the foehn phenomenon, the temperature will rise. Unless there is a separate rain front in the vicinity of Niigata Prefecture, there will be almost no chance of heavy rain.

2 Moving northeast just west of Niigata Prefecture:

This pattern is most likely to cause violent winds. About the time that the center of the typhoon crosses over Yamagata Prefecture and offshore of Akita Prefecture, strong winds begin to blow from the southwest. This brings heavy rainfalls of 50 to 100 millimeters in the mountainous areas of the Jōetsu, Chūetsu, and Kaetsu Regions.

3 Moving northeast crossing through Niigata Prefecture:

This pattern generates strong wind and rain. Right before the typhoon passes, winds from the north become strong and then weaken momentarily. After the typhoon passes, winds from the northwest gain strength. Precipitation in the Jōetsu and Chūetsu regions ranges from 100 to 200 millimeters.

4 Moving north over the eastern region of Niigata Prefecture:

Winds from the northwest gain strength over the ocean and shoreline while winds over the land weaken comparatively. When the center of the typhoon approaches the southeast of Niigata Prefecture, the wind speed reaches its maximum. This brings a total precipitation ranging from 100 to 200 millimeters to the Chūetsu and Jōetsu Regions.

What Is the Storm Zone?

The picture on the right side of this page shows the passage of a typhoon over Niigata Prefecture. The 'X' indicates the center of the typhoon and the red circle around it shows the storm zone where the current wind speed is greater than 25 meters per second (average speed measured over a 10 minute period) or where the wind speed could potentially reach that speed.

The forecast circles shown with broken lines indicate the anticipated path of the center of the typhoon. The probability that the center of the typhoon will be in the circles at the indicated time is 70%.

When a typhoon develops and approaches Japan, newspapers, TV, and radio stations inform the public with information regarding the typhoon. Please be aware of the situation and take steps to reduce any potential damage.



(Source: The Meteorological Agency Website)


Information Is the Key to Saving Lives

When flood damage is anticipated, "Information Regarding Preparation for Evacuation" will be announced prior to issuing "Evacuation Recommendations" so that the public can have sufficient time to evacuate.

Possibility of Disasters from Heavy Rainfall


Orders to Prepare for Evacuation and Orders for the Elderly and Others Needing Assistance to Begin Evacuating
(Hinan Junbi-Kôreishato Hinan Kaishi)

- The possibility of disaster is increasing.
- Begin preparations for evacuation.
- At this time, shelters will be established. People who require extra time to evacuate should use their own judgment and can begin evacuating at this time.
- Pay attention to TV and radio broadcasts for information.



Evacuation Recommendations
(Hinan Kankoku)

- Begin evacuation calmly.
- If you have any neighbors who have difficulty in evacuating, please help them as the need arises.



Emergency Evacuation Orders
(Hinan Shiji-Kinkyû)

- If you are in the process of evacuation, please complete evacuating.
- If you have not evacuated, please evacuate immediately.

● Ways to get evacuation information

- Emergency Flash E-Mail (Area Mail)
- Nagaoka Landslide Warning D Mail
- Radio : FM Nagaoka (80.7MHz), FM Niigata (77.5MHz), FM PORT (79.0MHz)
NHK (837kHz), BSN (1062kHz)
FM Nagaoka will interrupt regular programming to broadcast disaster information provided by Nagaoka City.
- Nagaoka Disaster Prevention Information
(Website) <http://www.bousai.city.nagaoka.niigata.jp>
- In some districts, information will be provided by communication networks of neighborhood associations, volunteer disaster prevention groups, wireless systems for disaster prevention, and the Off-Talk communication system.
- Information Service Vans
- TV



Information Provided by Non-Profit Organizations (NPOs)

Jûmin Anzen (Citizens' Safety) Network Japan

<http://jmjp.jp/npo/index.html>
(Information can be received via mobile phone e-mail.)

[Registration instructions for new users]
Access the screen to compose new e-mail.

1. In the [To:] section, enter jm@jmjp.jp
2. In the [Subject:] section, enter 111 using half-size characters
3. Leave the body of the message blank and send the e-mail

You will receive a confirmation message. Follow the instructions to complete your registration.



- Storms and Floods
- Landslides
- Earthquakes
- Tsunami
- Fires
- Snow Damage
- Preparation
- Medical Emergencies

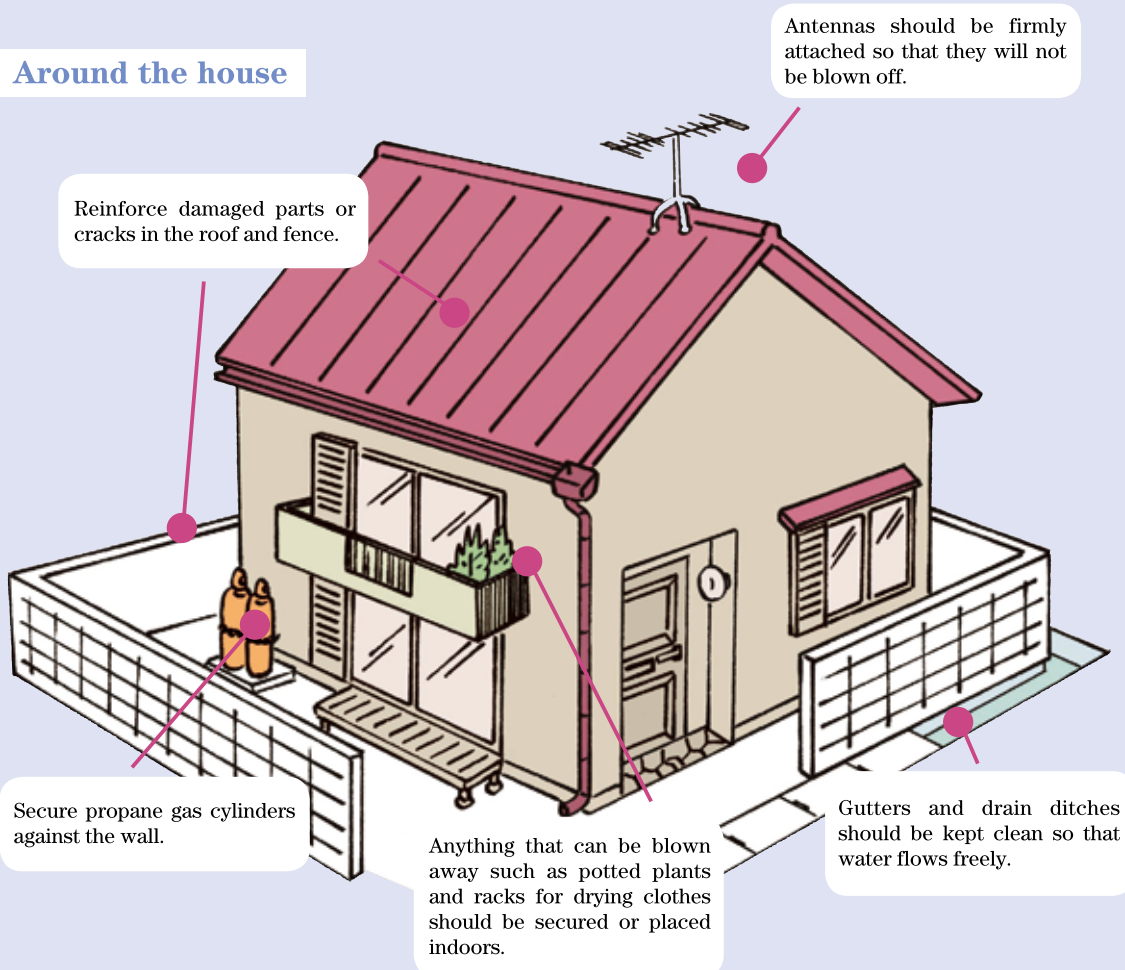
Safety Measures Inside and Outside Your House

Preparation

Inside the house

- Confirm the locations of evacuation shelters with family members and neighbors.
- Keep a portable radio, flashlight, and spare batteries handy in case of a power failure.
- In order to evacuate quickly in an emergency, prepare an emergency pack according to the checklist printed on the back of this booklet.

Around the house



Evacuating to the Second Floor May Be Safer in Some Cases

- ❶ If there is even a slight chance of flooding, avoid going to the basement.
- ❷ In the event of evacuation, communicate and act together with your neighbors.
- ❸ If the flood water reaches above your knees, evacuating to a shelter could be more dangerous. Refrain from leaving home. Evacuating to the upstairs of your own house or to a higher building nearby may sometimes be safer than going to a shelter.



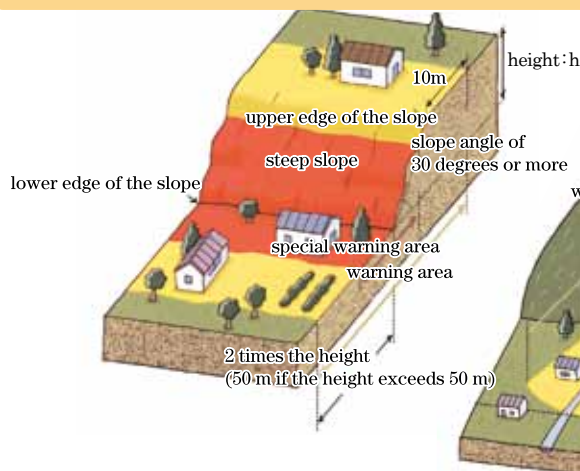
The Chûetsu Region Is Prone to Landslides

From 2006 to 2013, Niigata Prefecture experienced 770 landslides, the highest number of cases in Japan. In Nagaoka City, steep slopes collapsed at 51 locations, debris flows occurred at 39 locations, and landslides happened at 58 locations, recording a total of 148 cases. Unpredictable damage from such incidents is always a possibility.

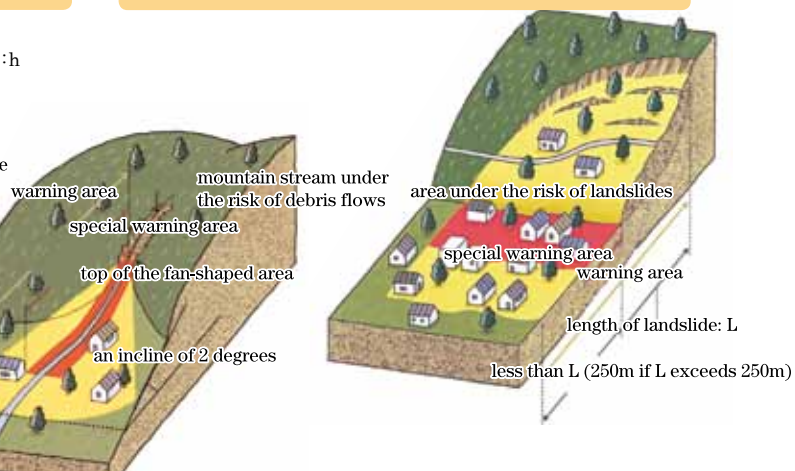
● Areas under the risk of landslide damage

- **Steep slopes under the risk of collapse**
Steep slopes of over 30 degrees and over 5 meters in height
- **Mountain streams under the risk of debris flows**
Mountain streams with a possibility of avalanches of rocks and earth
- **Areas under the risk of landslides**
Sloped areas with rivers, roads, public facilities, private houses, etc.

A steep slope under the risk of collapse



An area under the risk of landslides



A mountain stream under the risk of debris flows

● Areas where special countermeasures are required

- **Landslide warning areas:** Areas where warning and evacuation systems should be established.
- **Landslide special warning areas:** Areas with a higher risk of landslides. In addition to warning and evacuation systems, regulations regarding land development and building structures should be specified.

There are 774 landslide warning areas in Nagaoka City (among which 479 are marked as special warning areas). (as of March 2014)

Nagaoka City will draw landslide hazard maps sequentially and publicize the risk of landslides. The city will also continue to upgrade the system for transmitting information required for evacuation, as well as inspection tours by landslide patrols in an effort to prevent landslide disasters.

Niigata Prefecture has established the Landslide Disaster Information System for real time confirmation of the degree of a landslide disaster. This system can be accessed via computers or mobile phones.

Niigata Prefecture Landslide Disaster Information System

【PC】 <http://doboku-bousai.pref.niigata.jp/sabou/>
【Cell Phone】 http://doboku-bousai.pref.niigata.jp/sabou_m/



Be Aware of Precursory Phenomena

Unlike flood forecasts, it is very difficult to predict landslides. Since it is impossible to observe all the conditions of slope surfaces at various locations, the risk levels of possible landslides are judged by standardized levels of rainfall to determine the need for warnings or evacuation in each area. There were some cases in which lives have been saved by predicting possible landslides through observing precursory phenomena and evacuating before landslides occurred. The following types of phenomena have been the decisive factors. Take due precaution and try to evacuate as soon as possible if you feel any danger.

Collapse of Cliffs

Rain, snow-melt runoff, and earthquakes can cause the rapid collapse of slopes.

Debris Flows

Heavy rainfall causes rocks and soil from mountains and rivers to flow down rapidly.

Landslides

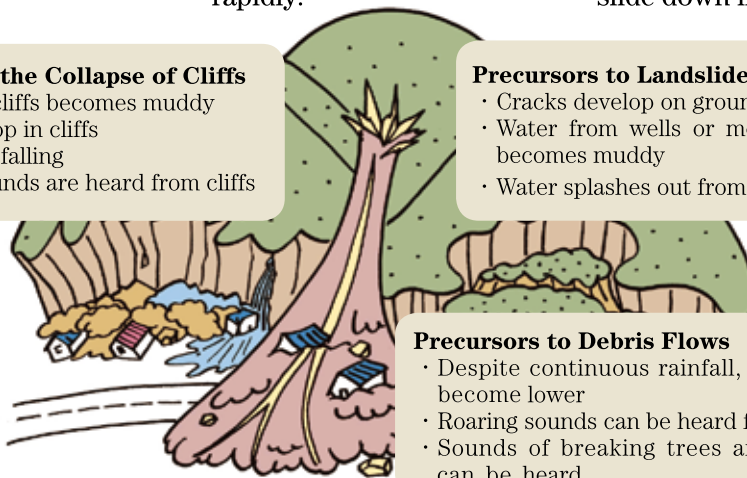
Rain and snow-melt runoff soak deep into the ground, making surfaces of slopes slide down intermittently.

Precursors to the Collapse of Cliffs

- Runoff from cliffs becomes muddy
- Cracks develop in cliffs
- Pebbles start falling
- Abnormal sounds are heard from cliffs

Precursors to Landslides

- Cracks develop on ground surfaces
- Water from wells or mountain streams becomes muddy
- Water splashes out from slope surfaces



Precursors to Debris Flows

- Despite continuous rainfall, river water levels become lower
- Roaring sounds can be heard from the mountains
- Sounds of breaking trees and colliding rocks can be heard

If you notice any precursory phenomena, please contact:

The River Management Division
The Department of Public Works
Nagaoka City Office

Phone: 0258-39-2233
Fax: 0258-39-2273

The River Administration Division
The Department of Regional Planning
The Bureau of Nagaoka Regional Promotion

Phone: 0258-38-2628
Fax: 0258-38-2676

The Erosion Control Division
The Department of Public Works
Niigata Prefectural Office

Phone: 025-280-5422
Fax: 025-285-9724

We often hear the expression that the chances of possible landslides are the greatest now than in the past several years. What does this mean?

It is generally said that a warning is called for if the amount of rainfall exceeds 20 milliliters per hour or 100 milliliters since the start of the rainfall.

The amount of water that ground surfaces can hold is limited. The Japan Meteorological Agency forecasts the risk degree of possible landslide damage by comparing soil and precipitation index values that have been recorded over the past 10 years. These index values show the amount of water accumulated in the soil. If you hear a prediction saying that the chances of possible landslides are the greatest now than in the past several years, it is necessary to take due precaution against landslide disasters.



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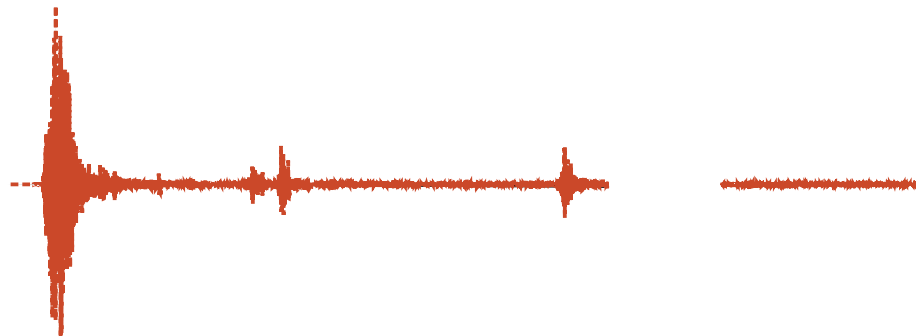
Preparation

Medical Emergencies

Earthquake! First, Protect Yourself

At 5:56 p.m. on October 23, 2004, an earthquake of magnitude 6.8 on the Richter scale registered an intensity of 6+ on the Japanese scale in the Yamakoshi and Oguni districts, and 6 in other larger areas, including the Nagaoka district.

It led to a great loss in Nagaoka City with 22 deaths, 2,376 wounded, 6 fires, and 86,778 structures damaged (up until October 1, 2006).



Oct. 23 5:56 p.m.

Earthquake Occurrence

Chûetsu Earthquake

0 - 2 minutes

2 - 5 minutes

Protect Yourself

- Take cover under a desk or table. (“Shake Out”)
- Open doors and windows to secure escape routes. It is important to check the conditions and secure an escape route as fast as possible, especially in apartment buildings and other buildings with only one entrance.
- Take care of open flames after the tremors have stopped.

Prepare for Aftershocks

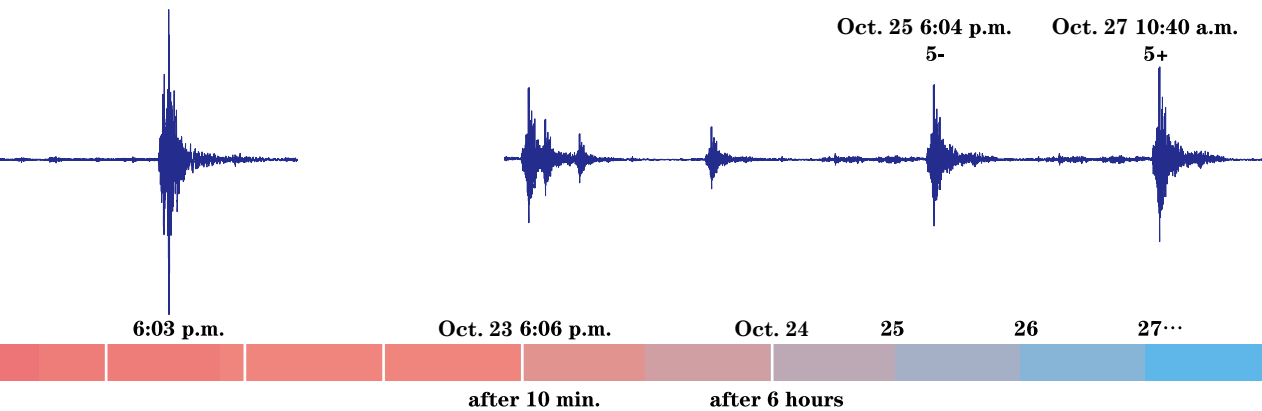
- Put on slippers or shoes to prevent injuring your feet. Be careful of broken glass, ceramics, etc.
- Make sure that your family is safe. Make sure that no one is trapped under fallen furniture.
- Turn off the circuit breaker and the gas at the main to prevent fire. Check other possible sources of fire, such as heaters.
- Extinguish fires as soon as possible.
- Evacuate buildings that seem likely to collapse.
- Stay away from areas where *tsunami* or landslides are likely to occur.

What is “Shake Out”?
(How to ride out an earthquake)



To Get Accurate Information:

- **Radio:** FM Nagaoka ...80.7 MHz NHK ... 837 kHz
FM Niigata ...77.5 MHz BSN ... 1062 kHz
- Do not use telephones unless absolutely necessary.
- **E-mail:** In the case of the Great Chûetsu Earthquake, cell phone e-mail worked relatively well, although it wasn't as effective in some areas.
- Get information via TV.
Do not make unnecessary phone calls.



5 - 10 minutes

Prepare for Evacuation

- Get emergency items ready.
- Listen to the radio to get the latest information about the situation.
- Shout for help if you can't handle the situation by yourself (for example, if you see someone with serious injuries or notice a fire break out).

10 minutes - a few hours

Cooperate with Your Neighborhood

- Ask the people living nearby if they are okay.
- Work with your neighborhood association or volunteer disaster prevention group. If you are having difficulties, don't be afraid to ask these groups for help.
- After you make sure you, your family, and your house are safe, before you evacuate, help extinguish fires and give first aid to other people.

Evacuation

- Evacuate on foot with only light baggage.
- Double check the gas main and the circuit breaker.
- Evacuate together with other people from your neighborhood.
- Watch out for falling objects.
- Avoid vending machines and concrete block walls, as they may fall over.
- Stay away from riversides, cliffs, and the seaside.

A few hours - 3 days

If something needs to be done, try to do it with the people around you.

- If your house is not in danger of being destroyed
 - Try to manage with the food and water you have at home, and share with your neighbors in need if you have extra.
 - Go to an evacuation shelter if you need first aid or information.
- At an evacuation shelter
 - Help things run smoothly at the evacuation shelter by cooperating with the other citizens, government officials, and facility personnel.

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Keep Calm Even When You Are Away from Home

● In a crowded area (department store, supermarket, movie theater, etc.)

- Cover your head with clothing or other personal belongings to protect yourself in case you fall or something falls on you.
- Do not rush to the exit, and please follow instructions given through any announcements or by people in charge.
- Do NOT use elevators, as they may stop due to power failure.



● In an elevator

- Press the buttons for all the floors and get off at the first available floor.
- In case it stops between floors, use the intercom to call for help.

● On the street

- Watch out for falling concrete block walls, signboards, and other objects that may fall, and protect your head with clothing or other personal belongings.



● While driving

- Just like when you have a flat tire, it's easy to lose control of your car, so avoid hard braking, slow down gradually, and pull over to the left side of the road.
- If you leave your car, make sure you close the windows, leave the doors unlocked, leave the key in the ignition, and take your valuables and safety inspection certificate with you.

● Near the seashore or cliffs

- If you feel any tremors while near the seashore, you should get to higher ground. A *tsunami* might hit in a few minutes.
- If you feel any tremors while near cliffs, leave the area right away.

Evacuation Using a Car

During the Great Chûetsu Earthquake, many people used their cars as evacuation shelters. There are some good points such as you can stay near your house, and you can keep your privacy. On the other hand, this increases the risk of Economy-Class Syndrome (Deep Vein Thrombosis) due to the lack of water and exercise. You need to take special precautions if you decide to stay in your car.

● Keep your body active

- Move your heels up and down for a few minutes once every hour. It is also helpful to move your legs often.
- Take a short walk once every two or three hours, making sure you lightly stretch and exercise your lower body.

● Keep yourself hydrated

- Drink sufficient amounts of water or juice.
- Avoid diuretics such as alcohol or coffee since they can lead to dehydration.

● Try to relax

- Wear loose, comfortable clothing.

● Do not take sleeping pills

- You might hurt your body by sleeping in an irregular position.

If your house falls down or you get crushed under falling furniture, it will be too late if rescuers come or you decide to take emergency countermeasures.

Make your house a safe and secure place by taking preventive countermeasures beforehand, such as:

- Have an earthquake-proof check done on your house.
- Repair and reinforce your house.
- Make sure your furniture and electrical appliances are firmly fixed in place.
- Don't put objects around your bed that might fall down on you.
- Secure enough space around the exits for escape.
- Prepare a radio, food, water, disposable toilets, etc.

These actions may lead to minimized damage due to earthquakes, and the saving of your life and your family's lives.

Once you make sure you and your family are safe, you should help and support your neighbors and people in your area. In the Great Chûetsu Earthquake, these actions were a great help to reduce the damage.

Efforts to Protect Yourself and Your Family, and Efforts to Protect Your Area from Disaster

Disaster Prevention and Disaster Reduction Start Here

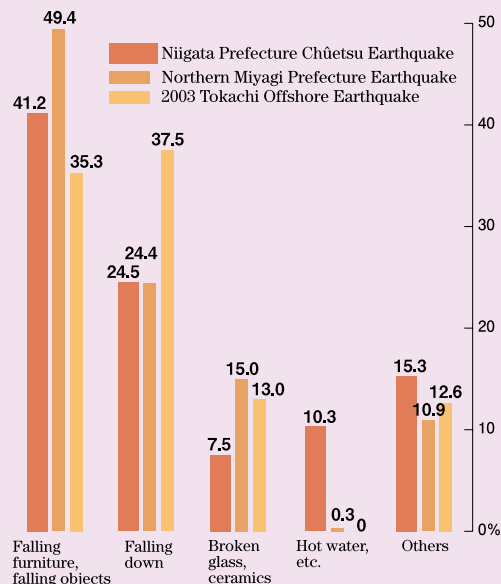
● A lot of people were injured by falling furniture

In recent earthquakes like the Great Chûetsu Earthquake, there has been a high rate of injury due to falling furniture and other objects. Furniture may fall over even during small tremors that don't damage buildings. Also, fallen furniture might block escape routes and rescue efforts.

It is important to make sure your furniture is secure and won't fall over for your own and your family's safety.



Injuries in Recent Earthquakes

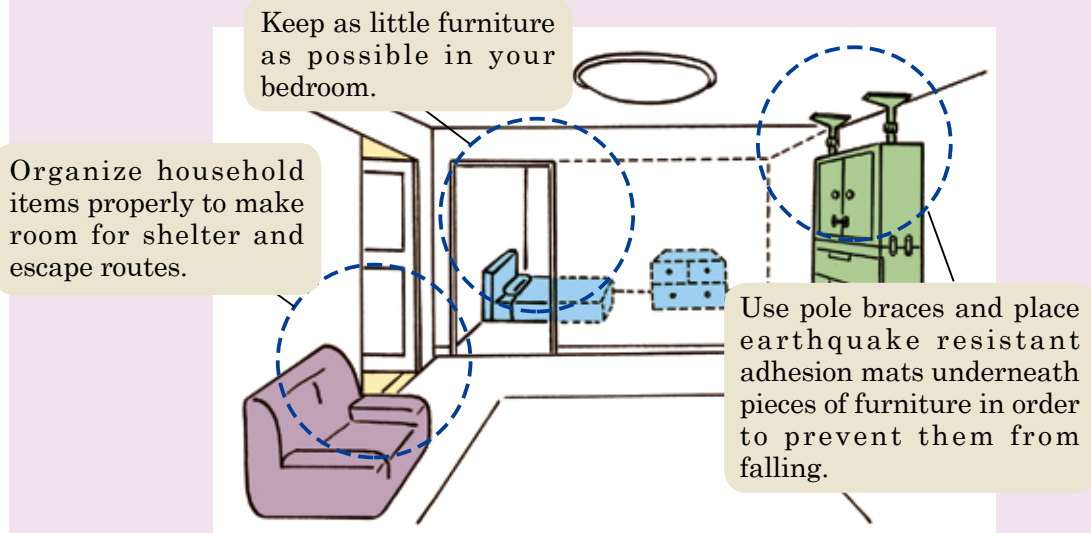


Source: The Metropolitan Fire Board, Examination by the Committee for the Promotion of Countermeasures to Prevent Falling Furniture and Objects (March 2005)

Protect Your Family from Falling Objects

Preparation

It is no exaggeration to say that falling furniture is the greatest risk during the initial tremors of an earthquake. To protect yourself from injury, take steps to prevent your furniture from falling.



● **Tips for Preventing Furniture from Falling**

Interlock upper and lower parts of furniture

· Furniture that is stacked up, computers, and TVs should be attached with metal fittings for safety.

Attach furniture to beams and pillars firmly

· Use L shaped fittings to attach furniture to beams and pillars. Before installing the fittings, check the strength of the pillars and ensure that the walls have firm foundations.

Place furniture in such a way that it does not fall easily

· Insert small wedges under furniture so that they lean against pillars or walls. When placing them on tatami mats, put boards under the furniture.

Prevent cupboard doors from opening and glass from breaking

· Put sheets of dispersal prevention film on the glass doors of cupboards. If both doors of the cupboard can be opened, fastening clips are also effective.

Examine Earthquake Resistance Levels

Preparation

An examination of earthquake resistance levels of a building is necessary to check its strength (resistance levels) against earthquakes. Can your house resist the tremors of powerful earthquakes? Evaluate your house by using the following tips for examining earthquake resistance levels. If you are not sure about one or more of the following check points, you are advised to contact experts for further examinations.

● Damage Levels

Due precaution should be taken for buildings that have not been repaired after being damaged by the 2004 Great Chûetsu Earthquake.

● The Year of Construction

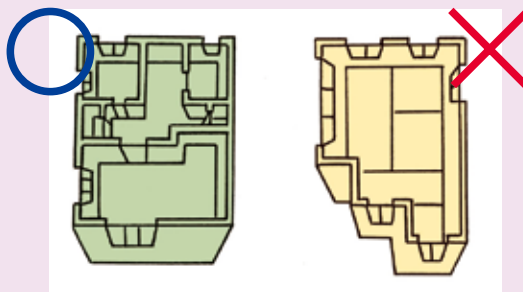
Due precaution should be taken for buildings that were constructed before June 1981, when the earthquake resistance standards were revised.

● Foundations

Wooden houses whose structures and foundations are not firmly connected as one unit are hazardous.

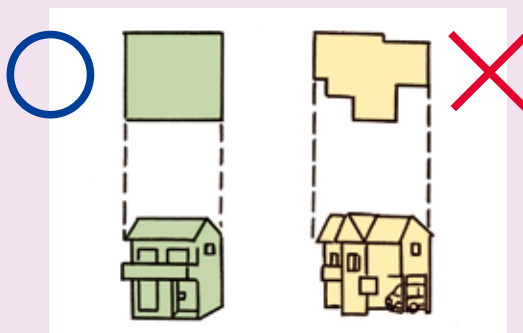
● Pillars and Walls

Wooden houses with more pillars and walls are generally believed to be stronger against earthquakes than those with fewer pillars and walls. It is also essential that walls be properly built at the 4 corners of the building. Due precaution should be taken for buildings with more windows and fewer partition walls between rooms.



● Shape

Buildings with simple shapes, without any uneven or irregular structures in both horizontal and vertical dimensions, are relatively safe. Precaution should be taken for buildings with complicated shapes with more irregular or uneven elements in the structures or buildings with high open ceilings.



Subsidies to Cover Costs for Examining Earthquake Resistance Levels and for Repairing and Reinforcing Houses Will Be Provided

Preparation

Examinations are required especially for buildings constructed before June 1981 when the earthquake resistance standards were revised. Each household is required to pay ¥10,000 and the city provides the rest of the necessary cost.

If your house needs to be repaired, the city recommends that you improve your house so that it will have the appropriate earthquake resistance level. The City of Nagaoka will subsidize 1/3 of the construction costs (up to a maximum of ¥600,000). For further information, please visit the city's website or contact the Urban Development Division, Nagaoka City Office.

For Further Information about Examining Earthquake Resistance Levels and Construction for Earthquake Resistance Improvement, contact

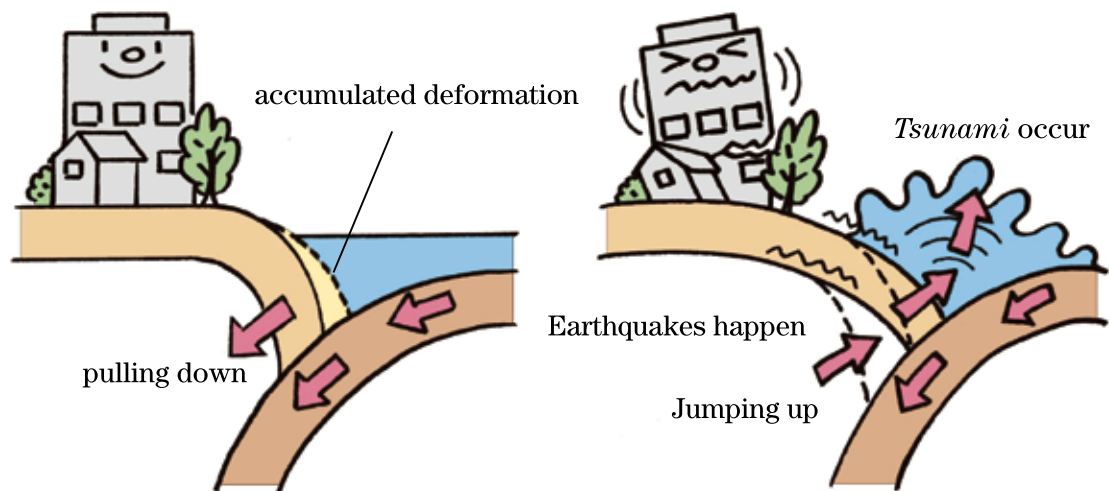
**Urban Development Division
Department of Urban Planning**

Phone: 0258-39-2226

Know More about the Mechanism and Fear of *Tsunami*

If a powerful earthquake occurs just below the seabed, the ground can rise or sink due to dislocations of faults. Because of this seabed deformation, the sea surface fluctuates, causing *tsunami*.

Tsunami are likely to hit a destination repeatedly, with both pushing and pulling actions.



The deeper the water level, the faster the *tsunami* speed becomes. Offshore, *tsunami* flow as fast as a jetliner. When closer to land, they are as fast as a bullet train. Therefore, it may be too late to run away if you see *tsunami* approaching the shore.

Furthermore, the height of waves varies greatly depending on the topographical formations of the areas around the seashore. Special precaution should be taken because *tsunami* rapidly advance up to land in these areas. Special precaution should also be taken in areas with specific geographical features such as V-shaped valleys because *tsunami* may become higher in these areas.

Learn about *Tsunami* Disaster from Previous Experiences

● Minor tremors resulted in major *tsunami*

Nearly 22,000 people were stricken by the 1896 *Tsunami* caused by the Sanriku Earthquake. It is said that the intensity levels of the tremors on the land were two to three on the Japanese seismic scale. This incident indicates that even a minor quake can cause major *tsunami*.

● *Tsunami* arrived in an instant!

Tsunami arrived at an unprecedented speed when the Hokkaidô Southwest Offshore Earthquake occurred on July 12, 1993. The *tsunami* hit Okushiri Island, which was close to the epicenter, three to five minutes after the occurrence of the earthquake. The dead and missing totaled 197. Okushiri Island was previously heavily damaged by a *tsunami* caused by the 1983 Japan Sea Central Area Earthquake. During this incident, the *tsunami* arrived 17 minutes after the occurrence of the earthquake. Because of this experience, some people were able to evacuate readily and safely in the 1993 incident by simply walking away before the *tsunami* arrived. Others, however, were affected by the *tsunami* because they didn't take quick action since they thought that they still had plenty of time to evacuate before the arrival of the *tsunami*.

● **The Most Powerful Tsunami in Recorded History**

During the 2011 Tōhoku Pacific Coast Off-Shore Earthquake of March 11th, approximately 19,000 people lost their lives. Most of them were victims of the powerful tsunami that rushed over and flooded the land. The tsunami reached heights of 40.5 meters (equivalent to about 10-story buildings), which is the highest in the history of tsunami observation. The reason for the unprecedented height of the tsunami is said to be due to multiple tsunami that were caused by tsunami generated around the epicenter and other tsunami caused by landslides that happened in the seabed to the north of the epicenter.

About Emergency Warnings

● **The Meteorological Agency established “Emergency Warnings” (effective August 2013) in order to announce the imminent possibility of unprecedented large-scale disasters.**

● **In Case of an Emergency Warning**

- Unusual heavy rain or large-scale tsunami are predicted.
- There is a high possibility of serious disasters.
- Please do your best to protect yourself.

● **Previous disasters that would have generated Emergency Warnings**

Examples of disasters that would have generated Emergency Warnings

Weather	July 2012 Northern Kyūshū Downpours (heavy rain) 2011 Typhoon No. 12 (heavy rain) 1959 Isewan Typhoon (heavy rain, storm, waves, high tide) 1934 Muroto Typhoon (heavy rain, storm, high tide, waves)	32 Dead or Missing 98 Dead or Missing 5,000 plus Dead or Missing 3,000 plus Dead or Missing
Tsunami	March 2011 Tōhoku Pacific Coast Off-Shore Earthquake July 1993 Southwest Hokkaidō Off-Shore Earthquake May 1983 Sea of Japan Earthquake	18,000 plus Dead or Missing 230 Dead or Missing 104 Dead (including earthquake victims)
Volcano Eruptions	2000 Miyake Island 2000 Mt. Usu 1991 Mt. Unzen	All residents evacuated Over 15,000 evacuated 43 Dead or Missing
Earth- quakes	March 2011 Tōhoku Pacific Coast Off-Shore Earthquake June 2008 Iwate-Miyagi Nairiku Earthquake July 2007 Niigata Prefecture Chūetsu Off-Shore Earthquake October 2004 Niigata Prefecture Chūetsu Earthquake January 1995 Southern Hyōgo Prefecture Earthquake	18,000 plus Dead or Missing (tsunami-victims included) 23 Dead or Missing 15 Dead 68 Dead 6,437 Dead or Missing

● **Disasters are possible even though no emergency warnings are issued.**

- You are advised to act as early as possible by paying due attention to cautionary notices, warnings, and other weather information.
- You are advised to prepare for possible disasters by checking the locations of evacuation shelters and evacuation routes.

(see the Emergency Warning Leaflet published by the Meteorological Agency.)

Storms and Floods

Landslides

Earthquakes

Tsunami

Fires

Snow Damage

Preparation

Medical Emergencies

Running Away is the Best Policy!

- **If you feel a tremor on the shore, move immediately to higher land**
A tsunami may appear immediately after the tremor without any withdrawal of coastal waters. Also, tsunami may hit repeatedly.
- **Tsunami can flow many kilometers upstream into rivers, so you are also advised to stay away from rivers**
The tsunami that flow into rivers travel very fast. Therefore, it is dangerous to use roads that run along rivers or to cross bridges while evacuating.
- **Confirm the location of your evacuation shelter and the route to get there**
It is helpful to estimate the amount of time necessary for evacuation on foot by actually walking along the evacuation route.



When tsunami cautions or warnings are issued in the Teradomari District or the district is under the risk of approaching tsunami, residents in the district and beachgoers on the shore will be notified through disaster prevention loudspeakers installed throughout the district.

Pay Attention to Tsunami Forecasts

The Meteorological Agency issues a tsunami forecast about two to three minutes after an earthquake occurs. Depending on the estimated heights of the tsunami, tsunami warnings or tsunami cautions will be issued.

Even a distant earthquake can cause tsunami. They may also flow upstream, causing damage to the inland areas.

Kinds of Warnings	Criteria
Huge Tsunami Warning	Tsunami of 3 meters or higher are predicted.
Tsunami Warning	Tsunami of 1 - 3 meters are predicted.
Tsunami Cautionary Notice	Tsunami of 20 cm to 1 meter that may cause damage are predicted.

Approximately 15 minutes after the Niigata Earthquake of 1964, a tsunami around 4 meters high hit the coastal area of Niigata City.

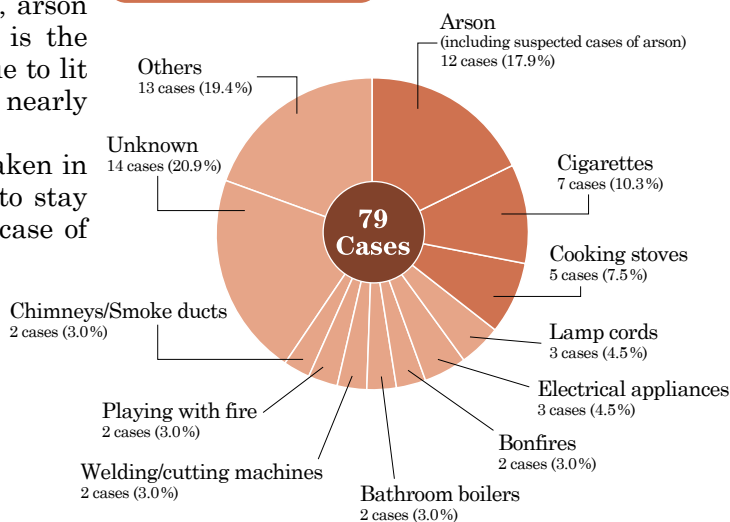
The tsunami caused tremendous damage to school buildings and bridges in the area along the coast, especially along the Shinano River, as well as to the Niigata Airport and Niigata Harbor.

Arson Is the Leading Cause of Fires

Nearly 100 fires break out in Nagaoka City every year. Among the causes of fires, arson (including suspected cases of arson) is the top. Fires that broke out in houses due to lit cigarettes and gas ranges account for nearly 20% of the total cases.

Due precaution should always be taken in each household. It is also important to stay calm and take appropriate action in case of an emergency.

Causes of Fires (2013)



Source: Fire-Fighting Yearbook
Nagaoka City Fire Department Headquarters

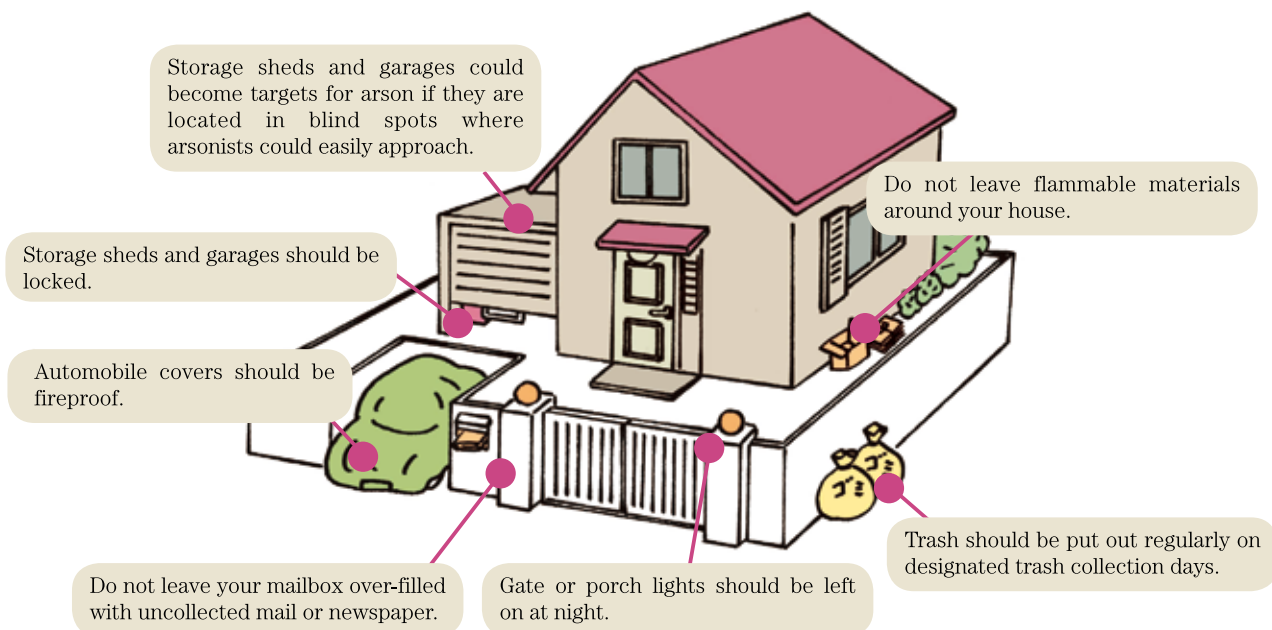
Prevent Fires

● Prevent Fires in Houses

- Do not leave any flames unattended.
- Do not place any flammable objects around heat generating devices such as space heaters.
- Do not smoke in bed.
- Do not toss cigarette butts. Put them out in ashtrays.
- Do not attach multiple plugs into one electrical outlet.
- Do not forget to periodically check possible sources of fires.
- Do not make bonfires on windy days.



● Tips for Preventing Arson



Storms and Floods

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Tsunami

Fires

Snow Damage

Preparation

Medical Emergencies

Shout Out Loud, "Fire!"

1 Inform anyone nearby of the fire

- First, evacuate children and the elderly. Then, inform anyone nearby of the incident and try to put out the flames.
- Even if you think it is a small fire, shout out loud to inform your family members and neighbors. If you are unable to speak, bang on nearby things to inform others that something unusual has happened.
- Even a small fire should be reported by calling 119. If you are the closest one to the flames, ask someone else to call 119 and concentrate on putting out the flames.



2 Put out flames

- Try to put out flames by any available means.
- Use a fire extinguisher to put out flames arising from a heated pan filled with cooking oil for deep-frying, or soak a large bed sheet in water and cover the flames with it to shut out the air to extinguish the flames.
- For fires caused by electrical appliances, in order to prevent shock, pull out the plug first and then close the circuit breaker before extinguishing the flames.



3 Run away

- When flames climb to the ceiling, initial attempts at extinguishing the fire become extremely difficult. Evacuate immediately.
- When evacuating, close the doors and windows of burning rooms to prevent flames from spreading.
- Never use elevators while evacuating because they are likely to become inoperable during a fire.

Smoke Is the Most Dangerous Foe!

- When a fire breaks out, smoke should be feared as much as flames. Because a large quantity of smoke is generated and spreads quickly during the initial stages of a fire, if you panic at the sight of the flames, visibility gradually deteriorates. There are many cases in which victims have been caught up in the smoke, resulting in carbon monoxide poisoning or suffocation.
- Smoke rises very quickly. If you notice that the room is filling with smoke, immediately evacuate outdoors.

Even if smoke fills the entire area, relatively clean air still remains at a lower level. Evacuate by keeping yourself in a low position with your nose and mouth covered with a handkerchief in order to avoid inhaling the smoke.



Does Your House Have Fire Alarm Devices?

Preparation

Prepare for Fires

Fires

Fires that break out in private houses counted for about 60% of all fires. There has been an increasing number of people who have lost their lives due to fires year after year. Starting on June 1, 2006, every household is required to be equipped with automatic fire alarm devices in accordance with the revision of the Fire Service Act.

What Are Household Fire Alarm Devices Like?

- Fire alarm devices automatically emit a buzzing noise or a recorded voice when they sense smoke caused by possible early-stage fires. There are two types of household fire alarm devices. One is a single-unit type that uses batteries. Installation of this type of device is simple, but only one unit will sound when it detects smoke. The other type is an integrated type that is connected to the household power source. To install this type, the in-house electrical wiring is used. As all units of this type are integrated, they will all sound if even one of them senses smoke.
- The battery operated devices can be purchased from fire-fighting equipment distributors, electrical equipment installation companies, electrical appliance stores, DIY shops, etc. for around ¥6,000 - ¥10,000. Please be sure to purchase devices with the NS inspection mark.

Housing to Be Equipped with Fire Alarm Devices

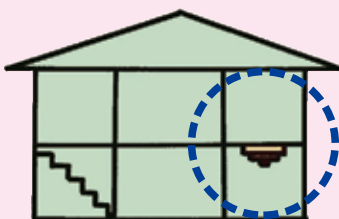
- Every house, condominium, apartment building, or other type of residential building where automatic fire detectors or sprinklers have not been installed should have fire alarm devices installed.

Places to be Equipped with Fire Alarm Devices

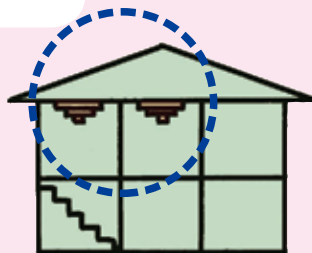
- Bedrooms: Every room that is used for sleeping
- Staircases: Over the top of the staircase of all floors with bedrooms
- Others: Corridors with more than five rooms, even if these rooms are not bedrooms, if each of the rooms is over seven square meters (about 4.5 *tatami* mats)



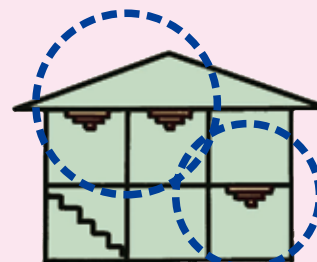
The Japan (*Nippon*) Fire-Fighting Service (*Shôbô*) Inspection Association



If bedrooms are only on the 1st floor, the devices should be installed in the bedrooms. It is not necessary to install them over the top of the staircase.



If bedrooms are only on the 2nd floor, the devices should be installed in the bedrooms and over the top of the staircase.



If bedrooms are on both the 1st and 2nd floors, the devices should be installed in the bedrooms on both floors and over the top of the staircase.

Storms and Floods

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Medical Emergencies

For Households with Younger Children

Preparation

Children, who are usually full of curiosity, watch adults using lighters and turning on space heaters or gas ranges.

A fire may break out when children are home alone or when they are not properly attended. It is advisable for children to be taught, from time to time, how dreadful fires are and how hazardous it is to play with matches, lighters, or flames. This is a way to keep your household environment safe. Here are some suggestions.

- Do not leave lighters out on tables or in other easily accessible places.
- Do not leave any flammable objects such as sparklers within children's reach.
- Space heaters should be equipped with child safety locks so that children cannot turn them on.
- When using space heaters, do not place them near children's beds.

Helpful Things during Initial Fire-Fighting Efforts

Preparation

● Every Household Should Be Equipped with Fire Extinguishers

Fire extinguishers are an indispensable tool to help minimize the damage caused by fires. It is recommended that you equip your household with fire extinguishers and that you also learn how to use them.

A fire extinguisher deteriorates over a long period of time even if it has not been used. The applicable life span of a fire extinguisher, if it is stored in good conditions, is eight years. For household use, the life span is roughly five years. Do not use fire extinguishers that are past their expiration date or those with visible abnormalities such as rust or scratches. For proper disposal, ask the store where you purchased the extinguisher or other specific dealers.

● Make Use of Remaining Water Kept in a Bathtub

Water left in the bathtub after bathing can be effectively used when a fire breaks out. Keep a bucket handy in order to scoop out water as needed. However, precaution should be taken in order to prevent younger children from falling into the water-filled bathtub, which may lead to a fatal drowning accident.

Fire Alarm Devices and Fire Extinguishers Cannot Be Purchased from the Fire Department

Due precaution should be taken against devious visiting salesmen who try to sell fire extinguishers. If you have been cheated or charged extraordinarily high amounts, it is possible to nullify the contract within eight days from the receipt date of a contract document or an invoice. This system is known as cooling-off. If this happens to you, immediately contact the Nagaoka City Consumer Affairs Center.

Telephone: 0258-32-0022 Hours: 9:30 a.m. – 4:30 p.m., Monday to Friday

Consultations and Inquiries about Household Fire Alarm Devices

Household Fire Alarm Unit Consultation

Toll Free Number: 0120-565-911

- Nagaoka City Fire Department Headquarters
Household Fire Alarm Device Consultation Direct Line: **0258-35-2193**
- The Nagaoka Fire Department
Fire Prevention Division: **0258-35-2190**
- Nagaoka City Yoita Fire Station: **0258-72-2572**
- Nagaoka City Tochio Fire Station: **0258-52-1155**

In addition to the above offices, please feel free to contact your nearest fire department branch office.

Protect Yourself from Accidents during Snow Removal Operations on the Roof

Of the human casualties during the heavy snowfall of 2012 when the Disaster Relief Act was applied, the top cause of accidents in Nagaoka City occurred during snow removal operations on the roof, with 27 incidents. This was followed by 8 accidents that occurred during snow clearance around houses, and 3 accidents caused by snowplows. Looking at the accidents by age group, more than 80% of the accidents occurred with people over the age of 50. The effects of depopulation and aging, which resulted in a shortage of snow removal workers as well as increased numbers of senior citizens who were forced to work alone, appear to have a direct connection to the causes of accidents.

Furthermore, the widespread use of snow melting pipes in recent years has cleared the snow off of some streets. As a result, a fall from a rooftop could result in serious injury. Please be very careful.



● Snow Removal from Your Roof

- Do not work alone and make certain your neighbors are aware when you are working on a rooftop.
- Do not work at night or in the dark, as it is dangerous.
- Make sure that no one is under the eaves or at the edge of the eaves.
- Do not dump snow onto the road or into rivers and canals. Dumping snow on the road could cause a serious accident. Snow removed from your roof should be placed in an appropriate area.

● Preventing Accidental Falls

- Falling accidents occur quite often while working on a rooftop. Please use a safety rope to prevent falling and work with as many people as possible.
- As a tin roof can be very slippery, try to prevent accidents by leaving some snow on it.

● Learn from the Knowledge of Elders

- If you are not familiar with snow removal, ask the older people in your neighborhood for tips and advice.



Overcome Heavy Snowfall as a Community

● Cooperate for Smooth Snow Removal Operations

- Do not park your car on the road since it may interfere with snow removal.
- In advance, put markers on objects such as fences and hedges, which could possibly be damaged during snow removal.
- You should contact and discuss with highway and road management offices before conducting snow removal operations along national highways and prefectural roads. Try to arrange snow removal operations at the same time with your neighbors.
- Telephone inquiries should be consolidated with a single call from the neighborhood association.



● Be Careful

- When road conditions become poor due to heavy snowfall, the arrival of fire engines may be delayed if a fire breaks out. Try to prevent fires caused by space heaters that use kerosene or natural gas as fuel.
- Some communities may be cut off or face the danger of an avalanche. Be prepared to evacuate immediately to safety in case of an emergency by cooperating with your neighbors.



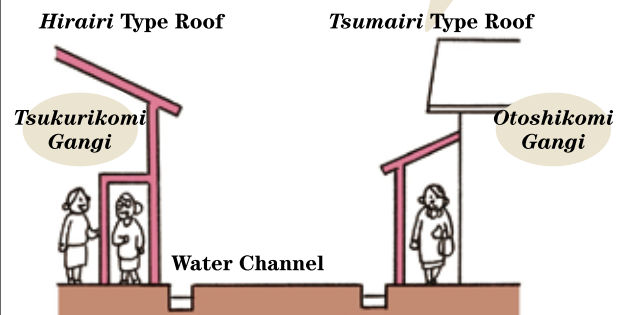
Protect Your Community with the Sharing and Caring Spirit of Gangi (Covered Sidewalks)

Owners of houses along roads traditionally provide the front part of their property to build snow-free pathways by extending their eaves. These covered sidewalks are known as “gangi.” In areas of heavy snowfall such as the Tochio District and central Nagaoka, they are important walkways in winter. Even on a rainy day or a hot, sunny day, this space becomes a very valuable place for passers-by and neighbors to enjoy chatting with each other. *Gangi* sidewalks are places for casual communication and these casual relationships are of great importance in emergencies as well as crime prevention.

To help prevent disaster and crime, we would like to continue to reflect on the sharing and caring spirit of *gangi*, which is built on a belief in mutual support by providing pedestrians the right to walk through private lots.

There are two types of *gangi*. One is called “*Tsukurikomi Gangi*” (built-in type), which is built as part of the house under the roof at the time of construction, and the other is called “*Otoshikomi Gangi*” (extended type), which is built by attaching extended eaves to the external part of the house.

Originally “*Tsukurikomi Gangi*” was built for rows of houses with *hirairi* type roofs (the entrance is under the eaves) and “*Otoshikomi Gangi*” was built for rows of houses with *tsumairi* type roofs (the entrance is under the gable). “*Otoshikomi Gangi*” was said to have originated in Nagaoka City.



Source: “*Shin Yukiguni Monogatari, Yuki Wa Jamamonoka*” (The New Story of Snowy Areas, Is Snow Just a Nuisance?)
By Tetsu Suzuki, Popura Publishing Co.

Use the Subsidy System

Preparation

Support for the Promotion of Snow Damage-Proof Houses

● Financing Program for Snow Damage-Proof Houses

[Public Buildings and Housing Division, Department of Urban Planning]

This loan program offers applicants a lower interest than that for ordinary houses for the construction of snow damage-proof houses and upgrading roofs on existing houses to snow melting roofs.

● Support Program for Building Snow Damage-Proof Houses in Nagaoka City

[Public Buildings and Housing Division, Department of Urban Planning]

In the districts of Oguni, Yamakoshi, and Tochio, for requests that meet the standards of assistance regulations the city will subsidize up to ¥440,000 to build houses with snow melting devices. For building houses with snow-sliding roofs or reinforcements, a maximum of ¥330,000 can be subsidized.

● Exemption of Fixed Assets Taxes on Snow Melting Roofs

[Fixed Assets Tax Division, Department of Financial Management]

For the promotion of snow melting roofs, the fixed assets taxes on snow melting devices in the construction of snow melting roofs are exempted.

Subsidies for Households that Need Consideration

● Subsidies for the Cost of Snow Removal Operations for Households that Need Consideration

[Social Welfare General Affairs Division, Department of Social Welfare and Health Care]

For the prevention of accidents and elimination of anxiety caused by snow removal tasks, financial assistance is offered to the elderly, single mothers, and other households with special needs, if all of the following conditions are met:

- The household has difficulty removing snow by itself.
- The household receives city tax exemptions.
- The household is unable to get labor or financial assistance from relatives.

Contacts for Inquiries on the Subsidy System

Public Buildings and Housing Division, Department of Urban Planning

0258-39-2265 (Public Housing Policy Section)

Fixed Assets Tax Division, Department of Financial Management

0258- 39-2213 (Housing Section)

Social Welfare General Affairs Division, Department of Social Welfare and Health Care

0258- 39-2217 (General Affairs Section)

Warning Signs of Possible Avalanches

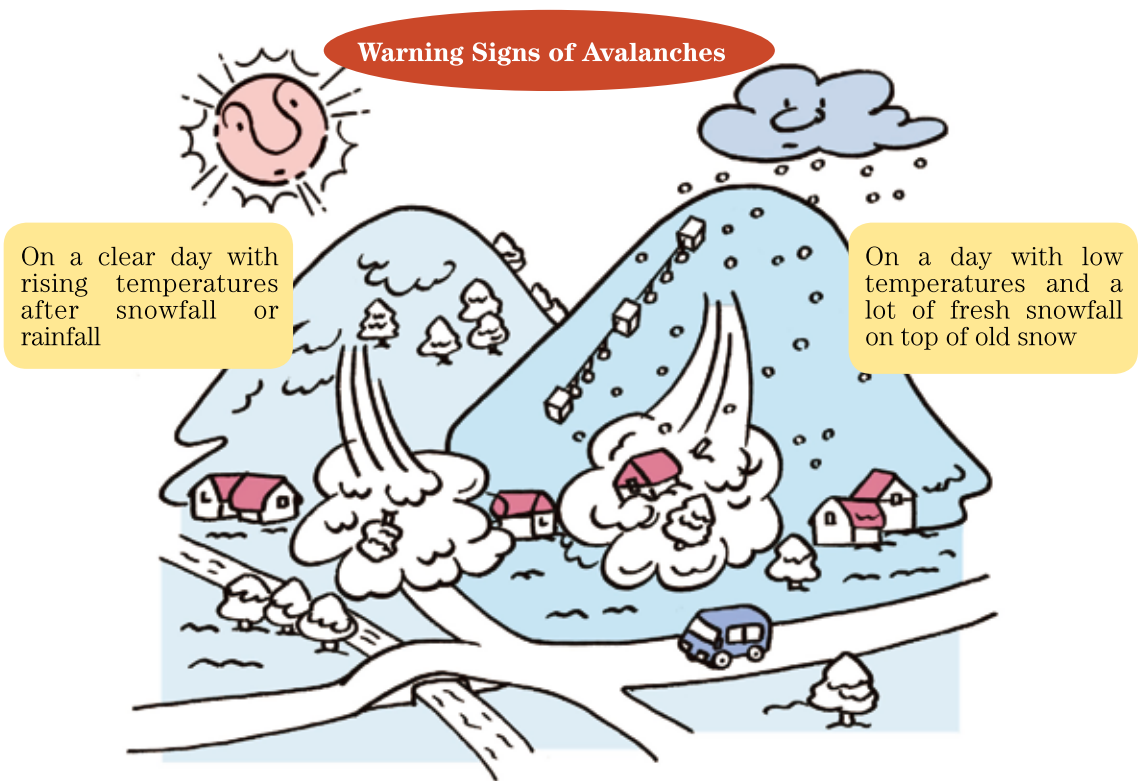
If snow accumulates on a slope, there is always a possibility of an avalanche. Be absolutely cautious under the following conditions.

Conditions Likely to Cause Avalanches

- Snowfall of more than 50 centimeters with a wide range of temperature fluctuations
- Snow built up more than 50 centimeters high with temperatures of 8°C or higher or rainfall of more than 20 millimeters per day

Stay away from these Dangerous Places

- Steep slopes of mountains
- Overhanging snow
- Near cracks in the snow on a slope



Watch for Disasters from Melting Snow in the Spring

Disasters from melting snow include increased water levels in rivers due to rapidly melting snow, landslides, and sliding earth and rocks. On May 15, 1984, there was a landslide of over 3 hectares near Mt. Sarukura in the Ôta area of Nagaoka City. It completely wiped out six houses at the foot of the hill. The landslide occurred as a large amount of snow that had accumulated in the winter melted from rising temperatures and the mountain became saturated with water.

The amount of melting water on a warm day, if converted to terms of rainfall, could reach up to 100 millimeters a day, which is more than the usual amount of rainfall during the rainy season. It is necessary to be aware of the danger of melting snow not only in winter, but also in spring.

Have a Disaster Prevention Meeting with Your Family

Preparation

- Check Dangerous Spots Inside and Outside Your House Regularly
- Decide How to Contact Each Other and Where to Meet in Case a Disaster Occurs

Also think about some other cases such as if you can't reach the meeting place you chose.

- Prepare Emergency Items to Take with You in Case of an Emergency

The City of Nagaoka has emergency supplies of blankets and makeshift toilet facilities in stock. However, every resident is advised to prepare for emergency items necessary to be self-sufficient for at least three days or if possible, about one week. What you need depends on your/your family's lifestyle. Some items for your pets should be included. See also the checklist on the back of the booklet.

Decide where each person will take shelter.



Decide who will be in charge of which emergency items.

Decide who will be in charge of taking care of fire sources.

Decide where to meet.

Check on the Safety of Your Loved Ones with This Message Service

- Disaster Emergency Message Number (171)

You can easily record messages and listen to other people's messages by dialing 171.

To record your message: **1 7 1** → **1** → **0 0 0 (0 0 0) 0 0 0 0**

Listen to the instructions

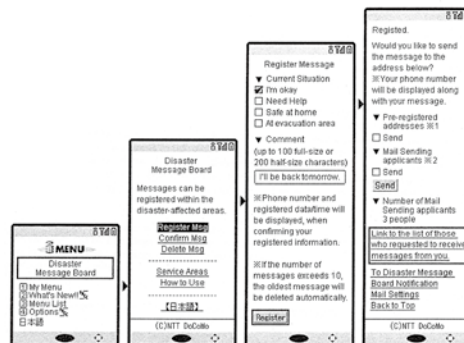
Disaster victims enter their home phone number and people outside the disaster area enter the victim's phone number

To listen to other people's messages: **1 7 1** → **2** → **0 0 0 (0 0 0) 0 0 0 0**

- Disaster Message Board

The Disaster Message Board is provided by cell phone companies, and can be used to input your message and check other people's messages on your cell phone and the Internet.

Format varies according to cell phone companies. Ask your cell phone company for further information.



<http://www.nttdocomo.co.jp/english/info/disaster/guidance/index.html>

- Safety Check Information System

Safety Check Information System

(Nagaoka Disaster Prevention Information)

[PC] <http://www.bousai.city.nagaoka.niigata.jp/>

[Cell Phone] <http://www.bousai.city.nagaoka.niigata.jp/anpi/>



Storms and Floods

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Medical Emergencies

Every Citizen Is a Disaster Prevention Standby – Help Each Other –

Preparation

There is a limit to how much the City or the Fire Department can do right after a disaster occurs. In an emergency, it is the people in the neighborhood who can offer help first.

The greater a disaster is, the more important it is to help each other in your area. Communicate regularly with your neighborhood association or volunteer disaster prevention group.

●Support for People Who Need Special Assistance

The elderly, disabled, babies and infants, and international residents who have difficulties communicating in Japanese, are usually the people who have trouble realizing the danger and the need to evacuate during a disaster. These are people who need special assistance during emergencies. Through socializing with these people, it is important for the community to develop a sense of what kind of assistance they will need, and for you to think about what you can do personally to help them.

●Cooperating to Manage Evacuation Shelters

Opening and managing an evacuation shelter is to be done with the cooperation of facility personnel (school personnel, etc.), city officials, local residents, and the evacuees themselves. Keeping mutual help and concession in mind, figure out how to support people who need special assistance, keep accurate counts of the numbers of evacuees, and help distribute emergency supplies to keep the evacuation shelter running smoothly.

●Disaster Prevention Drills

Participate in disaster prevention drills regularly to gain experience so that you can act smoothly during actual emergencies.

●Participate in Disaster Prevention Checks

There are some places you should stay away from during disasters, and some useful equipment for fire-fighting or rescue efforts. Gathering this information with your neighbors to make an emergency map is another safety recommendation.



●Participate in Festivals and Cleaning in Your Community

Communicating with your neighbors daily is the most important thing to help you feel secure. You can get information from them through these activities.

●Become a Chûetsu Citizens' Disaster Prevention and Safety Officer

The Chûetsu Citizens' Disaster Prevention and Safety College was established for the purpose of training "Chûetsu Citizens' Disaster Prevention and Safety Officers" to be the leaders of disaster prevention in the community. For further information, call the Chûetsu Organization for Promoting Disaster Prevention and Safety at 0258-39-5525.



What is the Association of Chuetsu Citizens' Disaster Prevention and Safety Officers?



The City of Nagaoka established the Chûetsu Citizens' Disaster Prevention and Safety College in 2006 for the purpose of training “Chûetsu Citizens' Disaster Prevention and Safety Officers” to be the leaders of disaster prevention in the community. In 2007, the Association of Chûetsu Citizens' Disaster Prevention and Safety Officers consisting of the graduates of the college started their activities. Currently, the Association has departments for General Affairs, Public Relations, Emergency First-Aid Promotion,

Self-Disaster-Prevention-Group Support, and Radio Information. Their activities to promote community strength for disaster prevention include the following:

① Disaster Prevention Consultations

In order to ensure the safety of the community on a daily basis, they accept visitors on inspection tours to the Civic Disaster Prevention Center as well as offer consultations regarding disaster prevention for disaster-self-prevention groups and neighborhood associations at the Civic Disaster Prevention Center on Mondays, Wednesdays, Thursday, and Fridays from 9:00 a.m. to 5:00 p.m.

② Presentations of Disaster Prevention Activities

In collaboration with the City of Nagaoka and the Chûetsu Disaster Prevention and Safety Promotion Organization (a public interest incorporated association), they introduce disaster-self-prevention groups with innovative activities. These presentations, which are held about twice a year, also provide participants with information about disaster prevention.

③ Training Programs

They dispatch members to disaster-self-prevention groups and neighborhood associations in order to support lifesaving training programs with AEDs (Automated External Defibrillators) and fire fighting training programs.



④ Participation in Disaster Prevention Events

During various disaster prevention events, they set up booths where they publicize the activities of the Association of Chuetsu Citizens' Disaster Prevention and Safety Officers and have consultations for neighborhood communities.

For further information:

The Association of Chûetsu Citizens' Disaster Prevention and Safety Officers

0258-77-3918

Storms and Floods

Landslides

Earthquakes

Tsunami

Fires

Snow Damage

Preparation

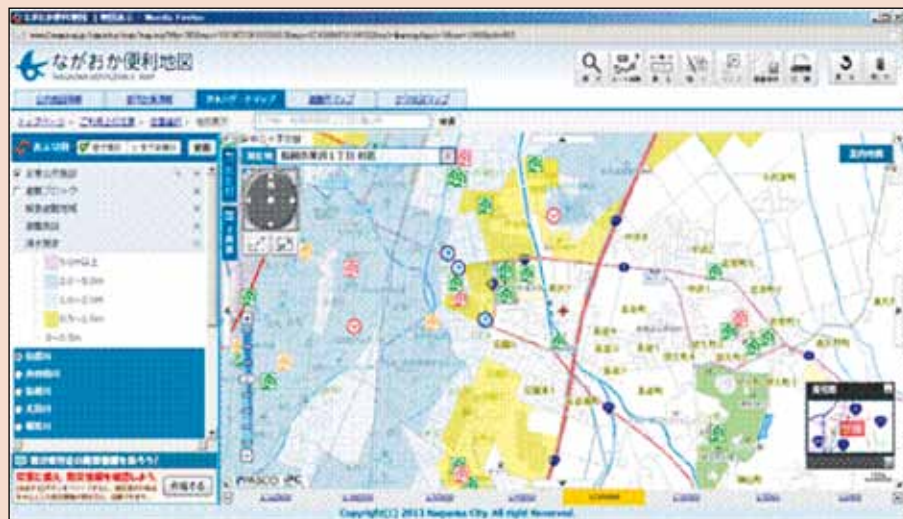
Medical Emergencies

Make the best use of the Flood Warning Hazard Map

- The Flood Warning Hazard Map gives information about possible inundation levels in your neighborhood if heavy rain causes the following rivers to overflow:
The Shinano, the Kariyata, the Saruhashi, the Inaba, the Suyoshi, the Kaki, the Jôdo, the Dôman, the Shôbu, the Ogijô, the Kuro, and the Shibumi
- You, along with your family and neighbors, are advised to always think about the route to evacuation facilities and things to take with you.

How to Check via Online Map

- You can refer to 「ながおか便利地図」 /Nagaoka *Benri Chizu* (Useful Nagaoka Map) on the city's official website. (<http://www2.wagmap.jp/nagaoka>)



How to Check via Brochure

- You can download the brochure from 「計画・様式など」 /*Keikaku · Yôshiki Nado* (Plans, Forms, and Others) on the city's disaster prevention website. (<http://www.bousai.city.nagaoka.niigata.jp>)
- Copies are also available at the Crisis Management and Disaster Prevention Headquarters. If you would like a copy, please contact the headquarters.

Access information via the city's website!

- You can always find useful information about disaster prevention on the city's official website. Please make the best use of it to improve your disaster prevention.

Nagaoka Disaster Prevention Website (<http://www.bousai.city.nagaoka.niigata.jp>)

- You can check the website for various information about disaster prevention.



Information includes:

- Emergency Information from the City
- Disaster Prevention News
- Disaster Records
- Evacuation Shelter Information
- Disaster-Self-Prevention Group Information
- Earthquake Simulation Vehicle Information
- Hazard Map
- Pamphlet

Nagaoka City Disaster Prevention Weather Information (<http://nagaokacity.bosai.info>)

- You can refer to disaster prevention weather information focusing on Nagaoka City.



Information includes:

- Rainfall Observation Information
- Water Level Observation Information
- Accumulated Snowfall Information
- Live Cameras
- Rain Cloud Conditions
- Registration for Receiving Weather Information E-Mail

「ながおか便利地図」/Nagaoka Benri Chizu (Useful Nagaoka Map) (on the Nagaoka City Website) (<http://www2.wagmap.jp/nagaoka>)

- You can easily confirm disaster prevention information via the following e-maps. Evacuation Shelter Map, Flood Warning Hazard Map, Bear Warning Map, and AED Map

How to Take Care of Injuries

Severe Bleeding

●Applying Direct Pressure Hemostatic Method

- Make sure of the position of the wound, cover it with some pieces of cloth (handkerchief, gauze, etc.) and press down on it firmly. Also, bleeding will stop faster if you raise the wounded spot higher than the heart.

When you give first aid, make sure you cover your hands with plastic gloves or plastic bags, as touching blood directly may cause infection.



Possible Bone Fracture

- If there is any possibility of a fracture, do not try to set a broken bone. Immobilize the broken part with any stiff items that are readily available around you, such as pieces of wood, magazines, cardboard, etc.
- If the injured area is sprained or bruised, cool it off to prevent bleeding or swelling. Don't put ice directly on the skin.



Symptoms

- **The area looks unnatural**
- **Bones sticking out from the flesh**
- **Swelling**
- **The person is suffering in pain**

Burns

- Cool off the burned area as soon as possible with clean running water for at least ten minutes.
- If the burned area is large, avoid long periods of cooling to prevent the victim's body temperature from dropping too much.
- Don't try to remove any clothing unnecessarily. Cool off the burn with the victim's clothes on.
- Be careful not to break any blisters.



First aid classes for the hemostatic method and CPR (Cardio-Pulmonary Resuscitation) are available. Learn the basics of first aid with your neighborhood association and a volunteer disaster prevention group.

For further information:

Nagaoka City Fire Department Headquarters (Phone 0258-36-0119)

CPR (Cardio-Pulmonary Resuscitation)

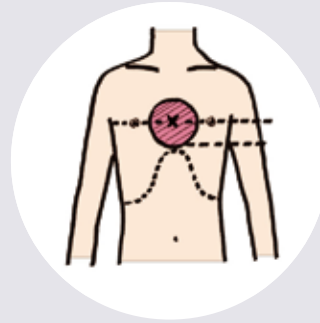
When You See Someone Collapse, or Find Someone Lying on the Ground

●How to perform CPR

- (1) Check for consciousness by talking to and patting the victim on the shoulder.
- (2) If the victim is NOT conscious, shout for help. Ask people nearby to dial 119 and get an AED (Automated External Defibrillator).
- (3) Lay the victim face up and check to see if the victim is breathing or not. Look for chest movement or breathing through the mouth.
- (4) If the victim is not breathing, immediately perform 30 chest compressions.
 - ① Place your hands, one on top of the other with the heel of your bottom hand in the center of the victim's chest, three finger-widths up from the bottom of the sternum (breastbone).
 - ② Push down firmly using your weight so that the victim's chest goes down about four or five centimeters. These chest compressions should be done at rate of about 100 times per minute (about 18 seconds for 30 compressions).
- (5) After giving the victim 30 chest compressions, immediately perform artificial respiration mouth-to-mouth twice.
- (6) Continue repeating the sequence of 30 chest compressions and two artificial breaths until an AED or an ambulance arrives at the scene.

●First Aid with an AED (Automated External Defibrillator)

- (1) Open the cover and turn it on.
- (2) Place the electric pads on the victim's chest as shown in the illustration on the right.
- (3) The AED automatically starts analyzing the victim's heart rhythm. If this message “電気ショックが必要” (electric shock required) appears, press the flashing button to apply an electrical shock. Make sure nobody is touching the victim before you do this.
- (4) Continue the first aid according to the audio instructions.
- (5) Repeat (4) until emergency services or a doctor arrives.



What is an AED (Automated External Defibrillator)?

When the heart's ventricles are twitching, a condition known as ventricular fibrillation occurs, in which the ventricles are unable to deliver blood to the rest of the body and is evident by a fatal irregular heartbeat. In this situation, an AED is a medical device that can be used to deliver an electrical shock to the heart to return to its regular rate.

Civilians in Japan have been allowed to use AEDs since July 2004. In Nagaoka, major public facilities have been equipped with AEDs.



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Checklist of Emergency Items to Take with You

This list includes items that you are advised to take first with you in an emergency.

- Keep them handy in a backpack.
- Prepare necessary items in a manageable amount so that you can easily move around.

Emergency Food and Drinks

- Water (3 liters per person)
- Food (Portable food such as crackers/hard biscuits, at least enough for one meal)

Clothing

- Helmets
- Masks
- Glasses
- Contact lenses (including preserving solution)
- Rain gear
- Underwear and socks
- Towels
- Sanitary napkins etc.
- Diapers

Items for Disaster Prevention

- Portable radio
- Flashlight (one per person if possible)
- Batteries
- Mobile phone charger
- Plastic bags
- Ground sheet
- Rope

Emergency Medicine

- Household medicine (including prescriptions for chronic diseases)
- Simple first aid kit
- Wet wipes/tissues

Valuables

- Cash
- Health Insurance Certificate (or a copy of it)
- Bank account books, personal seals, etc.
- Passport
- Foreign National's Registration Card

Checklist of Stocked Items

Minimum amount of items necessary to be self-sufficient for several days until the situation has improved.

- Store them together in a cardboard box.
- Prepare enough rations to last at least three days (if possible one week) per person.

Food and Drinks

- Water (9 liters per person)
- Food (Canned goods and boil-in-the-bag food)
- Can opener
- Paper plates, disposable chopsticks, plastic wrap
- Portable stove, gas cylinders

Clothing

- Underwear
- Clothes
- Cold weather outfits
- Blankets or sleeping bags
- Disposable heating devices and cooling patches

Items for Daily Use

- Lighters and candles
- Batteries
- Toilet paper

Valuables

- Backup data for computers

For Families with Younger Children
Powdered milk, baby bottles, diapers, solid baby food, spoons, washing sponges, a piggy-back pouch for carrying babies, etc.

For Families with a Pregnant Woman
Sanitary cotton, gauze, bleached cotton cloth, T-shaped belt, washing cotton, items for new born babies, Mother and Child Health Guidebook, etc.

For Families with Members Who Require Special/Elderly Care
Diapers, tissue paper, spare supporting equipment, medicine for daily use, Certificate Note for the Disabled, etc.

Prepare Yourself According to Your Family's Needs

Family Member Contact Information

↓ Name	↓ Contact Address	↓ Telephone Number