

**Hyogo Prefecture's Disaster Prevention Education
for Protecting Life and Building Community Bonds**

**Living for
Tomorrow**

Living for Tomorrow—For Junior High School Students—

Hyogo Prefectural Board of Education

Hyogo Prefectural Board of Education

Living for Tomorrow

Table of Contents

	Families' wish hidden in the local proverb, "Tsunami tendenko (everyone on their own in tsunami)"		2
Knowing about natural disasters	Can you protect lives?	Disaster training	4
Protecting our lives on our own	Protecting lives from an earthquake	Disaster training	8
Protecting our lives on our own	Protecting lives from a tsunami	Disaster training	12
Protecting our lives on our own	Protecting lives from a torrential downpour	Disaster training	16
Knowing about natural disasters	History of Earthquakes		20
Protecting our lives on our own	Can you protect your loved ones' lives?	Health and physical education	22
Living together	What we can do as local community members	General studies	24
Thinking about our ways of life	Roaring Drum Performance for Recovery	Ethics	26
Mental care	For mental and physical health	Health and physical education	28
Public aids	Recovery and restoration from the Great Hanshin-Awaji Earthquake	Social studies	32
	We never forget 1.17		34
	If... In search of time for living		38

The expression "Great Hanshin-Awaji Earthquake" refers to the disaster caused by the Southern Hyogo Prefecture Earthquake. The expression "Great East Japan Earthquake" refers to the disaster caused by the Off the Pacific Coast of Tohoku Earthquake and the nuclear plant accident resulting from the earthquake.

Are you familiar with the expression, "Tsunami *tendenko* (everyone on their own in tsunami)"? It is a local proverb created by our forefathers in the Sanriku coastal region that was affected by the Great East Japan Earthquake. The proverb was created to remind us of the importance of each individual evacuating on their own in the event of a tsunami.

The *Tsunami tendenko* proverb tells us to save our own lives in the event of a tsunami without regard for the lives of other people, including our parents and children, probably in order to remind us of the enormous difficulty in escaping from tsunami waves. Nevertheless, the proverb also seems to be telling us to survive even by severing our family ties, recommending cold-hearted selfishness. Abandon your old parents and run away; mothers should abandon their children and run away to save their own lives—taken literally, the proverb "Everyone on their own in tsunami" seems to support a very self-centered attitude.

Why did our forefathers choose to accept such a cold-hearted proverb? And does the *Tsunami tendenko* proverb really recommend us to adopt such a self-centered attitude?

The Sanriku coastal region, which was affected by the East Japan Great Earthquake, has repeatedly suffered damage from tsunami in the past. The Meiji Sanriku Tsunami, which occurred in 1896, took a toll of 22,000 lives. In Miyako City's Taro Village, almost all of approximately 1,800 villagers died, with only 36 survivors, most of whom were fishermen fishing off the coast at the time of the tsunami. In Kamaishi City, out of the population of 6,500 at the time, as many as 4,000 people died in the tsunami. As these examples show, the Sanriku coastal region has repeatedly experienced tragic disasters that claimed the lives of entire families and communities.

There is no doubt that the strong family bond was one of the reasons why these serious incidents have been repeated so many times in this region. Mothers were swallowed by tsunami waves while desperately searching for their children after an earthquake, along with young people who were on their way to rescue their grandparents. Nevertheless, is it really possible to stop such mothers and young people from searching for their loved ones, as the *Tsunami tendenko* proverb seems to suggest? Both as parents and as human beings, it seems only natural for mothers, caught in a conflict between saving their own and their loved ones' lives, to desperately search for their children. And as an unfortunate result, strong family ties themselves exacerbate the damage.

Against the history of repeated tragedies in which family ties have exacerbated damage from tsunami, the *Tsunami tendenko* proverb tells us to place the highest priority on saving our own lives. Its teaching seems to recommend us to sever family ties in order to save our own lives. But is that true? Does placing priority on our own lives mean severing our family ties?

In Iwate Prefecture's Kamaishi City, which was hit by enormous tsunami waves from the Great East Japan Earthquake, many children managed to save their lives, making desperate efforts to evacuate from tsunami waves. These children had learned about the tragic history of tsunami damage through disaster training and understood the horrors of tsunami; they knew that the only way to protect their lives from tsunami waves was to run away from them. However, Kamaishi children made desperate efforts to evacuate not merely because they understood the

horrors of tsunami. "What do you think your parents would do when a big earthquake hits this area?"

The above question made Kamaishi children think of their mothers desperately searching for them, as well as of a huge tsunami wave swallowing the mothers. Children then realized that their lives were not merely their own, that their mothers were more concerned about their children's lives than their own, and that in order to protect their mothers' lives, they must be able to evacuate on their own. If they are able to evacuate without their mothers' help and their mothers can believe in the children's ability to evacuate, they too will evacuate without searching for them—supported by this belief, Kamaishi City children tried desperately to run away from the oncoming tsunami.

After a disaster drill, a Kamaishi City child is reported to have told his mother in the kitchen, "If there should be a large earthquake while I'm playing in the park, I'm going to run all the way to that hill." During the Great East Japan Earthquake, this mother recalled her conversation with her child in the kitchen. Convinced that her child has evacuated, she shed tears thinking about her child who cared about her safety.

Looking back on Kamaishi children's desperate efforts to evacuate on their own, we realize that the *Tsunami tendenko* proverb is not telling us to sever our family ties. It may be difficult, indeed, to practice the proverb at the time and on the day when we are hit by tsunami. However, if each one of us can take responsibility for our own lives and family members can trust each other, we will be able to practice the *Tsunami tendenko* proverb. Our forefathers who adopted this proverb must have intended to tell us to create families based on such mutual trust.

It is also a message for you, who must build families and local communities that can protect their members from losing their lives to disasters and who must create a disaster prevention culture.

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Toshitaka Katada

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Professor Katada currently serves as Trustee of the Japan Society for Disaster Information Studies, Trustee of the Japan Society for Natural Disaster Science, and Vice-chairman of the Hyogo Prefecture Disaster Prevention Education Side Reading Preparation Committee.

His tsunami disaster prevention initiatives for children and students in Kamaishi City contributed to facilitating evacuation during the Great East Japan Earthquake.

Can you protect lives?

5:46 a.m., January 17, 1995 Southern Hyogo Prefecture Earthquake

At 5:46 a.m., January 17, 1995, the Southern Hyogo Prefecture was struck by an earthquake with a deafening roar. Strong quakes with a maximum seismic intensity of 7 on the Japanese scale continued for about 15 seconds, taking a heavy toll of over 6,400 lives.

Hyogo Ward, Kobe City

With the iron frame exposed, the building was crushed in the middle.



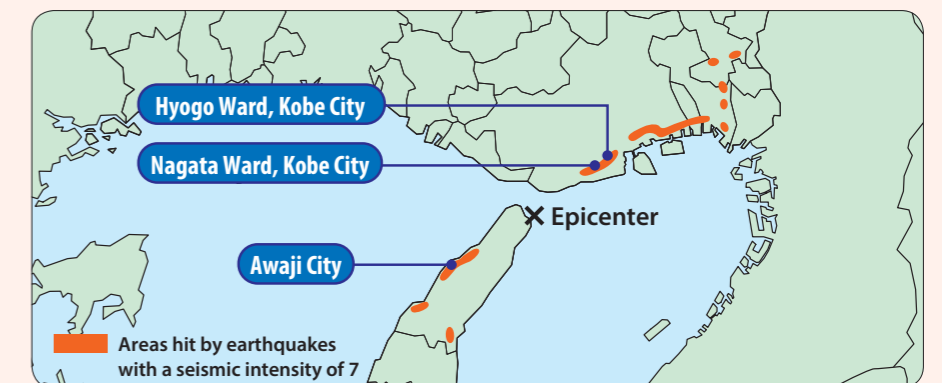
(Photo courtesy of Kobe Shimbunsha)

Nagata Ward, Kobe City

Collapsed buildings caught on fire, causing fires in many places.



(Photo courtesy of Kobe Shimbunsha)



Overview of the Southern Hyogo Prefecture Earthquake

EpicenterNorthern part of Awaji Island (at a depth of 16 km)
 Scale Magnitude: 7.3
 Number of deaths6,434 (including indirect deaths*)
 Number of missing persons..... 3
 Number of injured persons.....43,792

(Confirmed report on the Great Hanshin-Awaji Earthquake, May 19, 2006, Fire and Disaster Management Agency)

* Indirect deaths: Deaths that were not caused directly by the earthquake but resulted indirectly from earthquake-related factors, including changes in health conditions from living in evacuation shelters

Awaji City (former Hokudan Town)

Old wooden houses were completely destroyed by the earthquake.



(Photo courtesy of Kobe Shimbunsha)

In the Great Hanshin-Awaji Earthquake, many people died due to the collapse of houses and fires caused by the earthquake. Since it was a large-scale earthquake occurring immediately beneath a large city, it caused damage to electricity, water and gas supply in extensive areas, destroyed the traffic network, including railroads and highways, and wreaked havoc on lifelines.

Can you protect lives?

2:46 p.m., March 11, 2011 Off the Pacific Coast of Tohoku Earthquake

At 2:46 p.m., March 11, 2011, an earthquake of magnitude 9.0 occurred off the Pacific coast of the Tohoku region. Tsunami waves reached coastal areas near the epicenter in a little over ten minutes after the occurrence of the earthquake, striking communities and people in the region. After the first tsunami wave, enormous waves continued to hit coastal areas five or six times for a duration of nearly six hours.

Overview of the Off the Pacific Coast of the Tohoku Earthquake

Epicenter.....	Off the Sanriku coast (at a depth of 24 km)
Scale	Magnitude: 9.0
Number of deaths	15,879 (excluding indirect deaths)
Number of missing persons.....	2,700
Number of injured persons.....	6,132

(The numbers of deaths, missing persons and injured persons are based on data released by the National Police Agency on January 16, 2013.)

Minamisoma City, Fukushima Prefecture

An enormous tsunami wave hit the coast, crushing the trees and swallowing the vehicles.



(Photo taken by Sadatsugu Tomizawa; courtesy of Fukushima-Minpo)

Minamisanriku Town, Miyagi Prefecture

Houses lining the streets were swept away by tsunami waves and the entire area was filled with debris.



Photo taken during an on-site visit by the governor (this photo is available only in the English edition of Living for Tomorrow)

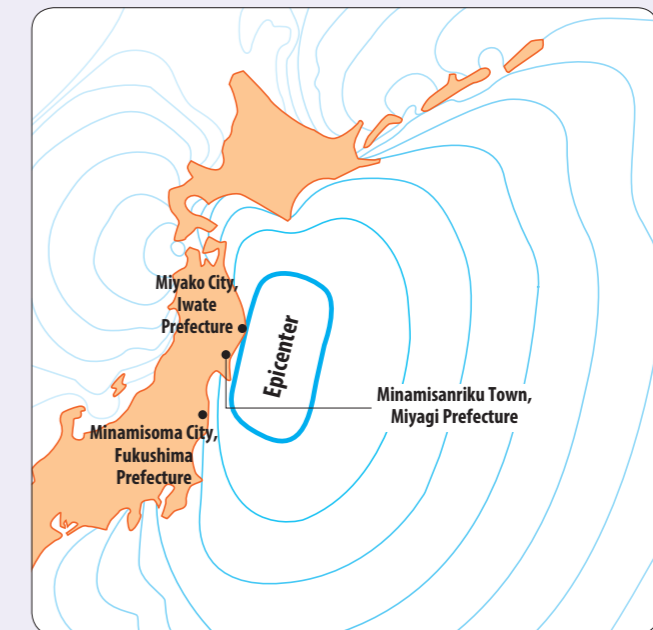
Miyako City, Iwate Prefecture

The tsunami wave traveled up the Hei River in Iwate Prefecture's Miyako City, flowing over the seawall.



(Photo courtesy of Kindai Shobosha)

1 The spreading of the first tsunami wave caused by the Off the Pacific Coast of Tohoku Earthquake



In the Great East Japan Earthquake, enormous tsunami waves struck coastal areas in the Tohoku and Kanto regions one after another. Huge walls of waves rushed into coastal areas and ran up across the land, destroying buildings with their enormous energy and taking the lives of many people. The tsunami waves caused serious damage in extensive coastal areas of Iwate, Miyagi and Fukushima Prefectures.

Protecting lives from an earthquake

We cannot predict when an earthquake will occur. In order to protect lives from an unexpected earthquake, it is important to get prepared through regular training and to act appropriately in the event of an earthquake.

Earthquakes expected in Hyogo Prefecture

It is known that there are many active seismic faults in and around Hyogo Prefecture that have the potential of causing a large-scale earthquake of magnitude 7 or greater. A large-scale earthquake is predicted to occur within 30 years from now along the Yamazaki fault with a maximum probability of 5% and along the Uemachi fault with a maximum probability of 3%.

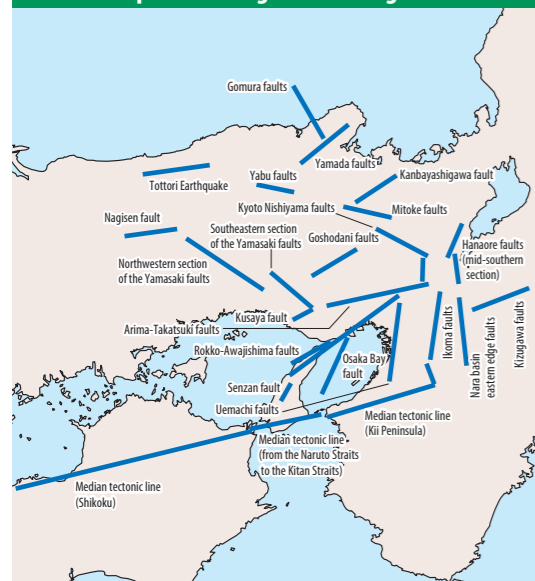


(Photo courtesy of Kobe Shimbunsha)

Also, along the Nankai trough, where the Philippine Sea plate sinks beneath the Eurasian plate, creating a deep ocean trough, earthquakes of magnitude 8 or greater have periodically occurred at intervals of 100 to 150 years. The Nankai Earthquake, which will occur along the Nankai trough off the coast of Shikoku Island or the Kii Peninsula and cause serious damage to Hyogo Prefecture, is predicted to occur within 30 years from now with a probability of approximately 60%.

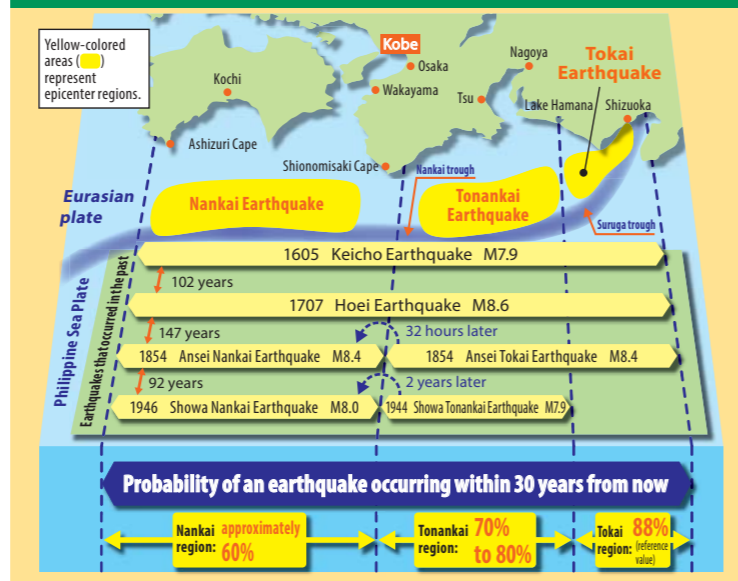
An earthquake such as the above will likely cause serious damage, including destruction of buildings, landslides and fires. The Nankai Earthquake is expected to cause damage from tsunami as well. However, it is also said that people's appropriate evacuation behavior, along with making buildings more resistant to earthquakes and securing furniture from toppling during earthquakes, will reduce the damage to less than half.

1 Active seismic faults that may cause an earthquake of magnitude 7 or greater



(Source: FY2012 Hyogo Prefecture Regional Disaster Prevention Plan)

2 History of earthquakes along the Nankai trough



(Source: Material released by the Cabinet Office Headquarters for Earthquake Research Promotion (probabilities measured from January 1, 2013))

Preparing for an earthquake 1

Judgment and action at the time of an earthquake

In order to protect lives from an earthquake, it is essential to make appropriate judgments and take proper actions when an earthquake occurs. Understand what accidents may occur around you and be always prepared to act quickly.

Indoor areas

- The first thing to do when you feel an earthquake is to ensure your own safety. Hide under a table and hold the table legs to protect your head until the earthquake stops.
- If you try to forcibly put out fire while using it, you may get a burn from hot water. Extinguish fire after the earthquake has stopped. If you rush outside, you may get hurt by falling objects, such as glass. Check the safety of the surrounding environment first.
- When evacuating from your home after the earthquake has stopped, turn off power breakers and close the main gas valve to prevent a fire from breaking out when power comes back on after a blackout. Don't forget to close LP gas container valves outside as well.



Outdoor areas

- If you are near a building or a cinder block wall, quickly move away from such structures.
- Also, immediately move away from a mountain slope or a cliff, which may collapse in the earthquake.



In elevators

- Push all floor buttons and get off the elevator on the floor where it stops. If you are locked up in an elevator, push the contact button and follow the instructions of the staff in charge.



Underground shopping malls

- Earthquake tremors are smaller and it is safer underground than above ground. Don't rush to go outside the mall; protect your head from falling objects and take your time to observe the surrounding environment before deciding what to do.
- When many people rush to emergency exits, stairways or escalators at the same time, there is a risk of them falling upon one another. Exercise caution when moving out of the shopping mall.



Use emergency earthquake news flashes

It is easier to prepare for an earthquake if its occurrence can be predicted in advance. Use emergency earthquake news flashes to get prepared.

Emergency earthquake news flashes provide earthquake information via radio, TV and mobile phone before severe earthquake tremors begin. After receiving an emergency earthquake news flash, it takes several to a little over ten seconds before the beginning of earthquake tremors. Do what you need to do to protect your life during that time.



Preparing for an earthquake 2

Easy ways to secure furniture

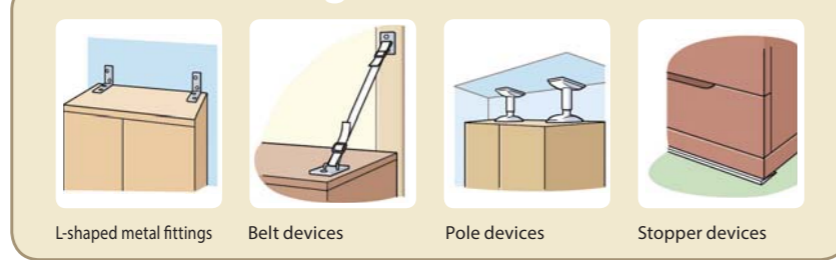
Earthquake tremors cause wardrobes and refrigerators to topple over, objects in cupboards and bookshelves to fly out, and glass to shatter. The most effective way to prevent such damage is to secure furniture.

An effective way to secure furniture is to use devices such as L-shaped metal fittings and belt, pole or stopper devices. Tilting furniture toward walls using cardboards and old newspapers also helps prevent furniture from toppling over. It is more important to secure heavier and larger furniture, which is likely to cause greater damage when it topples over.

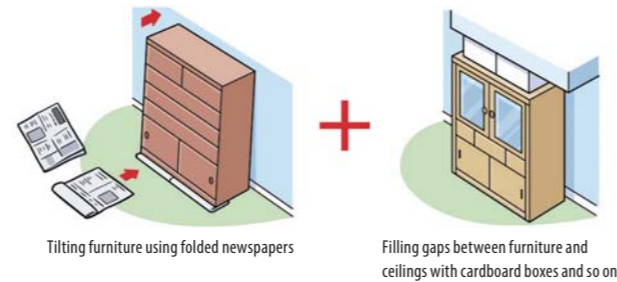
Attach stoppers to drawers and hinged doors in order to prevent their content from flying out.

An effective way to prevent shattered glass from scattering is to cover glass with film. It is also possible to hang curtains to prevent the scattering of glass.

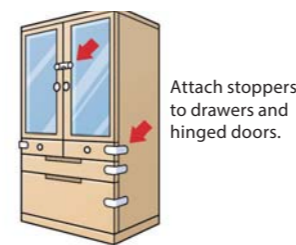
Furniture-anchoring devices



1 Fitting skills for preventing furniture from toppling over



2 Preventing drawers and hinged doors from flying out



3 Preventing flat panel TVs from toppling over



Living utensils turn into deadly weapons

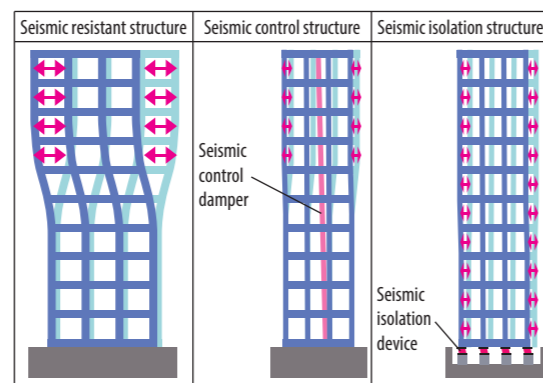
During the Great East Japan Earthquake, the seismic intensity was 4 on the first floor of a seismic-resistant 29-story building in Tokyo. On the topmost 29th floor, in contrast, the seismic intensity was 6-lower and the floor was swinging 60 cm horizontally, causing shelves and TVs to fall and ceiling boards to collapse.

Due to the long-period earthquake ground motion,* higher floors sometimes swing more widely than lower floors. Therefore, even a small-scale earthquake may cause unexpected damage on higher floors as a result of the long-period ground motion. Tall, unanchored shelves topple over, furniture with casters (pianos, etc.) moves around, and TVs mounted on stands fall off. Unanchored furniture may unexpectedly turn into deadly weapons.

* Long-period earthquake ground motion: Slow, long swing with a frequency exceeding several seconds. High-rise buildings may resonate with the motion and show a sudden increase in swing amplitude.

Seismic resistance, control and isolation for buildings

Buildings constructed in recent years are designed so as not to collapse even in the event of an earthquake; they are equipped with a seismic resistant, control or isolation structure.



Preparing for an earthquake 3

National and local government initiatives for protecting lives

Most of the deaths caused by the Great Hanshin-Awaji Earthquake were due to the collapse of buildings. Preventing the collapse of buildings would have reduced the damage from the earthquake. In order to prevent buildings from being destroyed by an earthquake, it is essential to enhance their earthquake resistance.

The photo below shows an earthquake resistance experiment conducted using more than 30-year-old wooden houses. The seismically reinforced house withstood a quake with a seismic intensity of 7, which was detected at JR Takatori Station during the Great Hanshin-Awaji Earthquake, while the non-reinforced house broke down.

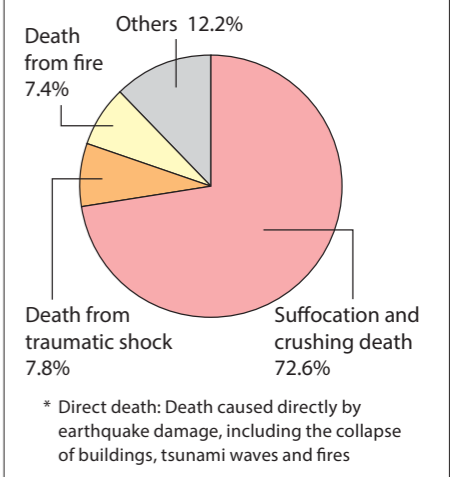


Experiment at the Hyogo Earthquake Engineering Research Center (2005)

Since the Great Hanshin-Awaji Earthquake, the national government has made various efforts to protect lives from earthquake damage, including the collapse of buildings. To that end, the government has created laws and provided subsidies for house renovation in order to promote the seismic reinforcement of buildings.

Efforts to enhance seismic resistance are made not only for houses but also for public facilities, including schools, as well as buildings.

4 Breakdown of 5,483 direct deaths



Breakdown of deaths during the Great Hanshin-Awaji Earthquake by cause of death (data released on December 22, 2005 by Hyogo Prefecture)



A seismically reinforced elementary school (Miki Municipal Hirono Elementary School)

Nuclear power stations located near Hyogo Prefecture

There are four nuclear power stations near Hyogo Prefecture: Takahama, Oi, Mihama and Tsuruga power stations. The figure on the right shows how radioactive substances would be dispersed around the Oi Nuclear Power Station based on data on the dispersion of radioactive substances generated by the accident at the Fukushima Daiichi Nuclear Power Station.



In the accident at the Fukushima Daiichi Nuclear Power Station during the Great East Japan Earthquake, radioactive substances were released into the atmosphere and the ocean. Areas within a 20-km radius from the nuclear power station were designated as a warning zone, where no one was allowed to enter. Subsequently, residents living in areas within a 30-km radius from the power station also evacuated from their homes to avoid the risk of exposure to an amount of radiation exceeding the standard level. Radioactive substances were dispersed over areas outside an 80-km radius of the power station, thereby not only causing the suspension of crop shipment in surrounding areas but also raising concerns over children's health due to the amount of radiation exceeding the standard level detected in the surface soil of school grounds.

Dispersion of radioactive substances simulated based on data on the Fukushima Daiichi Nuclear Power Station (2012; The Secretariat of the Nuclear Regulation Authority, Cabinet Office)

Protecting lives from a tsunami

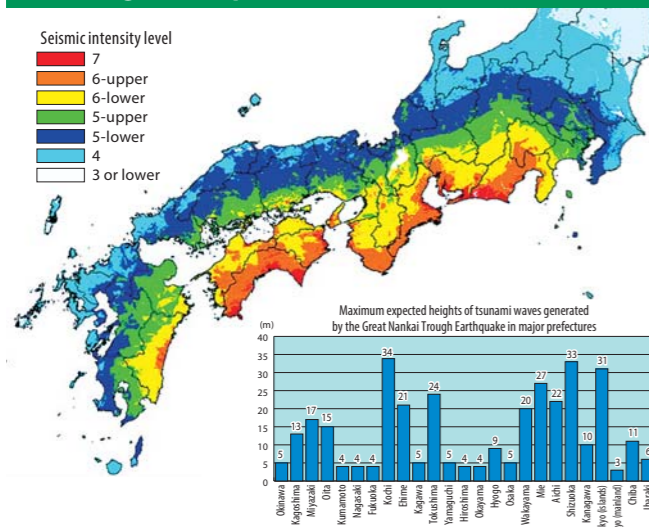
In order to protect lives from a tsunami, it is essential to evacuate as soon as possible. Some junior high school students took the initiative in evacuation during the Great East Japan Earthquake. Let's think what you can do to save your own lives as well as to protect the lives of your local community members.

Will Hyogo Prefecture be hit by tsunami waves?

If tsunami waves are generated by a magnitude-8 Nankai Earthquake that is expected to occur within 30 years from now with a 60% probability, the first wave will reach Minami Awaji City within approximately 30 to 90 minutes, and then Seto Inland Sea coastal areas in Hyogo Prefecture. The maximum height of tsunami waves is predicted to be 5.8 m in Minami Awaji City and approximately 1 to 3 m in other areas.

In consideration of the massive scale of the Great East Japan Earthquake and the subsequent tsunami that far exceeded conventional predictions, the Cabinet Office conducted a simulation of a largest-class Nankai trough earthquake using the most advanced scientific knowledge based on data on earthquakes that occurred along the Nankai trough in the past. Although the probability of occurrence is extremely low, if such an earthquake should occur, the height of tsunami waves generated is predicted to be 9 m in Minami Awaji City and 3 to 6 m in other areas, which will likely cause enormous damage.

1 Maximum tsunami heights and seismic intensity distribution predicted for the Great Nankai Trough Earthquake



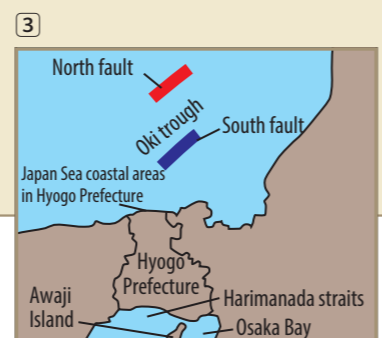
2 Minimum expected arrival time of tsunami waves generated by the Great Nankai Trough Earthquake (in minutes)

Minami Awaji City	39	Ashiya City	111
Sumoto City	44	Kakogawa City	111
Awaji City	64	Amagasaki City	113
Kobe City	91	Takasago City	116
Harima Town	109	Himeji City	119
Akashi City	109	Ako City	126
Nishinomiya City	111	Aioi City	128

(Compiled from "Expected Damage of the Great Nankai Trough Earthquake," Great Nankai Trough Earthquake Emergency Measures Review Working Group's First Report (August 29, 2012))

Possibility of Sea of Japan coastal areas being hit by tsunami waves

During the 1983 Central Sea of Japan Earthquake (magnitude 7.7, centered at a point 70 km to the northwest of the Oga Peninsula), a tsunami wave 28 cm in height was observed in Toyooka City's Tsuiyama. If an earthquake of a similar scale occurs along the two active seismic faults in the Sea of Japan shown in Figure (3), there is a possibility of tsunami waves hitting the coastal areas.



Preparing for a tsunami 1

Appropriate actions to protect lives

Evacuate immediately

- If you should feel an earthquake near the ocean, evacuate immediately. Run away as far from the coast as possible and evacuate to the highest place available. Even a minor earthquake may cause tsunami waves. Caution is required if the quake continues for more than one minute.
- Tsunami waves may travel up rivers even to inland areas from where no ocean can be seen. Stay away from rivers and evacuate to a high place.
- Tsunami waves hit the same area not just once, but many times. While a tsunami warning is being issued, stay in a high place safe from tsunami waves. During the Great East Japan Earthquake, after the relatively small first and second tsunami waves, some people went home from evacuation shelters and lost their lives due to the third wave, which was the largest wave that hit the coast around 5:30 p.m.
- Stay alert even if tsunami waves have not come more than one hour after the announcement of an evacuation recommendation. Remain in a safe place until the tsunami warning has been canceled.

Gather information

- It is very important to obtain disaster information and post-disaster life information. During the Great East Japan Earthquake, radios, TVs and the Internet were frequently used to obtain information.

Preparing for a tsunami 2

Be always prepared to take appropriate actions

Check the locations of evacuation shelters

- Check where to evacuate in the event of an earthquake and determine what route to take to evacuate to the shelter safely in the shortest period of time. Walk along the route to see how long it actually takes to reach the shelter.

Consult with your family members and neighbors

- Discuss and check how to evacuate with your family members. If you have family members or neighbors who have difficulty in evacuating on their own, determine specific methods of evacuation (e.g. wheelchairs) and roles of individual members in evacuation.

Participate in local community disaster training

- In the event of a natural disaster, you may have to serve as a supporter in your local community. Participate in community disaster training and build ties with other local community members. Think about how to support children, elderly people and disabled people in an emergency and prepare yourself through regular training to support people in need of emergency* help who are unable to evacuate on their own.

* People in need of emergency help: Old people, disabled people, children, infants and non-Japanese people who have difficulty in understanding Japanese



Preparing for an earthquake 3

National and local government initiatives for protecting lives

Facilities for mitigating damage from tsunami

To prevent damage from tsunami, breakwaters, seawalls and flood-gates are being developed in coastal areas.

Breakwaters served to delay the arrival time of the tsunami waves generated by the Great East Japan Earthquake and to reduce their height. Nevertheless, due to the size of the waves that exceeded all predictions, many breakwaters were destroyed, allowing tsunami waves to inundate downtown areas everywhere. Never forget that facilities are not always effective in securing safety.



Seawalls in Kobe City's Chuo Ward

Hazard maps

Hazard maps* provide information required to prepare for a tsunami, including data on areas expected to be inundated by tsunami waves, evacuation routes, evacuation shelters and cautions to be taken in evacuation. It is important to regularly check hazard maps in order to understand hazard risks in the area where you live.

Inundation information provided in hazard maps is no more than predictions. Natural disasters often exceed our predictions. Remember that tsunami waves may hit areas outside the region predicted to be inundated.

* Hazard maps are distributed to individual homes and posted on official websites.

Hyogo Prefecture CG Hazard Map <http://www.hazardmap.pref.hyogo.jp>



Areas expected to be inundated by tsunami waves (if the coastal facilities (seawalls) do not function properly) in the Hanshin region



* To help image the inundation by tsunami waves, Hyogo Prefecture has released a CG video.

Creating a zero-casualty community designed for disaster prevention

Kuroshio Town, Kochi Prefecture

Kochi Prefecture's Kuroshio Town is a community where tsunami waves generated by the Great Nankai Trough Earthquake are predicted to be 34.4 m in maximum height. In this community, houses and public facilities are concentrated in flatland facing the Pacific Ocean, with no hills in the vicinity to evacuate to.

"Will the community be able to survive?" "What can we do to survive?"—Driven by anxiety and concerns, Kuroshio Town is making concerted efforts to develop disaster prevention measures based on tsunami predictions with the aim of creating a zero-casualty community. In an effort to protect the lives of the entire community, residents are working to create a local community designed for disaster prevention through a variety of activities, including dividing the community area into small districts and allocating a district manager to each district to organize disaster prevention workshops, and studying each resident's evacuation method to review how to support people in need of emergency help.



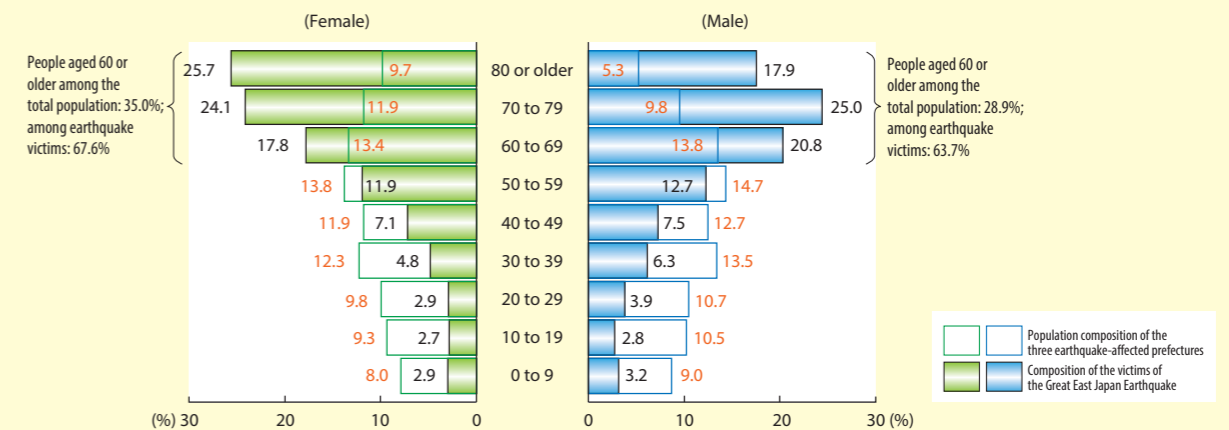
Kuroshio Town located along the Pacific Ocean coast

Support for people who are unable to evacuate on their own

People aged 60 years or older accounted for a large percentage of tsunami victims (63.7% of male victims and 67.6% of female victims) during the Great East Japan Earthquake. The estimated reason for the large percentage is that many of the elderly people had difficulty in evacuating on their own.

In an effort to protect the lives of elderly people and others in need of emergency help, municipalities across Japan are making efforts to develop evacuation support plans for people in need of emergency help and lists of such people. Hyogo Prefecture is also drawing up guidelines for supporting people in need of emergency help. Members of independent disaster prevention organizations are working in collaboration to gather information on people in need of emergency help in local communities in order to examine how to evacuate people safely in the event of a natural disaster.

1 Numbers of deaths from the Great East Japan Earthquake by gender and by age group (Iwate, Miyagi and Fukushima Prefectures)



Note: 1. Compiled from Metropolitan Police Department, "Causes of Deaths from the Off the Pacific Coast of Tohoku Earthquake (March 11, 2011 to March 11, 2012)" and the Ministry of Internal Affairs and Communications, "2010 Population Census"
 2. The figures are percentages of the age groups relative to male and female populations (%).
 3. The populations of the three earthquake-affected prefectures do not include people whose ages are unknown. The victims of the Great East Japan Earthquake do not include people whose genders or ages are unknown.

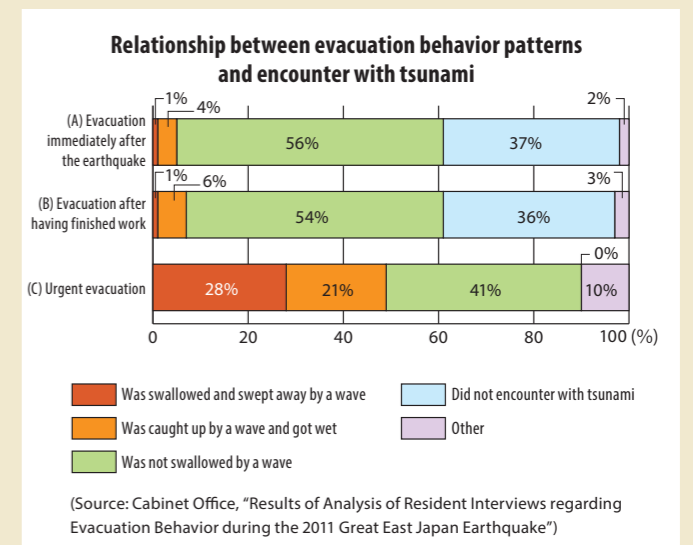
(Source: Cabinet Office, "FY2011 State of Formation of a Gender-Equal Society")

Take the initiative in evacuation

The combined total number of those who were killed in the Great East Japan Earthquake or are missing amounts to approximately 20,000. Most of these people were swallowed by tsunami waves generated by the earthquake.

Some of the survivors were also swallowed by tsunami waves. Such survivors either did not evacuate immediately after the earthquake stopped but only after finishing what they had been doing (B), or evacuated because they saw a tsunami wave coming while still doing their work (C). They might have lost their lives if something had gone wrong.

Taking the initiative in evacuation not only saves your own life, but also urges other people to evacuate, thereby helping protect the lives of your local community members.



(Source: Cabinet Office, "Results of Analysis of Resident Interviews regarding Evacuation Behavior during the 2011 Great East Japan Earthquake")

Protecting lives from a torrential downpour

Torrential downpours during the rainy season and heavy rainfalls from typhoons cause flooding of rivers and landslides almost every year in Japan, taking a heavy toll on local communities. It is possible to make fairly reliable predictions about the size and period of a rainfall and get prepared for it in advance. Let's think about how to get prepared for a torrential downpour, including the use of information.

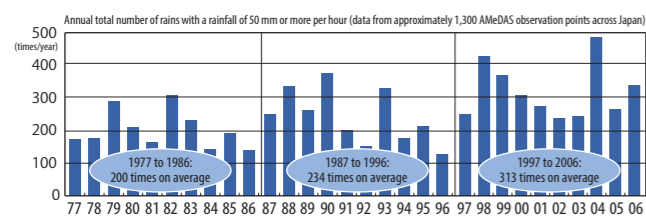


(Photo courtesy of Kobe Shimbunsha)

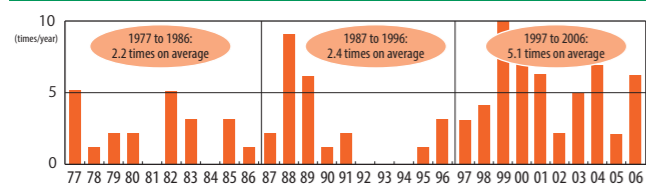
Torrential downpours in Hyogo Prefecture

In the past, Hyogo Prefecture has suffered serious damage from heavy rains caused by stationary fronts, local downpours caused by thunderstorms, and torrential rains caused by typhoons. In recent years, in particular, there has been a nationwide increase in the frequency of short-term heavy rains with a rainfall of 50 mm or more per hour. Hyogo Prefecture has also suffered damage from short-term torrential rains and local downpours. Short-term torrential rains occur as a result of thunderclouds forming and developing one after another in the same place. A local downpour has caused the Toga River (Nada Ward in Kobe City) to rise by 1.3 m within a period of 10 minutes, claiming casualties from water accidents.

1 Frequency of rains with a rainfall of 50 mm or more per hour



2 Frequency of rains with a rainfall of 100 mm or more per hour



In a rain with a rainfall of 50 mm per hour, umbrellas become useless and surrounding objects invisible due to the sheets of spray. Also, there is the risk of rainwater running up from manholes, thereby flooding roads. A rain with a rainfall of 100 mm per hour makes it difficult for people to breathe and is oppressive.

3 Records of major floods in Hyogo Prefecture

October 19 to 21, 2004: Typhoon No. 23

On October 20, 2004, typhoon No. 23 landed in Kochi Prefecture's Tosashimizu City and then again in Osaka Prefecture's Izumisano City. In Hyogo Prefecture, a downpour and flood warning was issued for the entire prefecture on the 20th, and a 24-hour rainfall of 350 mm was reported in Awaji and 250 mm in Tajima. Serious damage occurred extensively in the prefecture, including Toyooka City, Hikami Town (present-day Tanba City), Nishiwaki City, Nishinomiya City and Awajishima Island. The downpour also affected transportation, with the Sanyo main line closed for a while.

26 deaths; 135 injured persons; 783 houses completely destroyed; 7,142 houses half destroyed; 1,745 houses inundated above the floor level; 9,058 houses inundated below the floor level (nationwide data)

August 9 to 13, 2009: Typhoon No. 9

As typhoon No. 9 headed slowly north off the coast of Shikoku Island, the moist air around the typhoon flew into Western Japan along with the moist air from the Pacific high. In Hyogo Prefecture, torrential rain poured in places such as Sayo Town, Shiso City and Asago City on the night of the 9th, with a total rainfall exceeding 300 mm reported in Sayo Town.

20 deaths; 2 missing persons; 7 injured persons; 166 completely destroyed houses; 943 half destroyed houses; 335 houses inundated above the floor level; 1,494 houses inundated below the floor level (nationwide data)

September 2 to 4, 2011: Typhoon No. 12

Typhoon No. 12 landed in Eastern Kochi Prefecture on September 3 and swept northward through the Shikoku and Chugoku regions to the Sea of Japan. Record rainfalls were reported in wide areas, ranging from Western to Northern Japan, resulting in the largest disaster since the Great East Japan Earthquake. With the 24-hour rainfall reaching approximately 300 mm in Higashi Harima, Hyogo Prefecture suffered serious damage, including 700 houses being inundated above the floor level in Takasago City.

1 death; 18 injured persons; 3 completely destroyed houses; 121 half destroyed houses; 1,010 houses inundated above the floor level; 2,430 houses inundated below the floor level (nationwide data)

(Source: Data on damage announced by Fire and Disaster Management Agency Disaster Control Headquarters, etc.)

Preparing for a torrential downpour 1

Appropriate actions to protect lives

Evacuate as soon as possible

In order to protect lives from damage caused by downpours, it is essential to evacuate as soon as possible if any hazard is expected, regardless of whether or not pre-evacuation information has been announced. If you have elderly people and others in need of emergency help, it is all the more necessary to evacuate. To that end, there is a need to prepare yourself for natural disasters through regular participation in disaster training. Pre-evacuation information, evacuation recommendations and orders are announced via TV and radio, on the wireless station for disaster prevention, as well as from municipal advertisement vehicles.

The most important thing is to evacuate before flooding begins. If you need to evacuate through a flooded area, bear in mind the points listed below. Evacuation is very dangerous at nighttime, especially in a flooded area where it is difficult to check road conditions, so evacuate to the second floor of your home or other high places.

- 1 Don't try to walk in water with a depth exceeding the knee level even during the daytime. (It may be safer to stay in a high place, such as the second floor of your home, than to evacuate in dangerous conditions.)
- 2 Wear clothes that are safe and easy to move in. (Rain boots not only easily come off but also become heavy with water and make it difficult to walk, so wear string running shoes. Let small children wear floats to ensure safety.)
- 3 Evacuate in groups and tie bodies together using a rope. (Avoid acting on your own and tie each other's body with a rope.)
- 4 Use long poles as walking sticks. (Search under water with poles to evacuate safely. Watch out for bumps, gutters and manholes while walking.)
- 5 Carry elderly people and infants on your back to evacuate them. (Carry elderly people, infants and disabled people on your back.)

Pre-evacuation information, evacuation recommendations and orders announced by municipality mayors

- Pre-evacuation information** ▶ Pre-evacuation information is announced to recommend making preparations for evacuation, including getting emergency supplies and other things required for evacuation. Those who need long time to get ready for evacuation, including people in need of emergency help, should evacuate with evacuation supporters to scheduled evacuation shelters.
- Evacuation recommendations** ▶ Evacuation recommendations are announced when there is a high probability of human damage. Evacuation to shelter facilities starts.
- Evacuation orders** ▶ Evacuation orders are issued when human damage is highly likely to occur or when there is a grave risk of human damage due to geographical conditions, such as being adjacent to an embankment. If an evacuation order is issued, those who have not evacuated must evacuate immediately.

Avoid risks by evacuating as soon as possible

On July 28, 2008, the Toga River in Kobe City's Nada Ward rose due to a local downpour, resulting in an accident that claimed the lives of five people. After this accident, Hyogo Prefecture installed red flashers that turn on when a downpour and flood precautionary information or warning is announced, electronic signboards to flash warnings, or warning boards.

At 0:48 p.m. on July 21, 2012, a downpour and flood precautionary information was announced. Several minutes after police officers evacuated 23 students and 6 family members who were having a barbecue on the riverbed, the Toga River swelled, inundating the place where the students had been standing. Also, immediately after fire department officers evacuated approximately 25 children who were taking shelter from rain under a downstream bridge, water came rushing and swept about 10 bicycles away. Although red flashers and electronic signboards were on, many people did not evacuate. They might have lost their lives if something had gone wrong.

Why did these things happen? Regardless of whether red flashers or electronic signboards were on or off, visitors would have been able to evacuate on their own, if they had imagined rain upstream from the weather conditions and assessed the risk of flood at their locations based on lessons learned from past experience. Learning lessons from past disasters is essential to avoid repeating the same damage.

The most essential thing for protecting your own life from natural disasters is to be able to make judgment on your own.

* There is a possibility of a sudden rise in the water level even when the red flasher and the electronic signboard are off.



Kabuto Bridge, Toga River
Photo taken by a Kobe City river-monitoring camera

Preparing for a torrential downpour 2

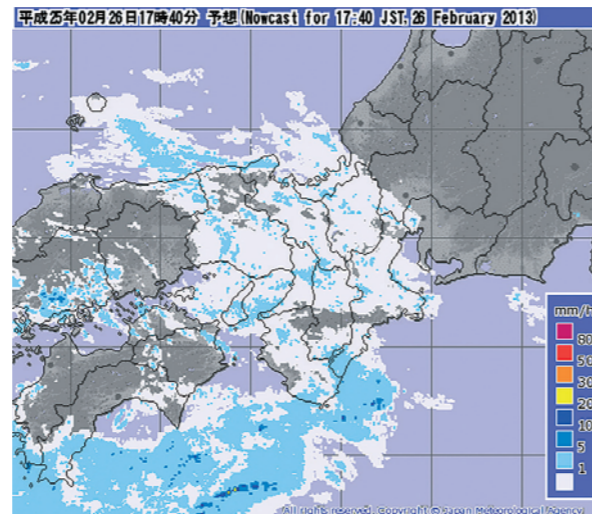
Be always prepared to take appropriate actions

Obtain knowledge about the nature of terrain and past disasters

Floods and landslides are disasters that are greatly affected by geographical conditions. It is therefore important to understand the nature of the terrain of the area you live in, as well as natural disasters that have occurred in the past. Also, municipalities are making hazard maps to provide residents with information on areas where floods and landslides are likely to occur. Check the hazard map of the area you live in.

Obtain disaster prevention information

To protect the safety of residents, the Japan Meteorological Agency provides disaster prevention information if there is a risk of damage caused by a torrential rainfall or a storm. Disaster prevention information includes weather information (such as heavy rainfall predictions), precautionary information (forecasts of potential disasters), warnings (forecasts of serious disasters), landslide warning information and typhoon information. Also, use the Precipitation Nowcast information of the Japan Meteorological Agency, which shows forecasts of rainfalls, tornadoes and thunders on a continuous basis, in order to obtain the latest data and forecasts about rainfalls and other weather conditions.



Precipitation Nowcasts: Forecasts prepared for each area of 1 square kilometer for the next 1 to 6 hours based on the past movement of rainfall areas and the current rainfall distribution

Torrential downpour	Weather information announced by the Japan Meteorological Agency	Behavior of residents
<p>Approximately 1 day before the rain: Increase in the probability of a downpour</p> <p>Half a day to several hours before the rain: A downpour begins and continues with increasing intensity</p> <p>Several to two hours before the rain</p> <p>Downpour further increases in intensity</p> <p>Concern over the spread of damage</p>	<p>Weather information on downpours Announcement before a warning or precautionary information</p> <p>Downpour precaution information A possibility of a warning indicated</p> <p>Weather information on downpours Announcement regarding rainfalls and forecasts</p> <p>Downpour warning (landslides) Downpour warning (inundations) Flood warning Periods of downpours, predicted rainfalls, cautions required, etc.</p> <p>Weather information on downpours Announcement regarding rainfalls that change from one moment to another</p> <p>Landslide warning information Announced if there is a further increase in the probability of landslides</p> <p>Weather information in short sentences Warning information announced in addition to warnings about downpours, floods and landslides, when there is a further increase in the probability of damage</p>	<ul style="list-style-type: none"> ● Paying attention to weather information ● Obtaining weather information via TV, radio and the Meteorological Agency's home page ● Checking house exteriors, including windows and shutters ● Checking evacuation shelters ● Checking emergency supplies ● Preparing for evacuation ● Staying away from dangerous places ● Evacuating to city halls and other shelters if there is anything out of the ordinary ● Evacuating to shelters immediately

Preparing for a torrential downpour 3

National and local government initiatives for protecting lives

To prepare for damage from torrential downpours and typhoons, national and local governments are developing disaster prevention facilities. In order to prevent the flooding of rivers, governments are reinforcing embankments, widening river channels and deepening riverbeds. Governments are building soil erosion barriers in mountain areas to prevent landslides and seawalls in coastal areas to prevent damage from high tides caused by typhoons. However, we need to understand that there are limits to preventive measures that depend on disaster prevention structures.



Reconstruction of the embankments of the Sumoto River that suffered damage from a downpour caused by typhoon No. 23 in 2004 (Sumoto City)



Soil erosion barrier for the prevention of landslides (Sasayama City)



Seawall for the prevention of high tides (Nishinomiya City)

Hyogo Prefecture Comprehensive Water Control Ordinance

Enacted on April 1, 2012

In order to prevent flood damage caused by typhoons and local downpours, Hyogo Prefecture created the Comprehensive Water Control Ordinance in April 2012.

In addition to river and sewerage strategies, the ordinance also aims to develop river basin strategies to store rainwater and let it infiltrate into the ground in order to reduce the overflow, as well as damage mitigation strategies to minimize damage from inundation. By combining these strategies, the ordinance intends to promote comprehensive water control through the cooperation of the prefecture, municipalities and prefectural residents. Please take an active part in developing comprehensive water control measures in your daily life, including your school and family activities.

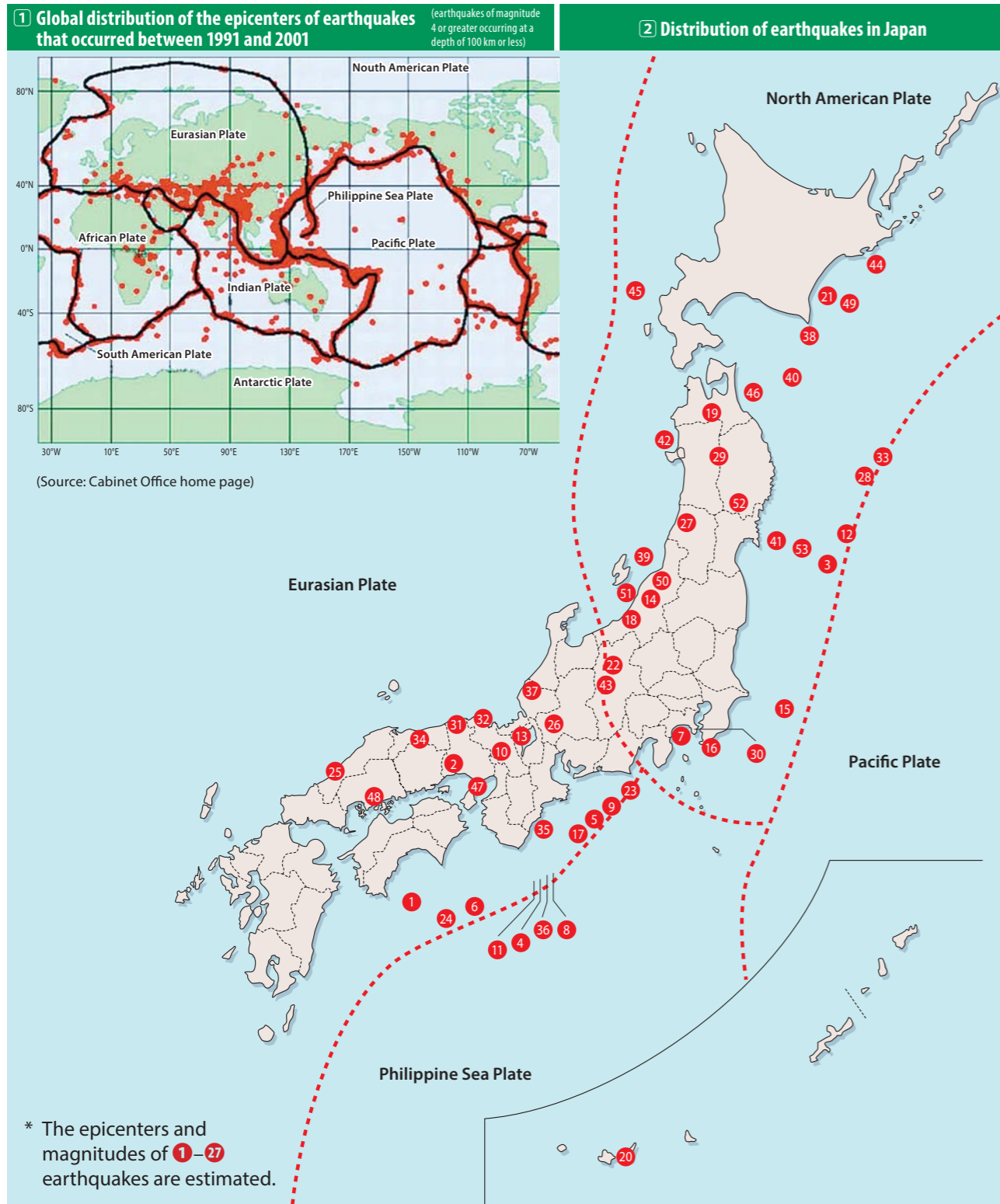


<p>● River and sewerage strategy: Flow</p> <p>River</p> <p>Sewerage</p>
<p>● River basin strategy: Storage</p> <p>Rainwater storage</p>
<p>● Damage mitigation strategy: Preparation</p> <p>Gathering information training</p> <p>Water resistance</p>

History of Earthquakes

Earthquakes occur in places around the world. Most of the earthquake epicenters are located on boundaries between tectonic plates.

Located on and along boundaries between tectonic plates, Japan has been struck by many earthquakes since ancient times. These earthquakes include plate-boundary massive earthquakes as well as active fault earthquakes.



Chronology of major earthquakes

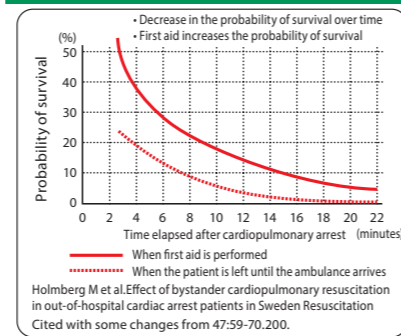
1	684	Hakuho Nankai Earthquake	M8.0	Damage from tsunami; many people dead
2	868	Harima-Yamashiro Earthquake	M7.0	
3	869	Jogan Sanriku Earthquake	M8.3	Damage from tsunami; more than 1,000 people dead
4	887	Ninna Earthquake	M8.0	Damage from tsunami; many people dead
5	1096	Eicho Earthquake	M8.0	Damage from tsunami; approx. 10,000 people dead
6	1099	Kowa Earthquake	M8.0	Damage from tsunami; approx. several tens of thousands of people dead
7	1293	Great Kamakura Earthquake	M7.1	23,000 people dead
8	1361	Shoei-Koan Earthquake	M8.0	Damage from tsunami; many people dead
9	1498	Meio Earthquake	M8.2	Damage from tsunami; more than 30,000 people dead
10	1596	Keicho Fushimi Earthquake	M7.0	More than 1,000 people dead
11	1605	Keicho Earthquake	M8.0	Damage from tsunami; more than 10,000 people dead
12	1611	Keicho Sanriku Earthquake	M8.1	Damage from tsunami; approx. 2,000 to 5,000 people dead
13	1662	Kanbun Omi-Wakasa Earthquake	M7.3–7.6	Several thousand people dead
14	1666	Echigotakada Earthquake	M6.4	1,400 to 1,500 people dead
15	1677	Enpo Boso Offshore Earthquake	M8.0	Damage from tsunami; more than 500 people dead
16	1703	Genroku Earthquake	M8.1	Damage from tsunami; more than 10,000 people dead
17	1707	Hoei Earthquake	M8.4	Damage from tsunami; more than 20,000 people dead
18	1751	Takada Earthquake	M7.0–7.4	Approx. 1,500 people dead
19	1766	Tsugaru Earthquake	M6.9	Approx. 1,500 people dead
20	1771	Yaeyama Earthquake	M7.4–8.0	Approx. 12,000 people dead
21	1843	Tokachi Offshore Earthquake	M7.5–8.0	Damage from tsunami; 46 people dead
22	1847	Zenkoji Earthquake	M7.4–8.0	Approx. 10,000 to 13,000 people dead
23	1854	Ansei Tokai Earthquake	M8.4	Damage from tsunami; more than 2,000 people dead
24	1854	Ansei Nankai Earthquake	M8.4	Damage from tsunami; approx. 2,000 to 3,000 people dead
25	1872	Hamada Earthquake	M7.1	Approx. 550 people dead
26	1891	Nobi Earthquake	M8.0	7,273 people dead
27	1894	Shonai Earthquake	M7.0	726 people dead
28	1896	Meiji Sanriku Earthquake	M8.2	Damage from tsunami; more than 20,000 people dead
29	1896	Rikuu Earthquake	M7.2	209 people dead
30	1923	Great Kanto Earthquake	M7.9	More than 100,000 people dead or missing
31	1925	Kitatajima Earthquake	M6.8	428 people dead
32	1927	Kitatango Earthquake	M7.3	2,925 people dead
33	1933	Showa Sanriku Earthquake	M8.1	Damage from tsunami; 3,064 people dead or missing
34	1943	Tottori Earthquake	M7.2	1,083 people dead
35	1944	Tonankai Earthquake	M7.9	Damage from tsunami; 1,223 people dead or missing
36	1946	Nankai Earthquake	M8.0	Damage from tsunami; 1,330 people dead or missing
37	1948	Fukui Earthquake	M7.1	3,769 people dead or missing
38	1952	Tokachi Offshore Earthquake	M8.2	Damage from tsunami; 28 people dead and 5 people missing
39	1964	Niigata Earthquake	M7.5	Damage from tsunami; 26 people dead
40	1968	Tokachi Offshore Earthquake	M7.9	Damage from tsunami; 52 people dead and 330 people missing
41	1978	Miyagi Prefecture Offshore Earthquake	M7.4	28 people dead
42	1983	Central Sea of Japan Earthquake	M7.7	104 people dead
43	1984	Western Nagano Prefecture Earthquake	M6.8	29 people dead or missing
44	1993	Kushiro Offshore Earthquake	M7.5	2 people dead
45	1993	Hokkaido South-western Offshore Earthquake	M7.8	Damage from tsunami; 203 people dead and 28 people missing
46	1994	Sanriku Offshore Earthquake	M7.6	3 people dead
47	1995	Great Hanshin-Awaji Earthquake (Southern Hyogo Prefecture Earthquake)	M7.3	6,434 people dead and 3 people missing
48	2001	Geiyo Earthquake	M6.7	2 people dead
49	2003	Tokachi Offshore Earthquake	M8.0	Damage from tsunami; 1 person dead and 1 person missing
50	2004	Niigata Prefecture Chuetsu Earthquake	M6.8	68 people dead
51	2007	Niigata Prefecture Chuetsu Offshore Earthquake	M6.8	15 people dead
52	2008	Iwate-Miyagi Inland Earthquake	M7.2	17 people dead
53	2011	Great East Japan Earthquake (Off the Pacific Coast of Tohoku Earthquake)	M9.0	Damage from tsunami; 18,579 people dead or missing

Can you save your loved ones' lives?

Speed is important for search and rescue in a natural disaster. However, a major disaster usually causes damage in extensive areas. Therefore, local fire stations and police departments are unable to provide sufficient personnel for search and rescue activities. Under such circumstances, it is the duty of local residents to save the lives of many people.

Let's learn how to provide first aid to save the lives of our loved ones.

1 First aid and survival curves



(Source: Japanese government public relations online)

Let's learn the way of first-aid (injury care)

How to stop bleeding

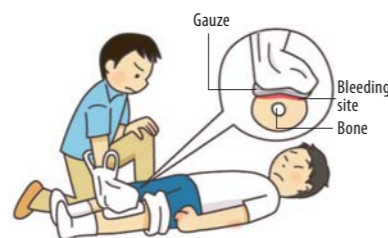
1. Direct pressure

Place gauze, a handkerchief or cloth directly on the wound and press the wound with a hand or a sling to stop bleeding.

- Place clean gauze or a handkerchief on the wound and press the wound with a hand.
- If the bleeding is from a major blood vessel and does not stop even when you press the wound with one hand, use both hands and put your weight over the wound to stop bleeding.

Key points:

- ▶ When stopping bleeding, avoid touching the blood with bare hands to protect from infection.
- ▶ Use vinyl or rubber gloves. If gloves are unavailable, use plastic shopping bags.



2. Tourniquet (using a bar)

- 1 Tie a tourniquet loosely (with a gap the size of a fist) and cover the wound with cloth.
- 2 Insert a bar into the gap and slowly turn the bar to tighten the tourniquet until the bleeding stops.
- 3 Fix the bar so that it does not move.
- 4 Record the time when the blood stanching started.



Key points:

- ▶ If there is a need to use a tourniquet for more than 30 minutes, loosen it once every 30 minutes to allow blood to circulate for a period of 1 to 2 minutes. Blood should no more than ooze out of the wound while the tourniquet is loosened. Continue to press the wound with your hand while the tourniquet is loose.
- ▶ The direct pressure method is the basic method of stopping bleeding. Use a tourniquet only when it is impossible to stop bleeding by the direct pressure method.



First aid for burns

Follow the following procedure to treat relatively minor burns:

- Cool the burn with clean, cold water as soon as possible for at least 15 minutes, until the pain disappears.
- After cooling the burn for a sufficient time, place clean gauze on the burn and cover the gauze with a sling or a bandage.

Key points:

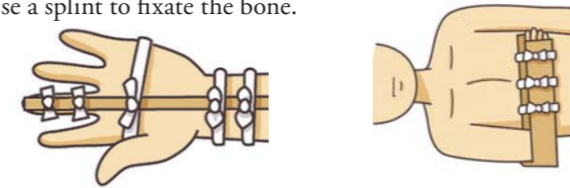
- ▶ Cool the burn together with any clothing around it.
- ▶ In case of an extensive burn, take care to avoid excessively cooling the body.
- ▶ Don't pop blisters.
- ▶ Don't apply any medication to the burn.



First aid for fractures

The most important point about the treatment of a fracture is to keep the fractured bone in a stable position. Any movement of the fractured bone exacerbates the damage. To avoid that, it is necessary to fixate the bone.

- Fixate the bone even if it is uncertain whether or not it is fractured.
- Use a splint to fixate the bone.



How to apply a splint:

- Apply the splint across the upper and lower joints of the fractured bone and fixate it. (There is no need to adjust the splint to the broken bone.)
- Use whatever is available, including umbrellas, sticks, shoehorns, magazines or cardboards as the splint.
- Cover ankles and other protrusions with cloth to avoid friction pain.



Let's learn first-aid procedures (cardiopulmonary resuscitation)

Checking response

Are you all right?



If the person does not respond, shout for help.

Someone please come and help. Please call 119. Get me an AED.

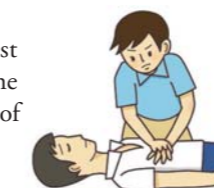
Checking breathing

- Focus on the up-and-down movement of the patient's chest or abdomen and check within 10 seconds to see if the patient is breathing.
 - If the person is breathing normally,
 - ▶ Secure the airway.
 - If the person is not breathing normally,
 - ▶ Immediately start chest compressions and, if possible, artificial respiration.



Chest compressions (cardiac massage)

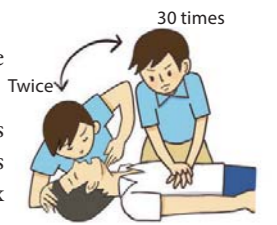
- Lay the patient on a hard floor and start chest compressions immediately to circulate blood throughout the patient's body.
- 1 Kneel down beside the patient's chest and place the heel of one hand on the center of the person's chest (bottom of the breastbone).
- 2 Compress the chest
- Hard and deeply (push down the breastbone at least 5 cm for an adult)



- Rapidly (compress the chest 30 times at the rate of at least 100 times per minute)
- Continuously (continue until paramedics arrive or the patient starts breathing)

Artificial respiration

- If the patient is not breathing, secure the airway.
- 1 Place your hand on the patient's forehead and squeeze the patient's nose with the thumb and index finger of your hand.
- 2 Open your mouth wide and cover the patient's mouth with yours to prevent air leaks.
- 3 Breathe air into the patient's mouth twice, for one second each time. (Each time you finish breathing, remove your fingers from the patient's mouth and nose.)



Continue the sequence of 30 chest compressions followed by 2 artificial respiration operations.

Automated external defibrillator (AED)

(Installed at school infirmaries or in facility hallways)

- 1 If an AED is available, place it beside the patient, open the lid and turn on the AED.
- 2 Operate the AED according to the voice message.
- 3 Attach the pad directly to the patient's skin.
- 4 Don't touch the patient during an AED shock.
- 5 Resume chest compressions immediately after the use of the AED.



Note: Japanese Red Cross Society (<http://www.jrc.or.jp/study/safety/>)

Training sessions for civilian paramedics

Since the Great Hanshin-Awaji Earthquake, Kobe City has been providing training sessions for civilian paramedics to help residents provide appropriate first aid by themselves, including chest compressions and artificial respiration. Participants are awarded training certificates. More than 400,000 residents, including approximately 37,000 junior high school students have obtained training certificates.



What we can do as local community members?

It has been reported that during the Great Hanshin-Awaji Earthquake, approximately 27,000 of the 35,000 survivors who were trapped under collapsed houses were rescued by their neighbors. During the Great East Japan Earthquake, junior high school students helped evacuate residents from tsunami waves by carrying nursery children in their neighborhoods on their back and pushing baby buggies. In the event of a disaster, ties between local community residents provide great support in protecting human lives. Let's think about what we can do as local community members.

Junior high school students playing active roles in local communities

As part of an effort to create a safe and secure community, Kobe Municipal Hiyodoridai Junior High School has formed a Junior Disaster Prevention Team to conduct disaster prevention activities, such as firefighting and first-aid training, as well as local volunteer activities, including cooperating in local summer festivals and participating in community cleaning. Junior Team members also visit earthquake restoration housing facilities in their local community and open temporary tearooms to communicate with elderly people and to work with them in disaster training. With their local community facing rapid population aging, junior high school students are expected as reliable members who can support the community in the future.

Their activities in the local community not only contribute to revitalizing the community, but also promote mutual help required in the event of a disaster.



Junior high school students of the Hiyodoridai Junior Disaster Prevention Team working with local community residents in firefighting training

Student volunteers in old days: Kitatajima Earthquake

In 1925, the Tajima Region (in Hyogo Prefecture) was struck by a massive earthquake. In Toyooka City's Tai District, which was located almost directly above the epicenter, 82 of the 83 houses were completely destroyed. The percentage of destroyed houses exceeded 50% in many villages; in addition to the collapse of houses, fires also broke out. A total of 428 people were killed in the region, including the former Toyooka Town.

Students of the old Toyooka Secondary School (present-day Toyooka Senior High School), who themselves were also suffered in school, conducted rescue activities immediately after the earthquake and also subsequently contributed to the community's recovery from the disaster.

Their activities of nearly 90 years ago may have been the first student volunteer activities during an earthquake in Hyogo Prefecture.

Activities of the old Toyooka Secondary School on the day of the earthquake

(from Toyooka Senior High School Alumni Journal *Tattoku* earthquake memorial issue)

- Students engaged in life-saving activities (rescue, transport of dead or injured people, etc.): 102
- Students engaged in firefighting activities: 58
- Students engaged in transport of household furniture: 189

Overview of the Kitatajima Earthquake

Date and time of occurrence:	11:11 a.m., May 23, 1925
Epicenter:	Near the Maruyama River estuary
Maximum seismic intensity on the Japanese scale:	6 (magnitude 6.8)
Number of people dead or missing:	428
Number of houses completely destroyed:	1,295
Number of houses burned:	1,925

From the rescued to rescuers

In areas with rapidly aging populations, there are often only elderly people and children left in homes during the day. In addition to elderly people, there are also people in need of help in emergencies in some communities, including those with visual or auditory disabilities as well as physical or mental disabilities. Let's think about what we can do to support other community members in the event of a natural disaster.

Hazard maps

Creating hazard maps enables you to understand the geographical features of the area you live in and to know the characteristics of people who live in your local community, including those in need of help in emergencies. Creating hazard maps is one of the initiatives required to protect not only ourselves but also other community residents in the event of a disaster.

An example of hazard map production process

- (1) Gather information in your local community. (Obtaining the cooperation of the ward manager and other community residents makes it easier to visit the homes of individuals.)
 - Fill in information on a draft map, including dangerous places and geographical features.
 - Visit homes to obtain disaster prevention information from community residents (it is also important to make an acquaintance with community residents).
 - Accompany local community residents to check dangerous places, as well as disaster supply warehouses, firefighting facilities, communication facilities and evacuation shelters.
- (2) Fill in information on the map. (It may also be necessary to fill in information, such as the names of persons in need of help in emergencies, in addition to disaster prevention facilities and dangerous places.)
- (3) Walk along evacuation routes actually using the map.
- (4) Make corrections.
 - Discuss what you have noticed and what is required for the evacuation of those in need of help in emergencies while using the hazard map.
 - Fill in other information, if necessary.



Inagawa Municipal Nakatani Junior High School students working to create a local hazard map

Key points

- Ask local community residents for cooperation in creating the hazard map to establish close ties with them.
- Check information about people in need of help in emergencies.
- Check the location of evacuation shelters and evacuation routes and examine what is needed to support those in need of help in emergencies.
- Distribute the completed map to community residents to help them act on their own initiative in evacuation.

Exchanging opinions regarding restoration and community development

Miyagi Regional Bureau of Reconstruction and Ishinomaki City's junior high school students at Ishinomaki City Children's Summit 2012

On Monday, August 20, 2012, the Miyagi Regional Bureau of Reconstruction held Ishinomaki City Children's Summit 2012 in Ishinomaki City, Miyagi Prefecture, to exchange opinions about disaster restoration and community development with the city's junior high school students.

In the Basic Guidelines for Restoration from the Great East Japan Earthquake, the Japanese government has made it a goal to create an environment that enables the opinions of children and young people to be reflected in disaster restoration and community development. In an effort to cultivate future community leaders, the Miyagi Regional Bureau of Reconstruction is collaborating with local communities to provide children with opportunities to think about disaster restoration and community development and act as local community members on their own.

At Children's Summit 2012, junior high school students discussed in groups the theme of what they can do for community development in the future.

Roaring Drum Performance for Recovery

On that tragic March 11, Ishinomaki Municipal Ogatsu Junior High School had had a graduation ceremony in the morning. We were still celebrating graduation at our homes and our friends' after the graduation ceremony. Then, all of a sudden, we were struck by a huge earthquake that we had never experienced before, followed by a tsunami wave that reached the height of 16 meters. To escape the brink of death, we ran with all our might. The enormous tsunami wave swallowed everything—our entire community and our houses. Approximately 4,300 people lived in the Ogatsu district, of whom more than 200 people were killed or went missing. Except for the collapsed school building left on what had been our school grounds, all buildings in Ogatsu turned into piles of debris. Under such circumstances, it was indeed a miracle that the students of our school were all safe.

Ogatsu Junior High School's new semester started in borrowed classrooms of a senior high school located 15 km away from our collapsed school building on April 21, when cherry trees finally began to bloom after a long winter. None of the 51 students were wearing school uniforms. However, our shoes were all new. Our teachers appealed to their friends and acquaintances for help to provide us with at least new shoes for the new semester. We were all excited that we could start a new school year and were not wishing for anything more. Nevertheless, we were really grateful for the shoes that were placed in our shoeboxes, which perfectly fitted the feet of each one of us.

Although the school resumed, our life was far from normal. We were beginning to receive support from people across Japan. Nevertheless, with our houses swept away, we were still going to school from evacuation shelters, where life was inconvenient. For many days, a bread roll and a pack of milk were all that were available for school lunch for a student. Faced with a shortage of clothing, food and housing, we were barely surviving from day to day.

Our school principal made a new school motto for us: "Have courage for life." Our teachers, including the school principal, supported and encouraged us when we were seized by a sense of loneliness. In order to move on with our lives, we were struggling to start something new. Our teachers were also searching for a project that would enable us to work together and to feel the joy of living again. What they proposed for us was the *Date Kurofune* (black ship) drum performance, a traditional performing art handed down through generations in Ogatsu. We all welcomed their proposal with loud applause.

We started from creating Japanese drums. Our school's Japanese drums had all been swept away by tsunami waves. To replace the old drums, we collected waste tires, washed off mud and covered them with packaging tapes in thick layers to make drumheads. While working together, we all had a premonition of something fortunate beginning to occur. We put plywood boards together and painted them to make drum stands. We bought rolling pins at a 100-yen store to use them as drumsticks. We worked together with our teachers to make "tire drums" to replace the old Japanese drums.

On June 8, we gathered together in the gymnasium. We arranged the tire drums in front of us and beat them together for the first time.

Bang!

Our minds were immediately attracted to the powerful sound that could compete even with the sound of authentic Japanese drums. Members of the *Date Kurofune* Drum Conservation Association were kind enough to provide us with drum training. At first, the sounds and rhythms of our drums were utterly uncoordinated.

"You each have had different experiences. So, it is quite natural that your sounds are uncoordinated at first. What is important is to beat the drums with all your hearts. The message in your hearts is transmitted through the sound of the drums you beat."

In accordance with the advice of the association members, we beat the drums with all our hearts. All students—including a student who was caught up by a tsunami but managed to escape by a hair's breath, a student who had his grandmother swept away by a tsunami while they were evacuating together, as well as a student who lost his mother to a tsunami—continued to beat the drums day in, day out. We continued to beat the drums, without regard for the blisters forming on our palms or the blood oozing out of the blisters, for the sole purpose of conveying the 51 members' heartfelt message of courage.

On August 20, we presented our first drum performance at the Summer Education Festival held in Ishinomaki City. Not only local community residents but also people from all areas of Japan came to the festival. Before the audience, we beat the drums to convey our unfocused anger and sorrow, as well as our courage for life. The eyes of those who were watching our performance were filled with tears; when our performance was over, we were greeted with deafening applause. Surrounded by never-ending applause and tears, we felt a deep sense of satisfaction that we had completed our performance. We also had a feeling that something more than temporary satisfaction was beginning to take shape in our minds.

On September 11, half a year after that tragic day, we were facing Ogatsu Junior High School's shattered building, wearing white headbands around our heads and black T-shirts with the message "Have courage for life" written on the backs. The school building that had been swallowed by the enormous tsunami wave was waiting to be demolished any time. The gymnasium where the graduation ceremony was held on that day had been swept away without trace. With windows all broken and walls destroyed, only the bare framework of the building remained. Standing before what was left of the building, we were recalling what our school building had looked like before the earthquake.

In front of the audience of families, local community residents and teachers, our student representative delivered a message:

"Our memories of the junior high school building continue to live in our hearts forever. With heartfelt gratitude, we present our drum performance to this school building where we spent our school life together."

And at the sound of a gong, our *Date Kurofune* drum performance slowly began.

Bang! Ba-ba-ba-ba ba-ba-ba-ba bang!

Bending our knees and putting our weight on the lower bodies, we beat the drums not only with our wrists but by joining drumsticks and our arms into one straight line. Looking straight ahead, we continued to beat the drums with all our might. Amidst the sound of the drums, what we had experienced in the past came to our minds one after another.

*On that day, when an enormous tsunami wave hit the town of Ogatsu,
We desperately rushed toward the mountain and ran up the slope, grabbing grass,
Spending many a long, cold night on the mountain where we evacuated.
We lost many innocent lives to the tsunami
That swept our houses and community away.
Unable to believe our eyes,
We stood there without knowing what to do.
Then our school reopened, providing us with emotional support.
We are grateful for the new shoes that made us so happy.
Let's have courage for life!
We will never be beaten.
Life is sometimes too hard for us to bear.
How we wish Ogatsu could be restored to what it used to be.
But we will move on, always looking straight ahead.
We must return the favor we have received.
And we are determined to do so.*



In front of the earthquake-affected school building in Ogatsu Town, Ishinomaki City (September 11, 2011; photo taken by Ishinomaki Municipal Ogatsu Junior High School)

The sound of the drums we beat with all our hearts spread into the sky—and also through the school building that we so fondly remembered.

And finally, the finale.

Bing bang, bing bang, bing bang, bang!

"Oh yeah!"

Shouting loudly together, the 51 members raised their both hands straight toward the sky. Then, at the sound of a gong, we stretched our arms toward the school building.

And we continued to look straight ahead.

I saw their drum performance on November 5, 2011, when I participated in the Education Forum held in Tokyo. I was overwhelmed not by the heavy sound of the drums, but by the power of the students who were beating the drums. In the early 17th century, Date Masamune, Lord of the Sendai domain at the time, sent a mission to Spain in order to promote trade between the Sendai domain and Spain. The *Date Kurofune* drum performance expresses the mission's ambitious journey to Rome—their anxiety about the voyage, hardships and the excitement they felt when they finally arrived in Rome safely.

Ogatsu Junior High School students' drum performance reminded me of the Date black ship sailing out into the Pacific Ocean.

(Compiled from Junichi Sato, former Principal of Ishinomaki Municipal Ogatsu Junior High School, *Courage for Life*, and an interview with Noriko Abe, Vice-principal of Ishinomaki Municipal Ogatsu Junior High School)

For mental and physical health

When people encounter a disaster and experience great fear or shock, such as losing family, friends or houses, they often suffer from anxiety, insomnia and other stress symptoms. Let's think about what we can do to provide mental care for those who have had such experience as well as to cope with our own stress.

Staying close to affected people is all we can do to provide mental care

All we can do to provide mental care to those who have been deeply traumatized by a disaster is to stay close to them and listen to their stories. To that end, we also need to provide them with places where they can relax.

In areas affected by the Great East Japan Earthquake, volunteers conducted a variety of programs to help those living in evacuation shelters and temporary housing facilities to relax. One of such programs was a program for giving massages in footbaths.

At a resting place in a temporary housing facility, residents of affected areas were receiving massages from volunteers, with their feet in footbaths.

I saw a volunteer asking with a smile,
“Does this hurt?”

In response to the question, the local resident answered, “No. It feels very comfortable,” with a relaxed expression on his face.

In the relaxed atmosphere, local residents started talking about their experience of the earthquake, their families and their concerns about the future. Volunteers listened to them, nodding to their stories. When the massage was over, some residents thanked volunteers many times; others were moved to tears, saying, “I felt your hands massaging my shoulders very warm; they brought warmth even to my heart”; still others, reluctant to bid farewell, kept saying to the volunteers, “We’ll see you again.”

Those who participated in the volunteer activity showed appropriate considerations for local residents—they always stayed close to them with a smile and listened to their stories without actively trying to talk to them. Through the experience, volunteers realized that communication with other people leads to genuine sympathy, making it possible to relieve their stress little by little.



Staying close to local community residents in affected areas and listening to their stories through the footbath service provided mental care for them.

Footbath volunteers communicating with local residents at an evacuation shelter (Koriyama City, Fukushima Prefecture, May 15, 2011; photo taken by the National Earthquake Network)

Memo

Dealing with stress wisely

Stress is a state in which your body and mind are heavily burdened due to external causes (in the environment). Strong stress that continues for a long period of time makes it difficult to concentrate on study or work and causes mental disorders or physical symptoms, such as headache or stomachache. Maintaining physical and mental health requires dealing with stress wisely. There are a variety of ways to deal with stress. In order to maintain your mental health, learn how to deal with stress wisely.

How to deal with stress

● Thinking positively

Even in a difficult situation, focus on how to solve problems by looking on the brighter side of things.

● Refresh your body and mind from time to time

Do exercise; listen to your favorite music; talk and associate with other people.

● Relax

Stress depletes your mental energy. When you feel stress, you need to rest and relax.

● Consult with other people

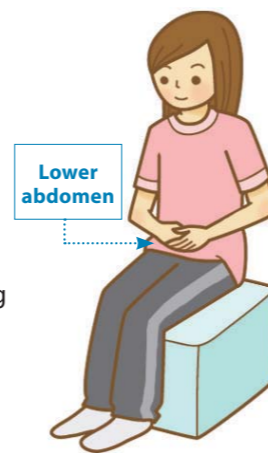
Consulting with other people about your problems helps alleviate your concern.

● Learn how to relax

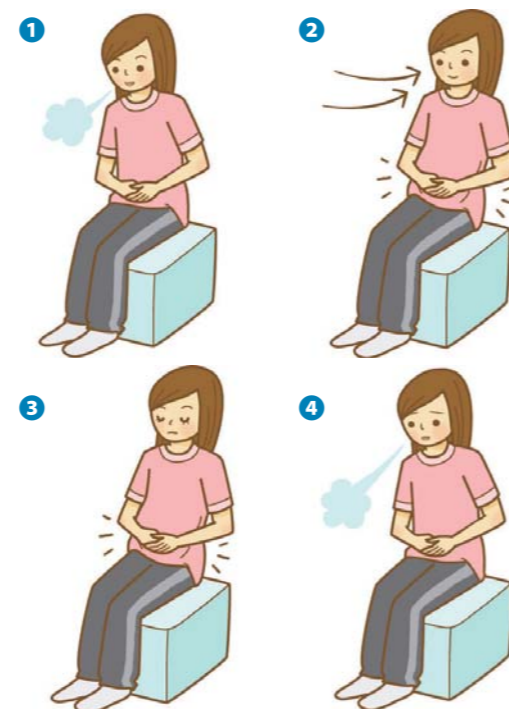
Relaxation reduces stress response and facilitates mental and physical recovery.

There are relaxation exercises that you can perform on your own, such as breathing and muscle relaxation exercises.

Posture



Breathing exercises



Breathing relaxation

Breathing relaxation is a method of relaxing the body and mind by taking deep, slow breaths. When breathing, focus your attention on your lower abdomen (region below the navel). Imagine that you are getting rid of your tension together with your breath when you breathe out.

Posture:

Sit in an upright position. You may sit on your heels, sit cross-legged, or sit on a chair. Until you get accustomed to the method, it is easier to put your both hands on your lower abdomen and feel your stomach swell while breathing.

Breathing exercises:

1 Breathe out completely: First, slowly breathe out until your lungs are empty.

2 Breathe in: Slowly breathe in through the nose so as to make your stomach swell.

3 Hold your breath: Hold your breath for a brief moment.

4 Breathe out: When you breathe out, imagine that you are removing tension from your body along with the slow, long breath that comes out of your mouth. Imagine that stress and physical fatigue are going out of your body with your breath.

* These exercises are more effective if they are performed with slow music in the background and with your eyes closed and attention focused on the music.

Muscle relaxation

Muscle relaxation is a method of relaxing the body and mind by consciously contracting muscles and then relaxing them.

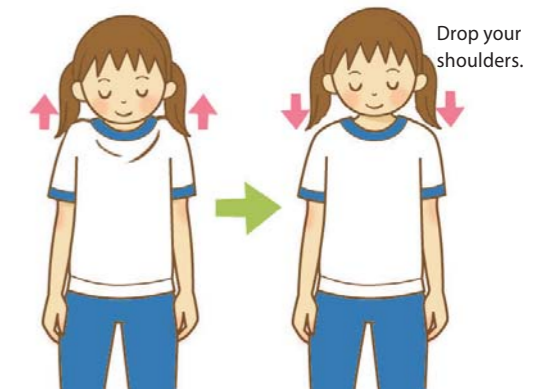
- 1 Take your most comfortable posture and close your eyes (lie down if there is space available). Continue to breathe slowly for a while.
- 2 Focus your attention on the muscles of the region that you wish to relax (A through E) and tighten the muscles for several seconds until you feel their contraction.
- 3 Release the tension all at once. Loosen up the muscles until you feel their relaxation. Repeat the same process.

When contracting muscles, focus your attention on the muscles that you wish to relax and contract only those muscles without straining your entire body.

Use the above method and relax all your body muscles from head to toe, one by one, by repeating the contraction-relaxation sequence.

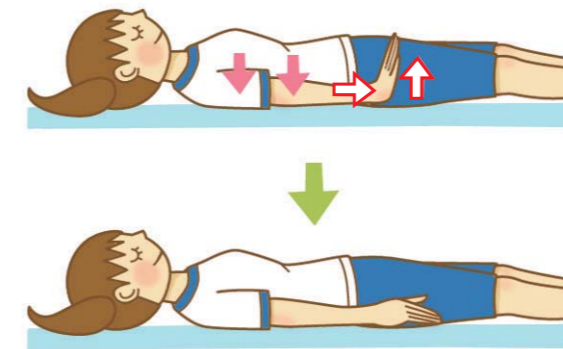
Ⓐ Shoulders:

Raise your shoulders.



Ⓑ Arms:

Bend your wrists backwards so that your fingers point upwards.



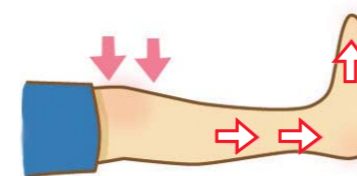
Ⓒ Face:

Try to make wrinkles on your face.



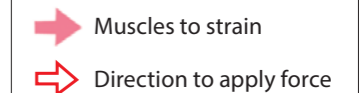
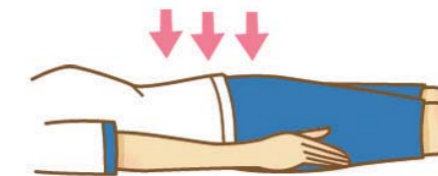
Ⓓ Legs:

Bend your ankles towards your body.



Ⓔ Waist:

Strain your belly muscles.



Relaxation exercises at junior high schools in affected areas

"I was able to relax for the first time in a while." "I feel my entire body warming up." "I would like to do these exercises again when I experience stress." "I think I will do these exercises in my home as well."

In areas affected by the Great East Japan Earthquake, many students are suffering from stress due to the aftermath of the earthquake. In an effort to relieve their stress, relaxation sessions are held to perform breathing and muscle relaxation exercises.



Relaxation exercises at Miyagi Prefecture Iwanuma Municipal Tamaura Junior High School

Recovery and restoration from the Great Hanshin-Awaji Earthquake

—Government Actions in Disasters—

The Southern Hyogo Prefecture Earthquake occurred in 1995, destroying many lives and possessions. To rebuild their lives, people helped each other and paved the way for recovery. Government agencies also provided support in the recovery process. In this section, we focus on infrastructures, such as roads, water, power and gas supplies, and housing facilities, and think about the actions taken by national, prefectural and municipal governments in the process of recovery and restoration from the Great Hanshin-Awaji Earthquake.

Recovery and restoration of infrastructures

Immediately after the earthquake

Prefecture

The prefectural government established the Emergency Response Headquarters in order to gather disaster information, provide search and rescue services, conduct firefighting activities and secure relief supplies for evacuees. Hyogo Prefecture requested the Japan Self-Defense Forces to dispatch emergency response teams and collaborated with these teams in search and rescue activities. Also, to cope with the disaster of an unprecedented scale, the prefecture appealed to neighboring local governments and the national government for support, including the restoration of lifelines.

Nation

The national government established the Southern Hyogo Prefecture Earthquake Emergency Response Headquarters and sent staff in charge to Hyogo Prefecture to provide advice regarding emergency measures.

One month later

Prefecture

The prefectural government allocated waterworks restoration experts sent from areas across Japan to affected areas and worked in cooperation with interested companies to restore gas and power supplies. Schools that had been closed after the earthquake were also reopened.

Nation

The national government developed laws required to secure the budget for the restoration of Kobe Port facilities, railroads and highways.

After one month later

Prefecture

As more and more debris was removed from affected areas, Hyogo Prefecture formulated a Great Hanshin-Awaji Earthquake Reconstruction Plan (Hyogo Phoenix Plan) to develop disaster-resistant communities. In this plan, the prefecture set goals for the next decade to implement programs for creative restoration. The prefecture also formulated a Three-year Emergency Restoration Plan with the aim of bringing things back to the pre-disaster level in three years and implemented programs for developing roads and ports, providing housing facilities and restoring industries to meet urgent needs.

Immediately after the earthquake



(Photo courtesy of Kobe Shimbunsha)

Two to three weeks later



One month later



(Photo courtesy of Kobe Shimbunsha)

One year later



(Photo courtesy of Kobe Shimbunsha)

Recovery and restoration of houses

Immediately after the earthquake

Municipalities

Those who lost their houses in the earthquake evacuated to schools, community centers and other public facilities. Municipal governments had designated public facilities as emergency evacuation shelters and allocated personnel for the management of these facilities. To compensate for a shortage of personnel, municipalities appealed to schoolteachers for support. Since the earthquake, municipal officer in charge and schoolteachers have been working together to provide shelters to evacuees.

Prefecture

The prefectural government made arrangements to provide drinking water, food, blankets and other relief supplies.

Half a year later

Prefecture

Temporary housing facilities constructed by the prefecture

Temporary housing facilities are constructed as emergency shelters for evacuees who are unable to build houses on their own. At the time of the Great Hanshin-Awaji Earthquake, because of the unprecedented scale of the damage, the prefecture constructed temporary housing facilities instead of municipalities. The construction started three days after the earthquake and total 48,300 houses were constructed by August.

However, many of the houses were constructed in suburbs located far from affected areas. As a result, local communities were divided and disappeared, with former community members, especially elderly people, left to die solitary death in temporary housing.

Several years later



(Photo courtesy of Kobe Shimbunsha)

Immediately after the earthquake



(Photo courtesy of Kobe Shimbunsha)

Half a year later



(Photo courtesy of the Disaster Reduction and Human Renovation Institution)

Several years later

Prefecture

Public condominiums supplied by the prefecture for disaster restoration

To recover the lives of evacuees who lost their houses as soon as possible, the prefectural government built a large number of public condominiums for disaster restoration in a short period of time. To meet elderly people's needs, all condominiums were designed to be barrier-free. Some of the condominiums were equipped with emergency report systems so that elderly people can call for help in an emergency, with life support advisers providing monitoring services for the elderly. The prefectural government also provided support for the formation of neighborhood associations to strengthen community ties as well as for the management of community plazas to promote communication among residents.

We never forget 1.17

On and around January 17 every year, a variety of events are organized at schools to commemorate the earthquake disaster and to talk about the experience of the earthquake. These events are held to commemorate earthquake victims as well as to pass on the lessons learned from the disaster and to make people with no experience of disasters realize the need to prepare for disasters. Also, outside schools, many volunteers tell stories about the experience of the earthquake—including the grief of those who lost their loved ones, inconvenience of life in evacuation shelters and the importance of mutual help and support among local community members—in order to pass on the experience and lessons learned from the earthquake to people with no experience of earthquake disasters.

Efforts to pass on the memories of the earthquake in schools in Hyogo Prefecture

At Nishinomiya Municipal Hamawaki Junior High School, January 17, the day of the Great Hanshin-Awaji Earthquake, is designated as the Hamawaki Junior High School Disaster Prevention Day. On this day, students hear from local community residents in the school districts stories about their experiences of the earthquake and participate in disaster training in order to establish ties with them.

This program was proposed by those who were student body representatives at the time of the earthquake and was started as part of efforts to learn about the importance of communication and ties with local community residents during the earthquake disaster.

It is becoming more and more difficult for students who were born after the earthquake to recognize earthquake disasters as their own problem. Events such as the above provide opportunities for students to learn about the lessons of the earthquake and disaster prevention and to pass on what we have learned and experienced to future generations.



Hearing stories about the earthquake from local residents



Emergency transport training with community residents

Students' remarks

- Getting acquainted with community residents on occasions like this will facilitate cooperation in the event of a disaster (second year male student).
- An earthquake always occurs unexpectedly no matter how much we prepare ourselves. I will prepare emergency supplies so that I can act without losing composure in the event of an earthquake. I hope to pass on the experience of the serious disaster to our next generation (third year female student).



Memorial meeting at Ono Municipal Ono Junior High School



Moment of silence by all students at Asago Municipal Asago Junior High School



Disaster prevention lecture at Tamba Municipal Wada Junior High School



Disaster training with community residents at Minamiawaji City and Sumoto City Joint Hirota Junior High School



Disaster Imagination Game (DIG) training at Itami Municipal Higashi Junior High School



Light sharing ceremony at Takasago Municipal Arai Junior High School



1.17 disaster studies at Shiso Municipal Yama-sakihigashi Junior High School



Joint training with the fire department at Fukusaki Municipal Fukusakinishi Junior High School

Initiative for raising disaster prevention awareness

In order to raise disaster prevention awareness, practical training is provided in technology and home economics classes to manufacture products that are used in emergencies, such as battery-free lights and radios and emergency headgears. Such training not only produces products for emergencies, but also provides opportunities for students to think about what is needed in the disaster situation.



This can be used as a cushion in ordinary life and as a protective headgear in an emergency.



This is a battery-free radio and light. There is also a product that can be used to charge mobile-phone batteries.

The following designs are also available.

Design 1:

Use thin blankets or insulation aluminum sheets instead of cotton for padding and use the product as a head warmer.

Design 2:

Put a pocket for a rescue whistle used to notify one's presence.

Passing on the memories of the Great Hanshin-Awaji Earthquake

The Disaster Reduction and Human Renovation Institution is a facility built in Kobe City's Chuo Ward in April 2002 to pass on the experience and lessons from the Great Hanshin-Awaji Earthquake to future generations and to contribute to alleviating damage from disasters in Japan and elsewhere. At this institution, special effects films, computer graphics, large screen video and sound effects are used to provide vivid descriptions of the enormous damage caused by the Southern Hyogo Prefecture Earthquake. Also, those who actually experienced the earthquake are working as volunteers to tell visitors about their experiences. In this section, we focus on efforts to pass on the memories of the earthquake to future generations.



Disaster Reduction and Human Renovation Institution
(photo courtesy of Kobe City)

Passing on our memories to future generations

—Disaster Reduction and Human Renovation Institution: Storytellers' commitment—

Since before the earthquake, I have been communicating messages about the preciousness of life, the importance of mutual help, and the meaning of life through my work and volunteer activities. Now that I have also gained experience from the earthquake, I would like to deliver messages that only those who has a real experience of the earthquake can convey. I hope all visitors to this facility will be able to learn about the earthquake and recall what they have learned from time to time. Those working as storytellers at this institution had different experiences in the earthquake. However, we all share the same commitment to passing on our memories of the earthquake to future generations.



(Remark by a storyteller at the Disaster Reduction and Human Renovation Institution)

Passing on our memories to future generations

—Hyogo Safety Day: 1.17 memorial meeting—

Hyogo Prefecture designated January 17 as the Hyogo Safety Day in order to raise disaster prevention awareness and to convey messages about the experience and lessons from the Great Hanshin-Awaji Earthquake in commemoration of 1.17. A variety of events are held on this day, including 1.17 Hyogo Memorial Walk, 1.17 Meeting for flower offerings and memorial events, a communication forum and stage performance, and disaster training.

Memorial Walk

Participants walk to the HAT Kobe district (in Chuo Ward), the goal of the walk, on Yamate Highway, which was constructed after the earthquake as an emergency evacuation route, visiting earthquake monuments on the way.

Since all public transportation became unavailable at the time of the earthquake, the only possible means was to walk along highways. Participants recall the time of the earthquake to raise their disaster prevention awareness.



Talking about the experience of the earthquake
—Story told by a storyteller—

All I wanted was to survive... Patience and scream: seven hours of crisis

At the time of the earthquake, our family of four lived in Higashinada Ward, Kobe City. The earthquake occurred at 5:46 a.m., January 17, 1995, on the morning after consecutive holidays. My husband and I were still sleeping in a first-floor room on a pair of futon mattresses laid in a direction different from usual, with a furniture-style *kotatsu* table beside us.

Then, straight out of the blue, we were thrown into chaos with a deafening sound, with the second floor of our 20-year-old house collapsing onto the first floor within an instant. The second floor dropped to the same height as the *kotatsu* table in our room. Fortunately, I barely escaped being crushed to death thanks to the small gap left between the *kotatsu* table and the tatami mat. However, lying supine, I could not move my body even an inch, as if I had been petrified. A paper sliding door covering my face saved me from asphyxiation. Nevertheless, I could not avoid feeling a fear of impending death.

Then, I heard our son's voice from the outside. I felt as if I heard the voice of God. I was so pleased to know that our son was alive. I was told later that although he was trapped under a wardrobe on the second floor, he managed to escape on his own. When he crawled out of the debris on his own, he received false information that we had already evacuated from the house. "What kind of parents would leave their son behind?"—feeling angry, he started to search for us. However, he soon realized that the information could not be true and came back to the house. Lying on the futon mattresses, my husband and I both escaped major injury. However, with the *kotatsu* table already half broken, the debris was beginning to weigh more and more heavily on our bodies, forcing us to breathe very slowly. It was January, the dead of winter; being unable even to go to the toilet, we had no choice but to endure the long, painful hours.

Ours was one of the houses that were particularly seriously damaged in our neighborhood. From the outside, it seemed quite unlikely that any human being was trapped alive inside the house. As my husband took a chance and kicked the *kotatsu* table, our son heard the sound, and neighbors also came rushing out of their houses for our rescue. Sound travels better when you bang on things than when you raise your voice.

One of our neighbors happened to be a carpenter. We were lucky that his house was only half destroyed and he could take out tools and also that he had expert knowledge. He removed the debris little by little, starting from the top of our collapsed house, and approximately seven hours after the earthquake, my husband and I were miraculously rescued from the debris. We felt deeply grateful for the kindness of the carpenter and of the neighbors and our son who worked together in rescuing us.

During the earthquake, I was driven to the point where all I wanted was to survive. On the brink of death, I learned about the preciousness of life, the kindness of our neighbors, the meaning of small acts of kindness, as well as about the importance of our health. Meanwhile, my experience of the earthquake also taught me about the ugly aspects of human nature, such as the frequently reported thefts of money and valuables from collapsed houses. And I am grateful for the fact that amidst the death of many people, I narrowly escaped death and have remained alive to this day, and also for the taken-for-granted fact that I can breathe the air as much as I want.

Our neighbors and our son saved our lives at the time of the earthquake. Needless to say, my husband and I would have died under the debris if those who saved our lives had died in the earthquake. In return for their kindness and also in commemoration of those who lost their lives, my husband and I are working as volunteer storytellers at this center in the hope of passing on our experience to future generations and contributing to preventing earthquake disasters. Finally, I would like to express my heartfelt gratitude for the support we have received from areas across Japan.