## Disaster Prevention Yokohama



Crisis Management Office, City of Yokohama Q) http://www.city.yokohama.lg.jp/somu/org/kikikanri/

### Introduction

The City of Yokohama is exposed to various risks of large earthquakes, typhoons, landslides, etc.

This booklet was produced as reference material for helping citizens engage in self-help and mutual assistance activities against various disasters.

In order to mitigate the damage by disaster, not only public help, but also self-help and mutual assistance efforts are essential.

Please utilize this booklet for preparing against disaster, talking with your family members and local community members.

P

Ρ

P

i.

March 2017



Rescue, relief, etc. by government, firefighting institutions, etc.

### **City of Yokohama**

### Table of Contents

Earthquakes	
Yokohama Citizens' Charter for Preventing Earthquake Disaster .	P3
Estimated damage caused by earthquakes in the City of Yokohama.	P4
Earthquake map: the entire city	P6
Areas that need to be evacuated in the event of tsunami .	P7
Preparing for an earthquake	
Discussion with your family members	P8
Earthquake-proof house	P8
Safety inside your house	P8
House equipped against fires	P9
Preparation of stockpiles and emergency supplies	P10
Preparation by business firms: controlling simultaneous returning by people $\dots$	P11
If an earthquake hits	
Safety appropriate for certain circumstances	P12
Swift extinguishment of fires	P14
People unable to return home	P15
Tsunami evacuation	P16
Where to evacuate	P17
Life as evacuees after an earthquake	
Living in their own homes as disaster victims	P18
Life at the disaster management base	P18
Food and water	P18
Storm and flood disasters, etc.	
Prepare for storm and flood disasters	
Heavy rainfall	P19
Preparation in everyday life	P19
Flow of information on disaster prevention	P20

Urban type flood and initiatives taken by local communities ... P22

Typhoon and sediment disaster

repare for thunder	000
Move to a safer place	P23
If it is impossible to evacuate to a safe place	P23
repare for a tornado	
Signs of a tornado	P23
Evacuation behavior	P24
repare for heavy snow	
If a heavy snowfall is expected	P24
When clearing snow	P24
nformation gathering	
	0.05
Information gathering at the time of disaster	P25
Mutual assistance – what a community can always	do
rotecting the whole community, starting from one's	
nmediate vicinity	
Cooperation among neighbors	P26
Safety confirmation of family members	P26
Municipal disaster prevention center	P26
Community-based anti-disaster organizations	P27
The model community-based anti-disaster	127
organizations should pursue	P27
To take actions during disasters	P28
Walk around the city	P20
Trainings proparations for apartment buildings	F 2 9
Cuppert for addedu people and bandisapped anos	P 30
Support for eldeny people and nandicapped ones	P31
Perspective of gender equality	P31
First aid, basic life support	P32
Fire extinguishing equipment used in the initial stages of a fire	P34
Check the activities of community-based	
anti-disaster organizations	P35





### Yokohama Citizens' Charter for Preventing Earthquake Disaster - We shall protect our lives by ourselves. -

The Great Kanto earthquake struck here in Yokohama and took the lives of many people.

Great earthquakes are inevitable. When it happens, support from the government won't reach us immediately.

We, the citizens of the City of Yokohama, hereby establish a charter in order to exert our individual power as citizens to overcome the great earthquakes, through self-preparation and our ties as a community.

Great earthquakes happen without warning and destroy peaceful daily life in an instant. It can be today, and it can be tomorrow.

#### That's why I ask myself: is my preparation enough?

In great earthquakes, it's not just luck that determines life or death. We also should keep in mind that there are people who aren't able to help themselves. I want to save my life and lives of my loved ones.

That's why I think to myself: what should I do if it happens right now?

There are a lot of worries in life as an evacuee, but if all of us take a little portion of the hardship and come together as a group, we can survive it.

#### That's why I tell myself: there has to be something I can do for others.

We have learned a lot from the Great East Japan Earthquake. The government we rely on might be damaged, too. It's us who can save our lives after the massive earthquake, face and overcome the difficulties. We can't forget this for the sake of the ones who fell victim to the great earthquakes.

That's why I pass this on to the next generation: the importance of helping yourself and each-other.

Enacted on March 11, 2013

### Yokohama Citizens' Charter for Preventing Earthquake Disaster (Action Guideline)

Preparation	<ol> <li>We shall make our houses quake-proof and take measures for preventing furniture from toppling.</li> <li>We shall be familiar with our region, and grasp hidden danger in the region.</li> <li>We shall stockpile drinking water, rations, and sanitation kits for at least 3 days, and set fire extinguishers.</li> <li>We shall determine how to communicate with our family members and beloved ones in advance.</li> <li>We shall confirm temporary evacuation sites, local anti-disaster facilities, wide-area evacuation sites, and areas for evacuation from tsunamis.</li> <li>We shall participate in disaster drills, involving our family members, colleagues, and neighbors.</li> </ol>
Initial response to an earthquake	<ol> <li>If I feel a strong tremor, I will try to secure my safety according to situations.</li> <li>When the tremor subsides, I will extinguish fires swiftly, because fires are dangerous.</li> <li>I will check the safety of elderly and disabled people in the neighborhood, and go to a safe place while bracing for aftershocks.</li> <li>At the time of evacuation, I will shut off the main valve of a gas pipe and turn off the circuit breaker, and bring rations and regularly used medicines with me.</li> <li>I will remain calm so as not to be confused by rumors and false reports, while available information is limited.</li> <li>If I feel a strong or long tremor, I will evacuate to a higher place while notifying other in a loud voice, while expecting the worst tsunami.</li> </ol>
Living as an evacuee	<ol> <li>Everyone is a victim in a disaster management base. I will find what I can do, and cooperate in operating the center.</li> <li>The shared phrase is "We're in the same boat." I will help operate the center while caring for the human rights of each citizen staying at the center.</li> <li>Half of evacuees are female. I will actively engage in the operation of the center, from the viewpoint of women.</li> <li>I will enlist cooperation from kids, and operate the center together.</li> <li>I will express my gratitude to firefighters and the members of the committee for operating the center, while keeping in mind that they are also victims.</li> <li>I will have the courage to say "Help me" and the kindness for listening to "Help me."</li> </ol>
n of self-help Ial assistance	<ol> <li>I will exchange greetings with neighbors and foster relationships, so that we will help one another in case of a disaster.</li> <li>I will learn about the prevention and mitigation of disasters in our local community, and with neighbors and family members.</li> </ol>



An important part of disaster prevention is the prediction of the actual impact of the great earthquake. Based on earthquake data in the past, new scientific knowledge, and previous experience from the Great East Japan Earthquake, together with specialists and operators of vital infrastructure, we have formulated a new estimation of the damage caused by earthquakes. (Publicly announced in October 2012)

### **Earthquakes included in this estimation**

Four earthquakes were used in the estimation of the damage caused by earthquakes.

### • The Genroku type Kanto Earthquake

This earthquake is assumed to have a magnitude of 8.1. It is almost double the size of the Taisho type Kanto Earthquake, which caused the Great Kanto earthquake. A maximum seismic intensity of 7 is assumed in the City of Yokohama.

### The Northern Tokyo Bay Earthquake

This earthquake is assumed to have a magnitude of 7.3 and have a considerable impact on the metropolitan area including the City of Yokohama.

### The Great Nankai Trough Earthquake

This earthquake is assumed to have a magnitude of 9. It was even raised by the Cabinet Office as the cause of the great tsunami.

### • Keicho type Earthquake

This earthquake was indicated as the cause of the great Tokyo Bay tsunami by Kanagawa prefecture in the fiscal year of 2011.

At high tide, the tsunami would inundate land at a height of about 4.9 m above sea level, even in the City of Yokohama.



Measurement standards of the severity of tremors (taken from the Meteorological Agency's explanation related to seismic intensity)

#### Seismic Intensity 1 Some people indoors feel a slight tremor.

**Seismic Intensity 2** Lights and other hanging objects shake slightly.

**Seismic Intensity 3** Most people indoors feel a tremor.



**Seismic Intensity 4** Some unsteady items topple.



from shelves.

**Seismic Intensity 5** Upper Some unfixed furniture topples.







Seismic Intensity 6 Lower The majority of unfixed furniture moves and

some doors get stuck.







**Seismic Intensity 7** Most of unfixed furniture topples and some items bounce.

#### The extent of the damage throughout the city is... (The Genroku type earthquake is assumed. For tsunami, the Keicho type earthquake is assumed.) Number of buildings partially or fully Number of buildings burned down destroyed due to strong tremors due to fires

137,100

Deaths due to buildings collapsing

### 1,700

443



 Number of buildings that were partially or fully destroyed due to the collapse of steep slopes



- Deaths due to fires
- 1,550 Number of people unable to return home due to the disaster 455,000

 Number of buildings partially or fully destroyed due to soil liquefaction

7,880

 Number of evacuees 577,000



27,000



Number of deaths due to tsunami 595

### For more information, please visit: http://www.city.yokohama.lg.jp/somu/org/kikikanri/jishinhigai/

For the full estimation of the damage caused by earthquakes in City of Yokohama, see 'Yokohamashi jishin higai soutei houkokusho' ('The Report on the Estimation of the Damage by Earthquakes in City of Yokohama' (October 2012))

### What is soil liquefaction?

Soil liquefaction is the phenomena whereby saturated sandy soil gush out with water due to earthquake tremors.

Due to soil liquefaction, the earth becomes soft, buildings and electricity poles tilt, and underground structures, such as sewage pipes, are exposed.

Utilization of maps / Soil liquefaction maps

http://www.city.yokohama.lg.jp/somu/org/kikikanri/ekijouka-map/

### Utilization of pamphlets

For information on how to prepare in advance, see the pages for countermeasures.



# orm and flood disasters, etc.

### An estimation of the damage caused by Genroku type Kanto Earthquake Earthquake map: the entire city



Produced by the Yokohama fire department in October 2012: Based on research of estimations of the damage in City of Yokohama caused by earthquakes, the seismic intensity of earthquakes in the city was evaluated with a 50 × 50 m mesh size.

This is a map that shows the seismic intensity of the Genroku type Kanto earthquake. The Genroku type earthquake was one of the four earthquakes that were used in the City of Yokohama for the estimation of the damage caused by earthquakes. It is estimated that the maximum seismic intensity within the city was 7.

However it is difficult to predict when an earthquake will occur and what the magnitude of the earthquake will be.

Even within areas where the seismic intensity was indicated as being comparatively low, it is necessary for people to assume a maximum of seismic intensity of 7 and to proceed with measures of both self-help and mutual assistance.

### *Suisui mappu* (a map indicating vater supply points for when disasters hit)

Within this city there are a total of 515 emergency water supply points where you can acquire drinking water during disasters. You can also check the **'Suisui mappu'** using your laptop and find the closest water supply points to your home and workplace.



▲An image of the 'Suisui mappu'

### For more details regarding earthquake maps: http://www.city.yokohama.lg.jp/somu/org/kikikanri/jisin-map/

#### 'Waiwai bōsai mappu' (a map that shows predicted danger points for when earthquakes strike and shows how to avoid these dangers.)

By using the 'Waiwai bōsai mappu' on the City of Yokohama's website, you can easily create your own map. The 'Waiwai bōsai mappu' can show not only a blank map but also points of danger and evacuation points in times of disaster. Let's create your own map with people in your area by printing out the map and using it to discuss the best possible strategy.

You can also display all kinds of disaster on the 'Waiwai bōsai mappu' by choosing seismic intensity or flood prone areas.

#### Outline of things you can display on the map

Seismic intensity, flood prone areas, the number of houses burnt down, each evacuation point, emergency water supply points, landslide warning areas, roads appropriate or not appropriate for evacuation, and emergency transport routes, etc.



Print out the 'Waiwai bōsai mappu', and write down disaster management bases, fireplugs, and other disaster prevention/mitigation information in your area so that you can use it if necessary.

わいわい防災マップ



### Areas that need to be evacuated in the event of tsunami



This map of tsunami evacuation points is drawn up based on the tsunami caused by the 'Keicho type Earthquake,' which would cause the deepest and widest inundation to the City of Yokohama among tsunamis simulated by Kanagawa prefecture in fiscal 2011. The tsunami-caused inundation estimate is a mere result of simulation, and an actual tsunami would inundate a wider area than estimated. Therefore, please voluntarily evacuate also from the area surrounding the areas that would be inundated.

You can see a detailed map, etc. in the website.

For more details about the map of the tsunami inundated areas: http://www.city.yokohama.lg.jp/somu/org/kikikanri/keikaku/tsunami/

### Have you discussed the proceedings with your family members?

- Decide with your family members methods of contact to use during times of disaster.
- Decide in advance evacuation and meeting points during times of disaster.

### Is it an earthquake-proof house?

### Check to see if your home is earthquake-proof.

- It is possible to perform a simple earthquake-proof check online.
- The earthquake-proof housing check that anyone can carry out' by the Japan Building Disaster Prevention Association (General Incorporated Foundation) http://www.kenchiku-bosai.or.jp/seismic/kodate/wooden\_wagaya.html
  - The City of Yokohama carries out free earthquake proof checks for wooden houses made with the conventional construction framework. Additionally we also subsidize part of the cost of earthquake proofing tests for condominiums. (Targets: houses constructed after May 1981. \*Other conditions apply.)

### Make your house earthquake-proof.

- The City of Yokohama subsidizes part of the cost of renovation for the purpose of earthquake proofing for wooden houses made with the conventional construction framework and condominiums, where it has been decreed that such renovation is necessary. (Targets: houses constructed after May 1981. \*Other conditions apply.)
- Architecture Disaster Prevention Division, Housing and Architecture Bureau, City of Yokohama TEL: (045) 671-2943
   http://www.city.yokohama.lg.jp/kenchiku/kenbou/bousai/taishinkanren.html

### Safety measures inside your house are sufficient?

### Carry out an inspection as to whether safety measures inside your house are sufficient, then based upon the findings, carry out necessary measures.

Prepare a bag with emergency supplies and place it in the entrance of your house or near to emergency exits.

Apply a shatter-proof film to your windows.

Place heavy objects under shelves and make sure not to store them in high up places.

Do not place objects that may topple in front of doors or in corridors that could be used for evacuation.



### Install apparatus that prevents furniture from toppling.

\* The City of Yokohama will install apparatus that prevents furniture from toppling free of charge for families living together with elderly persons over the age of 75, handicapped certification holders, those in need of care, and caregivers. More information will be announced publicly.



L shaped brackets, belts (the wall needs to have high strength)



Adhesive mats (make sure to check expiration dates)



Tension rod (the ceiling needs to have high strength) If there is shattered glass, you will be unable to walk through it barefoot, so make sure to keep slippers or work gloves close by.

Keep a flashlight and a whistle within close reach.

Make sure to latch the doors of shelves to prevent opening.

Arrange or fix large items of furniture in a way that prevents them from toppling.

Damage to housing during major disasters generally results in large costs for repairs and rebuilding. In order to mitigate this, we recommend you to take out the insurance and join mutual aid schemes so that you can get back to normal life as soon as possible.



#### A tale of disaster 'Lives can be saved with earthquake proofing'

Mr. Tsuyoshi Hoshino, who was a victim of the 2004 earthquake in Chuetsu, Niigata Prefecture, is a strong advocate of making sure your house is earthquake-proof.

"When the earthquake struck, I was in the mountainous area of Odiya city in Shiodani village, close to the earthquake's epicenter. At 17:56 on the 23rd of October, the earth below me shook violently with a magnitude of 7. As soon as the first wave of tremors hit, all critical infrastructure was instantly destroyed. My home collapsed and four of my family members were buried under the rubble. After a three-hour grueling rescue operation, they were recovered from under the debris, but my son then 11 years of age (in his fifth year at primary school) had already passed away and my wife was hospitalized for five months with serious injuries. In Shiodani village, two primary school children died and many others were injured. Of the 50 houses in the village 4 collapsed in the earthquake, and due to a large snowfall, 20 more collapsed. Please, ensure that you house is earthquake-proof so that you can avoid this kind of devastation. If you ensure your house is safe you can save lives."

#### **Kumamoto Earthquake**

On the 14th of April 2016 around 21:26, an earthquake of a maximum magnitude of 7 struck centered on the Kumamoto region of Kumamoto prefecture (foreshock). It is expected that the number of aftershocks follows, but again on the 16th at around 01:25 another earthquake of a maximum magnitude of 7 struck (main shock). Due to this earthquake, many houses collapsed and numerous individuals were injured while some died. Within Kumamoto prefecture a total of 180,000 houses were either completely or partially destroyed (as of the end of January 2017).

### Is this house equipped against fires?

### Damage caused by fires during earthquakes.

According to the damage estimation by the City of Yokohama, it is predicted that over 77,000 houses will be burnt down due to fires during earthquakes.

### Is the location of your house safe?

It is understood that damage caused by fires that occur during earthquakes is concentrated to certain parts of the city. In the City of Yokohama, we have set out areas where fire prevention measures should be prioritized as "priority areas for disaster-prevention measures (encouraged use of incombustible materials)" and "areas conducting disaster-prevention measures." (See the diagram on the right)

### Start using incombustible materials.

In order to avoid fire damage, it is important to use building materials that do not burn easily. In the City of Yokohama, when buildings are either dismantled, rebuilt, or repaired in 'priority areas for disaster-prevention measures (encouraged use of incombustible materials)', etc., a maximum grant of 3 million yen is given for the purpose of the use of non-combustible materials. For applicable areas, please see the URL below.

### If you are unsure about the safety of your building, consult with us.

For those worried about the safety of wooden structures, we dispatch specialists for consultation for free. For applicable areas, please see the URL below.

\*There are given conditions for subsidies and consultations. For more information, please see our website. A map of priority areas for disaster-prevention measures (encouraged use of incombustible materials) and areas conducting disaster-prevention measures



- "Project for the Promotion of the Use of Incombustible Materials," Disaster Preventing Community Planning Promotion Division, Urban Development Bureau, City of Yokohama, TEL: (045) 671-3595
- "Project for the Consultation on the Safety of Wooden Structures," Association of Architects, City of Yokohama, TEL: (045) 662-2711
- "Website for Disaster Preventing Community Planning Promotion Division"

http://www.city.yokohama.lg.jp/toshi/bousaimachi/

### Have you prepared stockpiles and emergency supplies?

- In the aftermath of a disaster, it often becomes difficult to purchase food or daily necessities. Prepare necessary items in case of an emergency, while considering the composition of your family.
   Make sure to put these emergency supplies in a place where they could be quickly taken out.
- Stockpiles should be for at least 3 days.
- There is also the method of a "rolling stock" where you buy slightly more daily necessities and foods than your family needs, and then restock these goods when they are used.

### Stockpiles:

### **Drinking water**

9 liters is the standard amount for one person for 3 days E.g. For a family of 3: 3 x 9 liters = 27 liters

### Food

Foods, such as crackers, which require no cooking, canned foods (cans which can be opened without a tin opener)

\*Individuals with allergies should stockpile foods that meet their own dietary requirements.

### **Sanitation kits**

The average person uses the bathroom 5 times a day. With this in mind, 15 packs are necessary per person for 3 days. \*Coagulants and treatment bags that can be installed and used in the bathroom of your

installed and used in the bathroom of your house. You can purchase them in most home improvement retailers.

## 

### Emergency supplies:

### ] Flashlight / lantern

Make sure to have extra batteries



### **Portable Radio**

Prepare the radio that can be tuned into both AM and FM channels and more spare batteries than you expect.

### **Valuables**

Cash, bankbooks, personal seal, and health insurance cards

### Other

Paper plates, paper cups, first aid kit (containing items like plasters), household medicine, medicine notebook, chargers for mobile phones, wet wipes, sanitary products, plastic bags, towels, items for oral hygiene, work gloves, saran wrap, and a whistle.

### Extra emergency items for households with special circumstances!

### Emergency items for household with infants

Milk, a baby bottle, baby food, a spoon, nappies, wet wipes, a change of clothes, a baby blanket, a baby sling, and toys for children



Extra emergency items for households with a resident who is pregnant

Bleached cotton, cotton wool, gauze, maternity passbook, and items for a newborn baby

### Advice from people who have experienced earthquakes, "things that would have been useful during the time of a disaster"

During past earthquakes, water supplies were cut off, and there were many individuals who suffered the lack of water for washing clothes, bathing, washing face, toilet facilities, and drinking water. Thus many say that as well as having an emergency stock of water, it is also beneficial to have polythene tanks to carry water as well as wet tissues for personal hygiene.

Additionally due to power outages and the cut off gas supplies, there are often many people who are put in a difficult situation in regards to food and contacting other family members. In these situations, items such as flash lights, portable radios, portable mobile phone chargers, batteries, and portable stoves were very helpful. Lastly most females say stockpile of sanitary products is useful. When preparing emergency items make sure to consider the age and gender of your family members.









### **\*\*\*** "Do not start moving thoughtlessly" when a major earthquake hits.

Right after an earthquake, roads and areas around stations become extremely crowded, which may cause a large group of people to fall or result in injuries or deaths caused by falling objects.

In addition, road congestion might hinder the first-aid/rescue activities, firefighting operations, emergency transportation, etc.

Therefore, the City of Yokohama obliges companies to make efforts for discouraging employees from going back home at once at the time of a large-scale disaster by ordinance.

We request each company to establish a system to ensure that employees and users can stay overnight inside the building.

[Underlying Laws]

- City of Yokohama Ordinance on Earthquake Disaster Countermeasures
- Ordinance related to the promotion of self-help and cooperation at the time of disaster.

### In the Great East Japan Earthquake, the instruction given by managers of companies to return home was one of the reasons that caused difficulties in returning home for many individuals.



### The City of Yokohama is seeking companies approving the "basic policy of controlling people from returning home simultaneously"!

The City of Yokohama is seeking companies that agree with the purpose of reducing the number of people stranded and promote our efforts.

### Outline of basic policy of controlling people from returning home simultaneously

- We make an effort to retain employees at the company.
- We make an effort in preparing a stock of food, water, etc. for employees and others for 3 days.
- We make an effort for environmental improvement such as preventing furniture at the company from falling and glass from scattering.
- We make an effort to decide on the rules for stand-by and retuning home, and disseminating them to employees.
- We make sure to determine the safety confirmation method to be used between the company and its employees. In addition, we make an effort to diffuse the safety confirmation method to be used between the employees and their families.
- We make an effort to carry out drills periodically.



 Pamphlet for controlling simultaneous returning by people



### What is the personal safety appropriate for certain circumstances?

It is difficult to respond with a calm mind when a major earthquake hits. However, an instant decision can determine if you survive or not. To act calmly and without panicking when an earthquake occurs, you must acquire the "personal safety appropriate for certain circumstances." It is essential to staying calm without panicking and ensure safety for yourself when an earthquake occurs.

### If you are at home

- Protect your head with cushions, blankets or pillows kept nearby.
- Hide yourself under a strong desk.
- Be careful not to injure yourself with glass fragments, etc.
- Do not rush to outside, but open doors or windows for exit.



### If you are at an underground shopping center

- Underground is considered safer during an earthquake, so go near a pillar or the wall and wait until it stops shaking.
- Emergency lights will be turned on after a while, so do not panic even if the power is interrupted.
- In case of fire, cover your mouth and nose with a handkerchief, etc., lower your body and follow the instructions given by staff members calmly.
- If there is danger of a tsunami, follow the staff members' guidance and quickly move to the ground after it stops shaking.



### When at departmental store or super market

- Be careful of falling objects, display stands, etc., and go near a pillar or the wall.
- Use cloths, baggage or shopping basket to protect your head.

### If you are at a workplace

• Distance yourself from windows, lockers, and bookshelves and hide under a desk or work table.



### If you are at a theater/movie theater

- Bend down between the seats and protect yourself from falling objects.
- Do not crowd the emergency staircase but follow the instructions of the staff members calmly.

# itual assistance – what a community can always

### If you are in an elevator

- Push the buttons of all the floors and get down at where it stops.
- If you are confined there, communicate through intercom or emergency button and wait for the rescue.
- Do not use elevators when evacuating, as there might be aftershocks.



### 📕 If you are in a train

- A train stops when a big earthquake occurs, so hold on to a handrail or strap tightly.
- If you are seated, bend forward and keep your foot.
- Do not get down on your own, but follow the instructions of the train crew.



### If you are driving a car

- Do not brake suddenly but slow down gradually while holding on to the handle tightly and stop the car at the side of a road.
- Gather information from radio, etc. until it stops shaking.
- When getting off the car, leave the key inserted as it might be necessary to move for emergency reasons.





- Distance yourself from vending machines, concrete-block walls, telegraph poles, etc. that may fall easily.
- Protect your head with a bag, etc., distance yourself from dangerous buildings from where signboards, outer walls, etc. might fall.
- Do not go near places where gas is leaking or electrical cables are hanging down, at any cost.
- Do not go near places of which road has been liquefied or got cracks (refer to page 5 to know about soil liquefacation).

### If you are near a mountain or a cliff

- Quickly evacuate from a dangerous place if you feel an earthquake.
- Do not go near a mountain or a cliff as aftershocks may cause a landslide.



### 3 chances to put out the fire at the time of earthquake

- **1** When you feel a shake
- (2) After it stops shaking

### **3** When there is an outbreak of

#### fire

\*During a big shake, do not force yourself in extinguishing or putting out fire, but protect yourself first!

### **To prevent the outbreak of fire** (precautions)

### Ensure a fire resilient indoor environment

- Install a home fire alarm that detects fire at an early stage.
- Install "a home fire extinguisher," etc. to extinguish the fire fast.
- Use heating equipment that switches off automatically on falling.
- Use fire-proof curtains, carpets, bedclothes, etc.
- Install a seismographic breaker to prevent fire by electricity.

### When evacuating after a disaster...

Shut down the circuit breaker and close a gas main cock to prevent fire.

### Initial firefighting

First 2-3 minutes are crucial. If you miss this period, fire starts spreading to the ceiling and becomes uncontrollable. At such a situation, give up on extinguishing fire and quickly evacuate.

...................

### Dialing 119

Inform the people around in a loud voice or by making a loud noise and report to the fire station.



### Initial firefighting

After fire breaks out, put out the fire before it spreads to the ceiling.



### Evacuation

If fire spreads, quickly evacuate on confirming your own safety as well as the safety of other residents. When evacuating, close the door to block the air, if possible.



### **Points**

### About home fire alarm

It notifies about the outbreak of fire in an early stage with warning sound or voice and every house is obliged to install it.

After its installation, perform regular operational tests and maintenance activities, as well as checking its warning sound.

An operational test is carried out through a "drawstring" and test button.

In case of any problem, consult with the store from where it was bought or the customer support desk of the manufacturer.



### About seismographic breaker

A "seismographic breaker" is a device that automatically cuts off the power on sensing a big shake.

More than 60% of the fire after an earthquake in recent years are considered to be caused by electricity.

Fire at the time of an earthquake can largely be reduced by installing "seismographic breakers".



 \* In the City of Yokohama, we provide an assistant service for the installation of seismographic breakers mainly in areas with a large number of wooden houses. To know the subject areas or details, check on the city's website, etc.
 \* If an earthquake occurs at night, smooth and safe evacuation might be hindered due to light failure, so please prepare an emergency lamp. When a big earthquake occurs, transportation services get suspended for a while, causing difficulties in returning home. In order to stay calm and act safely, always prepare in advance.

### Preparation is important in order to not panic

- Make arrangements at workplace for staying in advance, to avoid returning home in difficulties.
- In order to prepare for the situation of having to return home, arrange items needed for returning home, at workplace.
- Check for the safe walking routes home, and practice walking home.
- Discuss about the contact means and the meeting place with your family, etc. beforehand (refer to page 26).



### If a great earthquake happens, ...



It is expected that railway station vicinities and downtown areas will get crowded with a number of people running about trying to escape, throwing such areas into disarray. Do not rush yourself heading to another place, but try to collect accurate information and stay in a safe place, such as workplaces and schools.

- Gather information, including the damage situation, the status of train services, and safety of your family members (refer to page 25 for information gathering).
- Be sure to take major roads and wide roads.
- Choose an appropriate time of the day to move, such as while it is bright outside, in order to return home safely.

### Utilization of stations for supporting people in returning home at the time of disaster

If a huge earthquake happens, stores, including convenience stores, fast food restaurants, and gas stations, will support people in walking home. The stickers shown on the right are the sign at the time of disaster.

The following support will be offered:

- Tap water and restrooms
- Rest facilities
- Road information obtained based on various sources, including maps and radio

### Utilization of a temporary stay facility for people with difficulty returning home at the time of disaster

The City of Yokohama has designated temporary stay facilities for people with difficulty returning home at the time of disaster. The temporary stay facilities allow those people to use restrooms and tap water, and perform a search for nearby facilities using "Ichiji-Taizai Shisetsu NAVI (The City of Yokohama's system of navigation to find temporary stay facilities)." We recommend you to bookmark this system.



◀ For mobile phones http://wwwm.city.yokohama. lg.jp/b-m/



For smartphones http://wwwm.city.yokohama. lg.jp/b-sp/

For details of the measures taken by the City of Yokohama for people with difficulty returning home at the time of disaster, please see: http://www.city.yokohama.lg.jp/somu/org/kikikanri/kitaku/

### Ichiji-Taizai Shisetsu NAVI (system of navigation to find temporary stay facilities)

Examples of items needed

or returning home

Simple food (snacks, etc.)

Portable radio

**Drinking water** 

Electric torch
 Rain gear

Sneakers

Cellphone charger

Comfortable clothes

Map



災害時徒歩帰宅者

\*\*\*\*\*\*\*\*\*

----

### Care of students at public schools

If a major earthquake occurs, public schools in the City of Yokohama will break off class immediately and take the following action in order to ensure safety of students:

#### • Elementary/Junior High/Compulsory Education/Special-needs Schools

Elementary, junior high, compulsory education, and special-needs schools will **take care** of students until their parents come and pick them up.

#### High School

High schools have asked the parents of each student in advance to choose either of the following options of action that their children should take: to stay in school, or to return home. In principle, schools will comply with the option that the parents of each student have chosen. However, that if it is judged that students' safety on their way home cannot be ensured due to the school route conditions or other reasons, high schools will take care of the students until their parents come and pick them up.

### For details of "The City of Yokohama School Disaster Management Plan," please see: http://www.city.yokohama.lg.jp/kyoiku/bunya/bunya3000.html

\* This does not apply when a prior agreement on measures to take, such as students' return from school in groups, has been concluded between high school and parents or the community.

#### Childcare Centers

Childcare centers will continue to provide childcare and take care of the children until their parents come and pick them up.

### What are the key points of tsunami evacuation?

Some tsunamis reached inland before a tsunami warning was issued, as in the case of the South-west off Hokkaido earthquake in 1993. Therefore, it is important to be prepared for evacuation upon feeling violent or prolonged shaking, even if no tsunami warning, or evacuation advisory or notice is issued.

### Points of Tsunami Evacuation

### • Evacuate to a higher place as quickly as possible

When you evacuate, keep the following heights in mind as a rough indication for evacuation:

• High ground of 5 m above sea level or higher • 3rd floor or higher of reinforced concrete buildings or other similar buildings that endure earthquake shaking

### Do not use cars for evacuation

Avoid using cars for evacuation (except when people with a need for special help who are unable to walk autonomously evacuate, and when there are any other compelling reasons), because evacuation by car all at once will cause traffic congestion, which may raise a risk of failure to evacuate.

### Measures for tsunami evacuation that you can take at home and workplace by yourself

You need to know the height of the place where you currently are for evacuating from tsunami. Therefore, be sure to check the height of your daily living area and the places that you see: often, using the "heightabove-sea-level indicator" installed mainly around coastal areas, the "tsunami hazard map" contained in the "guidelines for tsunami evacuation," and the basic city planning map of the "Waiwai bosai mappu (disaster management map)" posted on the City of Yokohama's website.

For details of the tsunami evacuation facilities and the evacuation guidelines, please see: http://www.city.yokohama.lg.jp/somu/org/kikikanri/keikaku/tsunami/

### Notification using the public-address system

The City of Yokohama has set up the public-address system with which it notifies the citizens of the areas that are expected to be affected by tsunami inundation of a tsunami warning and other similar announcement.







 Height-above-sea-level indicator





serve as the disaster management base among public schools or other appropriate facilities.

The disaster management base have had a minimum quantity of food and water in stock for evacuees living there temporarily, and prepared materials and equipment necessary for rescue operations.

#### Major roles of the disaster management base

- ① Evacuation shelter
- 2 Place which has a minimum quantity of food and water in stock
- ③ Place where people can collect and communicate information on safety, damage, and relief supplies
- Operation of the disaster management base ➡ refer to page 18

Both victims who are able to live in their houses and need not evacuate (victims living in their homes) and evacuees who are living in evacuation shelters other than the disaster management base, too, can get relief supplies and information at the disaster management base.



#### Points to note

Use of private cars is prohibited in the disaster management base (including the roads around the base). As evacuation by private car will be a hindrance to emergency vehicles and other similar vehicles, evacuate on foot if you are able to walk. Furthermore, health damage, such as the economic class syn-

drome (refer to page 18), may affect you if you spend nights in your car during evacuation.

### Medical system at the time of earthquake disaster

When you get injured or sick at the time of earthquake disaster, you can consult a doctor at medical institutions that offer medical care, depending on the severity of your condition. In addition, a medical rescue team will make its rounds to the disaster management base in order to provide medical care to evacuees there. Check the medical institutions in your community on a daily basis in case of a disaster.





#### Who are victims living in their homes?

As the evacuation space will become full if people whose houses are safe evacuate to the disaster management base, such people (victims living in their homes) should stay at home.

However, that various pieces of information, and food and water, which will be delivered from the ward office to the disaster management base, will be shared by "evacuees in the disaster management base" and "victims living in their homes."

### Mutual assistance in the life as victims living in their homes

Cooperate with each other in the areas where people are living in their own homes as disaster victims.

- For example...
- Talk to each other
- Post information provided at the disaster management base so that they will be shared by all the disaster victims living in their homes
- Cooperate with each other in distributing relief supplies at the town hall or other appropriate places
- Make visits and provide information and relief supplies to those who need assistance, such as the elderly

### What is important in the life as evacuees at the disaster management base?

The life at the disaster management base will be operated by the disaster management base operation committee organized chiefly by local residents. However, evacuees' cooperation in operation is essential for smooth operation of evacuation shelters.

### What should be done at an evacuation shelter (example)

### Shortly after the establishment of a shelter

- Accepting evacuees, and grasping information on them
- Dividing the evacuation space, and securing dedicated space for breastfeeding, change of clothes, and other purposes
- Taking measures against crime at night in the evacuation shelter
- Performing rescue and aid operations
- Preparing a soup kitchen

**Economy class syndrome** 

as the economy class syndrome.

We ask every one of the households to prepare at least 3 days' worth of

food and water (refer to page 10).

- Distributing relief supplies in stock
- Taking measures regarding restrooms



\*A manual for operation of the disaster management base has been developed by the disaster management base operation committee

### What are expected to become necessary in the life as evacuees

- Management and procurement of relief supplies
- Coordination with disaster victims living in their homes
- Collection, collating, and
- communication of information Crime prevention patrol
- Acceptance of volunteers
- Health management of evacuees, and so on

For your reference The stocks of food and water that the disaster management base has built up

• Canned water: 2,000 cans • Crackers: 1,000 portions • Preserved bread: 1,000 portions

Rice porridge: 460 portions
 Soup: 220 portions
 Powdered milk and feeding bottles: 20 sets

Earthguakes



Establishment of a restroom

If you sit in a limited space for a long period of time without moving your legs and do not take a lot of food or water, blood circulation will be impaired, resulting in blood coagulation. As a result, blood clots (thrombi) so generated will travel from the foot to the lungs, which may clog up the blood vessels and induce pulmonary embolism, and in the worst case, one may lose his or her life. This condition is referred to

A number of people suffered from the economy class syndrome in the past disastrous events, including the Kumamoto earthquake in

The disaster management base has a minimum guantity of food and water in stock for those who have failed to carry out their food reserves due to collapse or fire of their houses. Therefore, the citizens must prepare a necessary amount of food and water by themselves. When

April 2016. Therefore, be sure to get some exercise on a regular basis and drink plenty of water in order to prevent these risks.

you evacuate to the disaster management base, be sure to bring the food and water that you have in stock at home.

Food and water in the life as evacuees

In recent years, heavy rain and storm damage caused by typhoons, etc. has been occurring at many places, such as the heavy rains in Kanto and Tohoku region in September 2015 and in Northern Kyushu in July 2017.

As the occurrence and scale of typhoons and heavy rainfalls can be predicted to a certain extent, it is important to prepare sufficiently to minimize the damage.

### **Evacuation policy**

To act on the basis of one's own judgement is the principle rule of evacuation. Even if no evacuation advisory is issued, start evacuating as soon as possible on the basis of the principle: "Saving one's own life," before it gets dangerous (refer to page 21).



Make use of a hazard map to know the dangerousness of disaster such as sediment disaster, flood and storm tide, which may damage your house

In addition, determine a place of evacuation nearby, such as an elevated ground and a vertical evacuation station.

Prepare minimum articles to take along with you when you evacuate outside. As minimum articles are the same as the emergency bag for earthquakes, it can be used for either case.

### List of items to carry in an emergency

Emergency bag

(Minimum articles)









Water/Food Drinking **Emergency** food water Powdered milk Paper plates/paper cups





Clothing Helmet Thick-soled sneakers Work gloves Clothing

### Make use of an evacuation card.

In order to take appropriate actions in emergency, it is important to check evacuation behavior that suits your house. Fill in the card with disasters that would require evacuation, information of which we should be aware, evacuation methods, etc., and prepare for disaster.

Also, discuss and share the information with your family members and neighbors.

### Methods of obtaining Information requiring Types of disaster Evacuation behavior special attention information

### Example

Types of disaster	Information requiring special attention	Methods of obtaining information	Evacuation behavior
Landslide	Evacuation information Sediment disaster warning information	Disaster prevention information E-mail television, radio, websites, etc.	Evacuate to OO evacuation shelter     If it is dangerous to go out, evacuate to     a room at the opposite side of the slope.
**River flood	Water level information of ○○ River △△ Bridge "Evacuation water level"	Websites of the City of Yokohama and Kanagawa Prefecture Disaster prevention information E-mail	• Evacuate to a shared space at the top floor of the apartment/ condominium building
Storm tide	Storm tide warning	Disaster prevention information E-mail	Evacuate to a relative's house



Weather information	Information details	Evacuation information	Your action	
Storm warning	There is a possibility of disaster due to heavy rain.	Preparation for evacuation/Start of evacuation of	People who need some time to evacuate, such as elderly people, kids, disabled people and sick	
Storm alert	There is a possibility of major disaster due to heavy rain.	elderly people and others	people, should start evacuating.	
Sediment disaster warning information	When there is a higher possibility of sediment disaster due to heavy rain.	Evacuation advisory	Start evacuating to a safe place.	
Information on a record-breaking torrential rain	When a record-breaking torrential rain that would occur once in a few years was observed.			
Storm emergency warning	When there is a remarkably huge possibility of major disaster due to heavy rain.	(emergency)	evacuate immediately.	

\*For more details of the announcement criteria for weather information, access http://www.jma.go.jp/jma/kishou/know/kijun/index.htm (Japanese Meteorological Agency Website)

### Trivia

### Information on a record-breaking torrential rainfall

This is announced by the Meteorological Office when a short-time heavy rain, which would occur once in a few years, is recorded. Its criteria vary among prefectures, and it is 100 millimeters/hour in Kanagawa Prefecture.

It indicates that the current rainfall of that area is a violent rainfall that rarely occurs and can lead to a disaster.

### **Flood risk information**

The Meteorological Agency forecasts floods while indicating the water level or quantity of flow of designated rivers of predetermined areas, so that it can be used as reference by residents when they evacuate, in case of flood or rising water of river. This is called "Flood forecast for designated rivers." In the City of Yokohama, "Tsurumi River" is designated. In the flood forecast for designated rivers, there are four types of information, i.e., flood warning information, flood alert information, flood risk information and flood occurrence information, and it is announced with a river name, such as "OORiver Flood warning information" and "AARiver Flood alert information."

Among these, "flood risk information" implies a stage where residents are encouraged to evacuate in a situation where the river flooding can occur at any moment.

### Confirm the evacuation behavior (evacuation signs) at the time of storm and flood disasters

Start evacuating before it gets dangerous, by referring to the <evacuation signs> such as precursory phenomena of a landslide, such as the falling of small stones with a pattering sound, water leakage from sewer pipes, flood information of river, evacuation advisory and preparation for evacuation/start of evacuation of elderly people, on the basis of the principle: "Saving one's own life with one's own judgement."



### Take the evacuation action that is suitable for your house

(1) Make use of a hazard map and check the risk of disaster (sediment disaster, flood and storm tide) that may damage your house or areas around it. (2)Consider the riskiness of disaster and inundation level, and confirm if there is a need to evacuate to an evacuation shelter, such as a designated emergency evacuation shelter, or vertical evacuation would be fine.

- ③Check the location of nearby evacuation shelters (elevated ground and vertical evacuation station) beforehand.
- (4) Start evacuating guickly if evacuation advisory and preparation for evacuation/start of evacuation of elderly people and others are indicated or precursory phenomena occur.
- ⑤Arrange a flashlight and a radio to prepare for blackouts.

### About designated evacuation shelters and emergency evacuation shelters

- A designated emergency evacuation shelter is a place to temporarily escape from imminent danger of disaster. Municipal schools, etc., which are disaster management bases, are designated by disaster type, such as "flood," "sediment disaster," "storm tide" and "earthquake." As there are centers where one can evacuate and cannot evacuate depending on the disaster type, it is important to check them regularly. Also, the establishment of a designated emergency evacuation shelter is determined when the administration issues evacuation advisory, etc., and in accordance with the situation and scale of the disaster.
- A designated evacuation shelter is a place to stay if you cannot live in your house after a disaster. In Yokohama, municipal schools, etc., which are disaster management bases, are designated as designated evacuation shelters (refer to page 17).

Make sure to know the evacuation routes and the location of "designated emergency evac- 横浜市 指定緊急避難場所 指定避難所 — Search uation shelters" and "designated evacuation shelters (disaster management base)."

Advance preparation can be made for typhoons. Take measures not when it approaches, but always be prepared. Check the course of a typhoon on news channels or the like.

### Preparation outside your house

- Clean the gutters and drainage to ensure that they are well-drained. Inspect and reinforce the roof, fence and wall.
- Fix or remove the things that might get blown away.
- - If you have a sandbag or a water sealing board, arrange for its installation immediately.

\*What is a typhoon... It is an atmospheric depression developed on tropical seas. Those tropical cyclones whose maximum wind speed (ten-minute average) is 17m/s or over are called "typhoons."

### **Preparation for sediment disaster**

To act on the basis of one's own judgement is the principle rule of evacuation. Even if no evacuation advisory is issued, start evacuating as early as possible on the basis of the principle: "Saving one's own life," before it gets dangerous.

In Yokohama, cliffy areas that may cause a remarkable damage to houses in case of a landslide are identified beforehand, and "sediment damage warning information" is announced along with an issuance of "evacuation advisory" (hereinafter referred to as "immediate advisory") to the surrounding areas.

### Signs for evacuation

- Falling of small stones with a pattering sound
- Spring water coming out on a slope
- Cracks on a slope, etc.
- Evacuation to a safe place (evacuation site such as a designated) emergency evacuation shelter, elevated ground nearby, a relative's house that is located outside the warned areas)
  - Evacuation to the 2nd floor or higher of a strong building, or to a tall building nearby
  - Stay at a safe place inside the building (if going outdoors to evacuate) is dangerous because it is in nighttime, in imminent danger, or the like)



Storm and flood disasters, etc.

### Hazard map for sediment disaster http://www.city.yokohama.lg.jp/kenchiku/kenbou/bousai/gake/gake/hmap/ About immediate advisorv http://www.city.yokohama.lg.jp/somu/org/kikikanri/doshasaigai-sonae.html

### **Preparation for flood disaster**

Due to the progress of urbanization, most of the areas of Yokohama are covered with asphalt roads, etc., making it difficult for rain water to penetrate through the ground. Therefore, pay enough attention to the rainfall and make sure to decide and act as soon as possible, as the rain water exceeding the drainage capacity of river and sewage due to concentrated heavy rain gets collected at low places, raising the risk of flood in a short period of time.

### Flood in underground facilities

• Water may suddenly enter underground shopping centers, semibasement houses, underground parking lots, etc. Evacuate early in order not to be confined.

### Flood in an underpass, etc.

• When underpasses or lowland areas are flooded, there is a risk for cars to get submerged. Avoid using them in heavy rain.

Make use of the flood hazard map/inland water hazard map and check the evacuation behavior and necessary preparation.

Inundation hazard map

http://www.city.yokohama.lg.jp/kankyo/gesui/naisuihm/

### Initiatives taken by local communities

Through walking around the city, check the dangerous places of the area beforehand. Also, try to help elderly people, children, disabled peopled and others in the community, besides putting efforts in informing everyone about evacuation and information on disaster prevention, etc., and ensuring support for vertical evacuation stations.





### **Prepare for thunder**

If you hear a crash of thunder or see thunderclouds approaching, it means that lightening is going to occur. Quickly evacuate to a safe place.

### If you encounter with a thunder

Thunderbolts can fall on any random place, such as the surface of the sea, plains and mountains, depending on the location of thundercloud. If there is a tall object nearby, thunderbolts tend to fall passing through it. They are likely to fall on people if they are in open areas such as schoolyards, golf links, outdoor swimming pools, embankments, the beach and

sea, or heights, such as summits and ridges, therefore, evacuate as soon as possible to a safe area.

The inside of buildings made of reinforced concrete, automobiles (excluding convertible cars), buses, and trains is considered safe. In addition, it is safe inside a wooden building, however, it is safer if there is a distance of more than one meter between you and all electronics and ceiling/wall. (Source: Website of Japanese Meteorological Agency; "How to protect yourself from a thunderbolt")

00

00

### If it is impossible to evacuate to a safe place

If there is no safe place nearby, evacuate to the place in a range from where you can look up to a tall object such as a pole, a stack, a pylon and a building, at an angle of 45 degrees or more, and 4 meters or more away (protection range) from the object. As it is dangerous to stand near a tall tree, maintain a distance of 2 meters or more from all its trunks, branches and leaves. Lower your body and do not hold the belongings above your body. Move to a safer place only after 20 minutes or longer have passed since the end of lightening.

(Cited from "How to protect yourself from a thunderbolt — Safety measures Q&A, by Society of Atmospheric Electricity of Japan)

(Reference: Website of Japanese Meteorological Agency; "How to protect yourself from a thunderbolt")



### Prepare for a tornado

Tornados are formed with cumulus and cumulonimbus clouds, and they are spirals in the atmosphere reaching the ground. If a tornado strikes, there is a possibility of massive damage such as the collapse of large trees and roofs being ripped, however, it is an atmospheric phenomenon for which it is difficult to forecast where and when it will occur.

When you feel abnormality in weather such as seeing black clouds approaching, or when you obtain information such as the tornado warning information, etc., refer to the following information and take measures to protect yourself.

### Signs of a tornado

- Black clouds approach and the sky suddenly gets dark.
- A crash of thunder is heard and lightening is seen.
- A cold, chilling wind starts to blow.
- You see large drops of rain or hailstones.



### Evacuation behavior

### If you are out...

- Evacuate to a strong building nearby.
- If there is no such building, go under a shelter where you can protect yourself from flying objects and bend your body and cover your head.
- Do not go near poles or thick trees as they might collapse.
- Do not evacuate to a storeroom, garage or prefabricated house.

### If you are inside...

- Close the shatters, windows and curtains, and distance yourself from windows.
- In a house with more than 2 stories, evacuate to the room without any window on the first floor.
- Evacuate to the room with no windows and the closest to the center of the house .
- Go under a strong desk or a table and bend your body and protect your head.



### Other measures

- Check "Nowcast of tornados."
- Gather and check information from television, radio, etc.

### **Prepare for heavy snow**

### If a heavy snowfall is expected...

### How to stay safe at home

- If a heavy snowfall is expected, avoid unnecessary outing.
- Have a flashlight, portable radio, food, drinking water, etc. prepared in advance.
- To prevent carbon monoxide poisoning, make sure not to cover the air supply and exhaust opening of a forced flue-type heater with snow.
- Actively talk to people needing care such as elderly people in neighborhood.

### Driving a vehicle

If a heavy snow is expected, avoid driving a vehicle as much as possible. Also, if you are compelled to drive a vehicle, take care of the following things.

- Check the weather information, road information, etc. in advance.
- Perform inspection and maintenance activities of the vehicle without fail.
- Prepare warm clothes, boots, gloves, heat packs, a shovel, pull ropes, drinking water, emergency food, etc.
- Drive according to the situation of roads and with care, and equip your vehicle with studless tires and tire chains at an early stage.
- If you are stuck and compelled to leave your car, keep unlocking the door and leave the key at a clearly visible place.



### When clearing snow...

Take safety measures when clearing snow, such as greeting family members and neighbors while working, doing warm-up exercises and working in a group. Also, help elderly people to enable them to clear snow easily in the community.

When a major earthquake hits, everyone wishes to obtain information about safety of their families, scale of the earthquake, situation of the public transportation, etc., as early as possible. In order to obtain accurate information and avoid false rumors, practice using the tools regularly.

### Website

It shows emergency information at the time of disaster, and initiatives for self-help/mutual assistance/ public assistance.

### URL:http://www.city.yokohama.lg.jp/somu/org/kikikanri/

### E-mail

### Disaster prevention information E-mail

The City of Yokohama will send emergency notifications about the earthquake, tsunami, weather alerts/ warnings, water level of rivers, etc., to those who have registered beforehand with their PC or mobile phones. Send a blank E-mail to the QR code at right or to the address written below. You will receive an E-mail about registration information. (Disaster prevention information E-mail: entry-yokohama@bousai-mail.jp)

### **Emergency warning emails**

The City of Yokohama will transmit disaster information and evacuation information of the city to mobile phones (NTT Docomo, au and Softbank) used in the city.

Registration is not required.

### App

### Yahoo! JAPAN disaster prevention flash report

You can receive emergency information for disaster prevention from the City of Yokohama by downloading the "app version" from the QR code given at right on your smartphones or registering in "E-mail version" from PC or mobile phones of conventional model.

(Yahoo! JAPAN disaster prevention flash report: https://emg.yahoo.co.jp)

防災情報ガイド

### Twitter

### Official twitter account of Emergency Management Office, General Affairs **Bureau, City of Yokohama**

It will transmit the information related to evacuation, etc. if a disaster is forecasted to occur in a wider area of the city, information related to the disaster, etc., under the Disaster Control Headquarters system, emergency warnings, alerts, information on cancellation of some warnings, etc.

Account: yokohama saigai URL: https://twitter.com/yokohama saigai

### Yokohama information guide for disaster prevention

In this guidebook, basic notes on information gathering and its communication at the time of disaster is summarized, so that every citizen can grasp the information related to disaster fast and accurately and make use of them effectively.

### URL:http://www.city.yokohama.lg.jp/somu/org/kikikanri/panfu/ guide/bousai-jouhou-guide.pdf

### Confirming the safety of family - Disaster message dial-

Refer to page 26 for details







### Cooperation among neighbors

It is said that 72 hours (3 days) after the occurrence of an earthquake determines whether a person survives or not. When a major earthquake hits, a fire engine/ambulance may not reach the site right way. In such times, neighbors must help each other.

### Safety of family members and neighbors

After confirming the safety of your family members, confirm the safety of neighbors as well.

Check carefully if there are no people who require special assistance during times of disaster and failed to evacuate (refer to page 31).



### Cooperate in carrying out relief/rescue and fire extinguishing activities

Relief/rescue the people who got pressed by fallen furniture or a collapsed building in cooperation with your neighbors. If you cannot rescue them alone, seek for help from the people around, or make use of rescue tools\* such as jacks and crowbars equipped in a disaster management base.

Fire due to an earthquake is very dangerous. Extinguish fire in cooperation with the community.



#### Precaution when rescuing

Check the situation around as there is a possibility of secondary disaster.

\*The method for handling rescue tools equipped in disaster management base can be learned in the "Yokohama disaster prevention license class" (refer to page 28).

### Safety confirmation of family members

At the time of a major earthquake, everyone wishes to obtain the information about the safety of their family members, etc. as early as possible. In case of difficulty in contacting the people in damaged areas, either you can share the contact number of a relative residing in a distant place with family members and contact the relative at the time of a disaster or use the service below.

### • Confirming the safety of family members — Disaster message dial

It is an audio message board that starts when communicating the people in affected areas becomes difficult due to high call volume.



\*We started providing "Disaster emergency message board (web 171)" that responds to a smartphone and has a message recording function in Aug. 2012.

### • Communication using a portable telephone line or an Internet line

It is effective to use communication means such as Twitter and LINE which are relatively easier to be connected at the time of disaster to make calls or send messages.

### **Use the Municipal Disaster Prevention Center!**

Yokohama Municipal Disaster Prevention Center is the central facility that promotes selfhelp and mutual assistance by cultivating "a sense of self-help to save one's own life" and "a sense of mutual assistance to help one another" and providing a place to educate people who can take such actions. You can learn about self-help and mutual assistance by making use of various facilities such as the theater that enables you to learn about realistic disaster damage on a big screen and simulator that allows you to experience past earthquakes such

as the Great East Japan Earthquake. Address: 4-7 Sawatari, Kanagawa-ku, Yokohama TEL: (045) 411-0119





### Community-based Anti-Disaster Organization

### Definition

- An organization that is formed voluntarily on the basis of self-awareness of "protecting our community ourselves" and a sense of solidarity.
- It carries out activities to prevent and minimize damage caused by disaster.

Reference taken from "A Guide of Independent Anti-Disaster Organization" published by the Fire Defense Agency

If a large-scale disaster, such as an earthquake and a typhoon, takes place, administration's support including relief and rescue activities is not provided right after its occurrence. Therefore, "self-help" in which a person prepares or takes action to protect him/herself and his/her family, and "mutual assistance" in which neighbors who meet regularly cooperate and help each other in putting efforts in disaster prevention are essential to reduce the damage caused by disaster.

Community-based anti-disaster organization involves everyone in the community to work for disaster prevention not only at the time of a disaster but also during normal times, under a recognition of "self-help" meaning "saving one's own life" and "mutual assistance" meaning "protecting our city ourselves".

### S The model Community-based Anti-Disaster Organization should pursue

### 1 Each resident is fully prepared to "protect herself/himself" from a disaster.

**Examples of activities** 

Promotion of self-help activities, including the measures to prevent furniture from falling
Events for disaster prevention, etc.

### 2 It carries out disaster reduction activities that suit the area, as a community-based anti-disaster organization.

**Examples of activities** 

Creating maps of all dangerous sites

• Disaster prevention drills considering a specific damage, etc.

### 3 Relationships of neighbors are such that they will be able to help each other at a time of disaster.

**Examples of activities** • Being aware of the people needing assistance • Conclusion of agreements with companies, etc.

### Do you participate in drills or training sessions in your community?

Many voluntary activities for disaster prevention are carried out in every community such as drills by community-based anti-disaster organizations like community associations/neighborhood associations, and trainings in establishment and operation of evacuation shelters in disaster management base. Each citizen should participate in those drills and prepare for disaster.

### Trainings by community associations/neighborhood associations

For "initial fire extinguishing" and "emergency aid"!! Participate in drills organized by community associations/ neighborhood associations!

- Know how to use a fire extinguisherKnow how to use a triangular bandage
- Know how to use AED and how to carry out CPR (cardiopulmonary resuscitation)
- Experience smoke



First aid training

**Cooperation in the community** 

Cooperation at an evacuation shelter

### Training at a disaster management base

For "establishment and operation of evacuation shelters"! Participate in trainings at a disaster management base!

**Fire-fighting drills** 

 Experience accepting evacuees and training in aggregation
 Experience the trainings in dividing the place of living, and taking measures for washrooms

• Experience rescue training and training in securing drinking water



Training in the establishment and operation of evacuation shelters (division)

In the City of Yokohama, we are looking for fire corps members who will be in charge of disaster prevention in local communities, and participants in the training for disaster prevention at home and the Yokohama disaster prevention license class.

#### Member for disaster prevention at home

You can acquire necessary knowledge and skills about fire and disaster prevention. In order to receive the training, you must have a recommendation from the community association/neighborhood association.

\*Refer to page 17 to learn the roles of a "disaster management base" \*Refer to page 18 to learn about life at a "disaster management base"

To learn further details of "Training for disaster prevention at home," access http://www.city.yokohama.lg.jp/shobo/kabou/

#### Yokohama disaster prevention license class

In the City of Yokohama, "Yokohama disaster prevention license class" is held for people to learn how to handle the equipment for disaster prevention kept in the disaster management base

To learn further details of "Yokohama disaster prevention license class," access http://www.city.yokohama.lg.jp/somu/org/kikikanri/bousailicense/

#### Fire corps

In the City of Yokohama, we are recruiting fire corps members who will carry out fire and disaster prevention activities in local communities.

Fire corps members play a role of leaders for disaster prevention in the area, along with performing firefighting activities, such as fire extinguishing and recuing at the time of disaster, while being engaged in studies or main jobs.

### To learn further details of "Fire corps," access http://www.city.yokohama.lg.jp/shobo/shouboudan/





### Walk around the city with everyone in the community

Check for dangers, useful community resource (parks, green space, etc.) and evacuation sites at a time of disaster by walking around the city together, know about the area and consider possible problems.

### Things to prepare for walking around

- Housing map (using "Waiwai bōsai mappu" may be helpful.)
- 🗌 Hazard map
- 🗌 Camera
- Uriting materials (including red, blue and other color pens)
- Label sheets, memo pads
- Cellophane tape, etc.





### Start walking around the city (example of execution methods)

Imagine how your area will be when an earthquake hits, together with everyone, and actively discuss on the subject. Prepare a map and decide the walking routes (one hour per walking session is recommended)

### Walk around the city

- When walking, participants must cooperate with each other and perform activities such as guiding the way, photographing, taking records, etc.
- Be careful of cars while walking.

### Points to check when walking around the city (reference examples)

### Dangers in disaster-

- □ If there is any object that may fall along the road. □ If there is any roundabout route nearby
- There is an absence of bidirectional evacuation routes
- □ If there is a crowd of deteriorated wooden buildings There is a risk of fire to spread
- □ If there is a line of high-rise buildings on a roadside There is a danger of falling objects
- □ If there is any high cliff or old and easily breakable fence There is a danger of collapse
- Think of problems specific to your area other than the above.

### -Community resource and general disaster prevention—

- Evacuation sites (temporary, open areas, etc.)
- If the space, display, etc. are easy to understand
- Fire extinguishing facilities (fire hydrants, waterproof water tanks, initial fire extinguishing apparatus, etc.)
- Emergency supplies storehouse managed by the community or the administration (emergency storehouse)
- Medical facilities such as hospitals and clinics
- Sign denoting the evacuation route
- Meeting point of the community
- Other things that may be useful for disaster prevention activities

### After wandering through the town...

After wandering through the town, discuss with everyone anything that caught your eye and present your findings using maps.

Use the community notice board, etc. to share your findings with other members of the community.

### Findings from wandering through the town (example)



### Instruction course for a local community

### Instruction course for promoting disaster prevention and mitigation activities

In order to increase local community's capability of preventing disasters, we hold instruction courses for those who are responsible for disaster prevention activities in an area.



For more information regarding the "instruction course for the promotion of disaster prevention and mitigation activities," please check the following URL:

### http://www.city.yokohama.lg.jp/somu/ org/kikikanri/20161017120736.html

### A collection of ideas for "disaster mitigation" from Yokohama

In the city, there are over 2,700 "community-based anti-disaster organizations." They engage in activities for protecting their regions from disaster.

We summarized the activities of groups that deal with issues in a way that is suited to their regions. These examples can be used for reference when tackling these issues.

While utilizing it as educational material for training, we distribute it to



community associations/neighborhood associations, where it could be used for reference during their regular activities.

http://www.city.yokohama.lg.jp/somu/org/ kikikanri/machibo-jireisyu/jireishu.html

### What kinds of preparations are necessary for apartment buildings?

In the City of Yokohama, roughly 60% of residents live in residential complexes such as apartment buildings. Within these mid-rise buildings, the cutoff of vital infrastructure (water, gas, electricity, etc.) would cause difficulties in living and many troubles in checking the safety of all residents, rescue efforts, and daily life after the disaster.

When the operation of the elevator is halted, many people are forced to use the stairs, making it harder to go out. This is especially an issue for elderly people or those who live on higher floors.

Community-based anti-disaster organizations should discuss post-disaster measures and self-help activities.

### Tremors of high-rise buildings

- High-rise buildings shake slowly in big movements (due to prolonged ground tremors), thus there is a high possibility that furniture will topple, fall, or move. Accordingly, it is necessary to take measures of fixating furniture and so on.
- It is also necessary to install an earthquake emergency operation device in the elevators of high-rise buildings.



### Cooperation between condo association boards and residents

- It is essential to have cooperation among residents living on the same floor, within the same building, or in the neighborhood. Make sure to read notifications from condo association boards, including those about the inspection of anti-disaster equipment and disaster drills.
- Make sure you are aware of the number of households and of the demographics of oth-

er residents of your floor and use this information to cooperate with the condo association board in producing a manual in the event of an emergency.

• Discuss the activities of community-based anti-disaster organizations and also thorough self-help.

### About emergency supplies

As well as having emergency supplies within individual households, make sure to have prepared stretchers, first aid kits and equipment for all residents of apartment buildings.
There is also a possibility that people

will get trapped inside of an elevator,

so consider to stockpile emergency

supplies in elevators.

### Regarding evacuation routes

- When disasters strike, there is a high likelihood that you will be unable to evacuate using elevators or the normal entrances, therefore make sure you are aware of the location of emergency stairs and emergency exits, and how to use emergency exit hatches and breakable partitions on balconies.
- Make sure not to place any object around equipment for evacuation.



### What is the support for people who require special assistance during times of disaster?

During times of disaster, there are some people who require special assistance such as elderly people, handicapped ones, infants, and pregnant women (people who require special assistance during times of disaster). Additionally, people who sustain injuries during times of disaster may also be in need of special assistance.

In order to protect people who require special assistance during times of disaster, they or their family members need to have sufficient arrangements in advance. It is also important for surrounding people to understand people who require special assistance during times of disaster, check their safety, help them evacuate, and care for them at evacuation sites.

### Things you can do on a daily basis

- Make sure to communicate with people living around you on a daily basis. As well as people who require special assistance during times of disaster such as elderly people and handicapped ones, there are other people who may have special requirements. Build up a relationship with the people who live around you so that people feel safe calling on each other in times of need.
- Make sure that you are aware of those who may need additional assistance, and determine how to manage information, etc. in advance. Ward offices also keep a track of the names of individuals who need assistance in the area so you could also acquire a name list from there.
- Ensure that people who require special assistance during times of disaster regularly participate in disaster drills. It is good to determine who should reach out and help them during evacuation. Also make sure you know which evacuation routes are spacious or narrow, and where may become a potential danger spot if an earthquake was to occur.

### If a disaster occurs

- Once taking care of your own safety, check the whereabouts of those around you, then evacuate.
- If your family cannot evacuate by yourselves, ask for the help of others around you. Do not try and manage things on your own, but act in groups.
- If there are individuals who are hard of hearing or are visually impaired, inform them of their surroundings and aid them with evacuation if necessary.
- If there are individuals who are bedridden or who are difficult to move, think about moving them using sheets, blankets, or a baby sling.



For more information about the support for people who require special assistance during times of disaster, check the following report: http://www.city.yokohama.lq.jp/kenko/bousai/ ("A guide of regional measures for supporting people who require special assistance during times of disaster")

### Disaster prevention activities that incorporate the female perspective

Disaster prevention activities that incorporate the female perspective involve "women participating in disaster prevention activities, helping others in the area stay calm during troubling times, and exhibiting their own unique strength," and "learning from women who have experience of a massive earthquake of their anxieties and difficulties, and using their experience to prepare for future disasters."

### • Valuing your bond in "everyday life" to cope with "if"

Do women also participate in regional disaster prevention activities and evacuation drills? What role do they take when they participate? Mothers raising children, spritely old ladies, girl schoolers on their way to school,... if you build up relationships with them, whom you see regularly, you might be able to help each other if you or they are in trouble. Create a society where, regardless of gender or generation, everyone can easily participate in disaster prevention activities.

### To make evacuation sites places where women can feel safe

In the event of a large-scale disaster, it is likely that you will have to spend an extended period of time at the evacuation center. During these periods, there are often problems of some individuals passing away with earthquake related physical or mental illnesses, or other individuals responding violently by either physically or sexually abusing women. Facilities such as divided living spaces, breast feeding areas, and gender separated changing areas and drying areas are installed to cater to the needs of both genders and ensure safety for not only women but everyone.

### What you can do to protect both your beloved ones and town

An earthquake could happen at any point. Do not cringe with fear, but check your preparations and engage in disaster prevention activities for protecting beloved ones and town. We hold a seminar about disaster prevention that incorporates the female perspective.

Details of the regional seminar titled "My Notebook regarding Capability of Preventing Disaster" http://www.women.city.yokohama.jp/find-from-t/bousai/ (Policy Bureau, City of Yokohama and Yokohama Association for Promotion of Gender Equality (public interest incorporated foundation)



AU BOTT CLOSE	ALL BORNE ATTRILATED TO
Contraction of the second seco	

### **First Aid**

### What is first aid?

First aid refers broadly to the treatment of sudden injuries and illness that can be carried out by family members or within the workplace.

First aid can be divided into the one conducted for victims in cardiac arrest, and the other one carried out for preventing the aggravation of injuries or illness other than cardiac arrest, or alleviating pain, for example, by applying pressure to stop the loss of blood.



### **First aid**

### **Basic life support**

①CPR (cardiopulmonary resuscitation)

②Electric shock with an AED (automated external defibrillator)③The removal of foreign objects from victims' airways if they are choking.

### Other forms of first aid

•The application of pressure to wounds to prevent the loss of blood •Cooling and treatment of burns (or blisters caused by burns)

•Treatment of broken bones, sprains and bruising

### Basic life support

Make daily efforts to master basic life support to save the lives of people around you not only for times when disasters strike, but also for daily life.

### What to do if someone collapses

- Check to see if they are conscious If they are not conscious, proceed to step 2
- 2 Call for help
- ③ Dial 119 and call for an AED
- ④ Check to see if they are breathing If their breathing is irregular, proceed to step (5)
- ⑤ Perform chest compressions (CPR - cardiopulmonary resuscitation)



- (6) Open up their airways, and carry out mouthto-mouth resuscitation (assisted respiration)
   \*This may not always be necessary
   If you are unable to perform mouth-to-mouth resuscitation, or do not wish to do so, continue performing chest compressions
- ⑦ Continue performing cycles of chest compressions and assisted breathing.

### How to carry out chest compressions

### The key points are to push "hard, fast, and continuously."

- 1. Lay the person on his/her back on a flat surface, and kneel down next to him/her.
- 2. Place your hands one on top of the other in the middle of his/her chest
- 3. Extend your elbows and use your body weight to apply pressure through the base of your palms. Administer compressions which are about 5 cm deep and at a rate of 100-120 compressions per minute.

\*If you are able to perform mouth-to-mouth resuscitation, after about 30 compressions deliver 2 rescue breaths. If you are unable to perform mouth-to-mouth resuscitation, or do not wish to do so, continue performing chest compressions

### How to perform mouth-to-mouth resuscitation

### 1. Open their airways

While pushing the person's forehead back with one hand with the other hand, place the tips of your fingers under the hard part of his/her chin and tilt his/her head back lifting his/her chin.

### 2. Mouth-to-mouth resuscitation

While keeping the victim's airway open, take the hand that was resting on his/her forehead and use your thumb and your index finger to pinch his/her nose. Place your mouth over his/her mouth and breath into his/her mouth for a second, checking to see if his/ her chest rises. Repeat this process twice. (Within 10 seconds). After repeating twice continue with chest compressions.



Chest compressions (CPR)

### Open the person's airways



### Mouth-to-mouth resuscitation (assisted breathing)





(9) Until the ambulance crew arrive, continue to perform CPR and use the AED

### How to use an AED

### How to use an AED

When AED is turned on, lights and voice messages will instruct you how to use the AED, so keep calm and carry out the correct procedure.

#### **1**Turn on the AED

- ②Stick the electrode pads to the person's chest③Check the electrocardiogram
- (IDo what the AED tells you to do and give an electric shock if necessary
- **(5)Immediately resume chest compressions**

Things to note

bone protruding?)

• When performing an examination of the painful area, do not move it

• In the case where it may have been broken, treat it as a broken bone.

• Check the status of the broken bone (Is it extremely painful, is there any

swelling, is the person unable to move it? Does it appear deformed? Is the



### Other forms of first aid

### Broken bones

### 1. Check to see which part of the bone is broken

- Ask the person which part hurts
- Check the painful spot
- See whether the limb appears deformed or if the person is losing any blood

#### 2. Secure the broken bone

- If you have someone to help you get them to support the broken bone
- If the injured person is able to support the broken bone, have him/her do so.
- Use a splint
- Fix the broken limb with something like a sling
- Do not try and force the limb back into its usual position

### Notes

- For a splint, use an object long enough to secure the upper and lower joints of the broken bone.
- When securing the broken bone, make sure to let the injured person know that you are securing it.

### Burns

Immediately cool the burn with clean running water for at least 10 minutes to soothe the pain.

### Notes

- If the person wears clothing items such as socks, cool the affected area while wearing each item of clothing.
- Be careful not to burst any blisters.
- If the burn covers a large area of the body, be careful not to let the person's body get too cold.
- If the burn is cooled with ice or iced water for an extended period of time, it may get too cold, which will actually have an adverse effect.



Attend lectures about life-saving treatment for emergencies. 🅿 (045) 714-9911 (Reception for lectures about life-saving treatment)

### **Regarding early fire extinguishing**

### Fire extinguishing equipment used in the initial stages of a fire

Fire extinguishing equipment used in the initial stages of a fire is a set of equipment. By directly attaching a hose with fireplug, you can use it for extinguishing a fire in the initial stages. Even when the fire is in a place which is too narrow for access by fire engines, this equipment can be used at the place where a fire breaks out for effective fire extinguishing. Generally, equipment used for extinguishing the initial blaze can be divided into the following two groups.

### Fire extinguishing box for the initial stage (fixed)

- A fire hose (3- 5 hoses)
- Fire hose nozzle
- Clamps
- A key for opening the fireplug
- Storage box



For more details regarding usage, please check our website.

### How to use a fire extinguisher

① Call out and inform people around you of the fire② Carry the extinguisher over to the point of the fire

- ③ Remove the yellow safety pin
- ④ Unfasten the hose and hold it firmly pointing the nozzle at the fire
- (5) Firmly grab the lever (If it is stiff, use your body weight). Stand in a safe point about 3 - 5 meters away from the blaze and put the fire out.
- (6) Don't aim for smoke or flames but the burning object. Use the hose in a sweeping action as if using a broom.

### Standpipe used for fire extinguishing for the initial stage (portable)

- A fire hose (3- 5 hoses)
- Fire hose nozzle
- Stand pipe
- Clamps
- A key for opening the fireplug
- A trolley
- A storage box or bag





### Check the activities of community-based anti-disaster organizations

Check the following items regarding disaster prevention and mitigation measures to be carried out by community-based anti-disaster organizations, such as community associations/neighborhood associations.

Each of the below points is a mere standard for disaster prevention. They are not compulsory. In a certain region, it may be difficult to conduct some activities or the necessity of some activities may be relatively low.

We hope that local residents will check these items, imagine an ideal "community-based anti-disaster organization" in your region, and engage in local activities for preventing and mitigating disaster.

We have also published a check sheet on our website that can be used at your convenience.



### 1. Each resident has made necessary preparations to save lives when disasters strike.

It is important for community-based anti-disaster organizations to deliver information and educate citizens on a regular basis. Equipping residents with correct knowledge and skills makes it possible to prepare in advance, create necessary countermeasures, and cooperate during actual disasters.

### 2. A community-based anti-disaster organization carries out disaster prevention and mitigation activities suited for your region.

Depending on the region, the points of danger and assumed damages vary. For example, there are "places where there is high likelihood of a landslide during heavy rain," "places where a fire is likely to spread," "places where buildings are likely to collapse in the event of an earthquake," and "places likely to be affected by a tsunami."

Additionally, there are many resources such as places, objects, people, organizations, and facilities, which could be utilized during disasters. Grasp a region's danger spots and available resources.

### 3. You have fostered relationships with your neighbors so that you can help each other in times of disasters.

Immediately after a disaster, check the safety of your family and then your neighbors. Within regions, there will be people who require special assistance during times of disaster, such as elderly people, handicapped people, and infants. It is essential to prepare for cases of emergency and create a system where you and your neighbors can help each other. Start first by getting to know each other's face.

### 4. The staff in charge of disaster prevention have been trained (increased).

Due to the increase of elderly people and office workers, common local issues are not only disaster prevention but also insufficient people for activities and the lack of people who can contribute to activities during the day time.

While leaders and experts with prior experience are necessary for disaster prevention, it is also important to expand the range of activities by increasing roles that people can casually participate and increasing the number of participants.

### 5. There is a community network for preventing and mitigating disaster.

During disasters, it is important to cooperate with disaster management base, which would gather information and relief supplies. Additionally, within towns there are many other places, such as enterprises and facilities, that could cooperate during times of disaster. For this reason, it is important to make regular connections within them. <u> Mutual assistance – what a community can always do</u>

### In preparation for disasters, please check each of the following items. I recommend you to exchange information with your neighbors and check them regularly.



Name	Safety confirmation method	Contact info	Notes

### **Disaster Prevention Yokohama**

### Crisis Management Division, Crisis Management Office, General Affairs Bureau

1-1 Minato-cho, Naka-ku, Yokohama-shi, Kanagawa-ken 231-0017 TEL: (045) 671-2012 FAX: (045) 641-1677

First edition issued in March 2017 Second edition issued in April 2018