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Preparation and Actions for a Mega Earthquake (1)

It is predicted that there is a 70% possibility of an earthquake directly hitting Tokyo within the next 30 years, as well as an 70 to 80% possibility of a Nankai Trough earthquake. Nobody knows if it will actually happen, and if so, when it will happen. However, there are things you can do now to prepare for the various risks and to minimize the damage that a major earthquake can cause. Let's prepare for what could happen.

Voice from experience

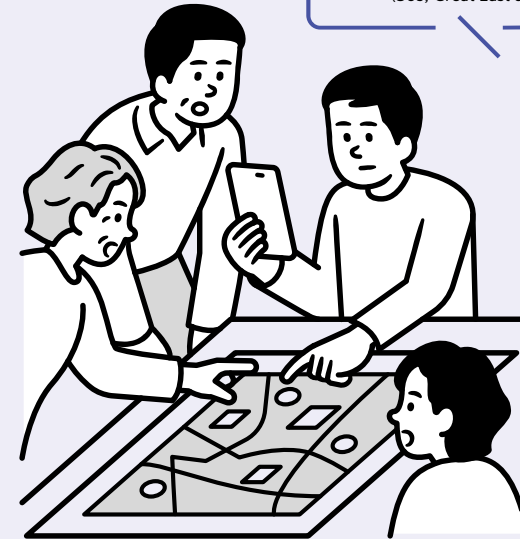
The biggest problem was not having a change of clothes. I couldn't take a bath for five days and felt uncomfortable. I put underwear in my evacuation backpack.

(70s, Great East Japan Earthquake)

Voice from experience

Since I lived alone, I would buy food for my meals each day. I learnt the importance of stockpiling food.

(30s, Great East Japan Earthquake)



Voice from experience

My family and I discussed ways to confirm each other's safety, and we are putting effort into confirming evacuation routes and stocking up on the minimum amount of food.

(40s, Great East Japan Earthquake)

Source: Edited and created based on Cabinet Office, One Day Before Project, <https://www.bousai.go.jp/kyoiku/keigen/ichinitimae/index.html>

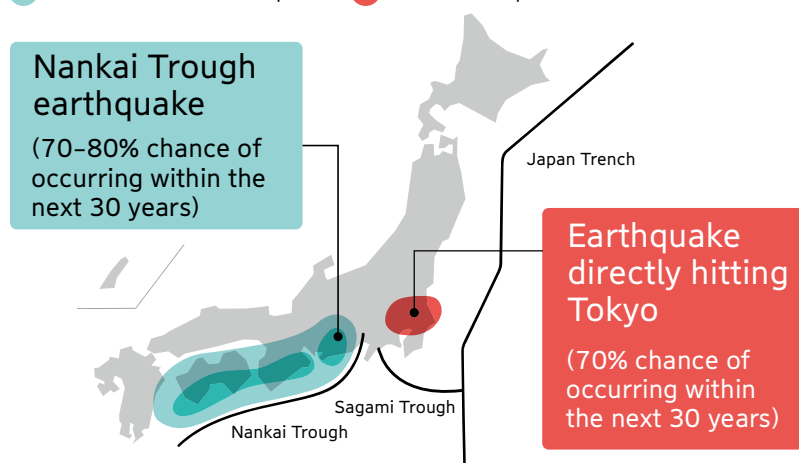
Reasons to Prepare for a Mega Earthquake

Japan is prone to earthquakes

The reason why Japan is said to be an earthquake-prone country is because there are multiple plates surrounding the country, which trigger earthquakes when they shift. The movement of these plates is expected to lead to a large-scale earthquake directly hitting Tokyo.

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● Subduction-zone earthquake ● Inland earthquake



What is an earthquake directly hitting Tokyo?

Because there is a complex structure of various plates subducting beneath Tokyo, it is expected that a gigantic magnitude 7-class earthquake will occur in the southern Kanto region with an epicenter in the Tama area or in central Tokyo.

What is the Nankai Trough mega earthquake?

A Nankai Trough ocean trench mega earthquake is the earthquake that is predicted to occur with an epicenter in the Nankai Trough, which stretches from the Tokai region to Kyushu. The metropolitan area, including Tokyo, will also be hit by tremors with a maximum seismic intensity of 6 Lower, and there is a risk of tsunamis.

Assuming Various Evacuation Scenarios

In the case of Tokyo, due to its large population that is typical of a capital city, there is the risk that people will rush to evacuation centers in numbers greater than can be accommodated, emergency vehicles will not be able to pass through congested roads, leading to the situation where “people take away people’s lives.” There is the risk that if lifelines are damaged, you will not be able to use electricity, gas, water, or sewerage until restoration is completed.

To protect your own safety Evacuate to an evacuation area

An evacuation area is a place where people can urgently evacuate to, in order to protect their lives in situations of imminent danger. Please check your local municipality’s websites in advance.



At least three days’ to one week’s (recommended) worth of food Stockpile and prepare for sheltering at home

You should shelter at home if it is possible for you to continue living in your home. At evacuation centers, some people become unwell due to the changes in their environment. It is a good idea to always have at least three days’ to one week’s (recommended) worth of food stockpiled.

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If there is danger in your home An evacuation center provides temporary shelter

A place for people who cannot continue to live in their homes to live in evacuation for a certain period of time. Approximately 4,800 evacuation centers have been secured in Tokyo.

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Options other than home or an evacuation center The home of a relative or acquaintance, or a hotel

Evacuating to the home of a relative or acquaintance where safety is ensured or staying in a hotel are also options. Be aware of the various evacuation methods and regularly plan what actions you will take.



Sheltering at Home Preparations

by Housing Type

Condominiums/apartments

Practice mutual assistance while protecting privacy

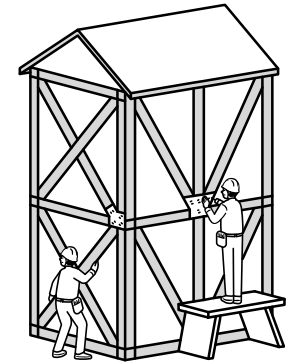
Although condominiums and apartments that satisfy seismic resistance standards are at little risk of collapsing, there is a possibility that water may be cut off due to power outages, or that the elevators may stop working. It is necessary to cooperate and help each other, such as sharing information while maintaining privacy and assisting to carry supplies up the stairs. Building relationships on an ongoing basis will help you prepare for an emergency. ➔ Page 66



Detached housing

Prepare for earthquakes from both inside and outside

Seismic resistance is also important for detached houses. The measures you should take depend on when the house was built, so check when it was built, as well as whether the roof is made of tiles and what condition the walls are in. Additionally, termite damage may reduce seismic resistance even if there are no apparent problems externally. ➔ Page 76



Understand your region's characteristics and learn from past disasters

Regardless of your housing type, it is important to know the topography of the area in which you live and the characteristics of the ground, such as whether it is a low-lying area that is prone to shaking, situated on a plateau, or if there is a possibility of being affected by a tsunami. Also, by understanding past disasters that have occurred, you can learn what measures have been taken to prevent dangers that are likely to occur in the area. ➔ Page 62



High-rise condominiums

Check the emergency stairs in case of fire etc.

If you live on a higher floor, be sure to ascertain the location of the emergency stairs in case of a fire as well as nearby evacuation centers. If the elevators stop working after an earthquake due to a power outage, it may be difficult to go up and down to the floor on which you live, making sheltering at home difficult. Also, the emergency water supply systems vary depending on the building, so also check your building's system. After a disaster, refrain from using toilets, etc. until the sewerage facilities have been checked. ➔ Pages 42, 66-68, 71



What is Daily Stockpiling?

Rather than stockpiling specifically in preparation for a disaster, it is important to have a “daily stockpile” of the food and daily necessities that you need in order to live at home. The key to stockpiling is to always have a little extra of the items you regularly use.



Use the “Tokyo Stockpiling Navi” to find out the items you should stockpile and the approximate quantities you will need! You can also learn about stockpiling ideas and recipes for preserved foods on the site.



Model family: Example of a family of four – a husband, wife, infant and elderly woman, living in a detached house

- * It is assumed that contact lenses are used, the infant has an allergy, and the elderly woman uses a hearing aid.
- * Recommended amount for approximately three days to one week

Food etc.	Water	3 L per person per day
	Pre-washed rice	4 kg
	Retort pouch rice	27 serves
Daily items	Instant noodles	3 packs
	Canned food (mackerel, etc.)	9 cans
	Canned fruit	3 cans
	Retort pouch food	9 packs
	Vegetable juice	9 bottles
	Favorite drinks (500ml)	9 bottles
	Cheese and protein bars	3 packs
	Snacks	3 packs
	Nutritional supplements	9 boxes
	Powdered health drink	9 bags
	Plastic bags	1 box
	Plastic wrap	1 roll
	Aluminum foil	1 roll
	Tissue paper	4 boxes
	Toilet paper	4 rolls
Ignition stick	1	
Cloth duct tape	2 rolls	
Work gloves	9 pairs	
Vinyl gloves	1 box	
Sanitary goods	First aid kit	1 box
	Masks	9
	Regular medicines/supplements	1 box
	Disinfectant wet wipes	120 sheets
	Disposable contact lenses	1-month supply per person
	Alcohol spray	2 bottles
	Wet wipes for cleaning your teeth	About 90 sheets

Items required by some individuals		
Women	Sanitary products	Set of 30
	Basic cosmetics	As appropriate
Infants	Powdered milk (stick type)	18 serves
	Liquid milk	18 serves
	Allergy-friendly baby food	9 serves
	Baby wipes	3 packs
	Diapers	30 pieces
	Disposable baby bottles	18
Elderly people	Rice porridge	9 serves
	Hearing aid batteries	As appropriate
	Denture cleaning agent	12 tablets

Items to test periodically	
Portable gas cooking stove	2 units
Gas cylinders	8
Portable/emergency toilets	45 uses
Flashlights	2
LED lanterns	
Minimum of 3	
Headlights	4
Dry-cell batteries	As appropriate
Hand-rechargeable or other type of radio	1 unit
Portable charger (spare battery)	
Backpack	As appropriate
	1

Main Goods to Stockpile

Food etc.

- Water
- Pre-washed rice
- Pre-packaged rice
- Instant noodles
- Canned food (mackerel, vegetables, etc.)
- Canned fruit
- Retort pouch food
- Freeze-dried food
- Dry food
- Vegetable juice
- Drinks (beverages you like to drink, other than water)
- Cheese, protein bars, etc.
- Snacks
- Nutritional supplements
- Powdered health drink
- Seasoning set

Daily items

- Plastic bags
- Plastic wrap
- Aluminum foil
- Tissue paper
- Toilet paper
- Ignition stick
- Cloth duct tape
- Work gloves
- Vinyl bags
- Newspaper

□ Sanitary goods, etc.

- First aid kit
- Masks
- Regular medicines/supplements
- Prescription drugs
- Disinfectant wet wipes
- Wet body wipes
- Disposable contact lenses
- Alcohol spray
- Mouthwash
- Wet wipes for cleaning your teeth

For women

- Sanitary products
- Basic cosmetics

For infants

- Powdered milk (stick type)
- Infant liquid milk
- Allergy-friendly baby food
- Baby wipes
- Diapers
- Disposable baby bottles

For the elderly

- Rice porridge
- Hearing aid batteries
- Denture cleaning agent

Items stockpiled for a disaster that should be tested periodically

- Portable gas cooking stove
- Gas cylinders
- Portable/emergency toilets
- Flashlights
- LED lanterns
- Headlights
- Dry-cell batteries
- Hand-rechargeable or other type of radio

For pets

- Pet food
- Water
- Collar and lead
- Toilet supplies for pets
- Food bowl



Emergency Bag



An emergency bag is a bag that contains the minimum essentials needed for the time being after you evacuate. In preparing an emergency bag, it is important to think about what each of you would need, and select items to be put in the bag. Pack those items in bags such as knapsacks, and place them near the front entrance or in the bedroom, car, or shed so that you can carry them out even if your house has collapsed. If you have an infant or child, or if you are elderly, a woman, or have allergies, be sure to add items that you will require to your emergency bag.



- Portable toilet
- Headlights
- Helmet (a foldable type is convenient)
- Raincoat
- Disaster preparedness whistle
- Towel
- Water (one or two 500 mL bottles)
- Masks
- Jelly drinks, etc.
- First aid supplies
- Portable phone charger (dry cell type, solar rechargeable type)
- Water bag
- Dry-cell batteries

Emergency bag that is always carried around

In case a disaster occurs while you are out, always carry the minimum requirements in your bag. Remove the batteries from the portable radio.

- Portable phone charger (dry cell type, solar rechargeable type)
- Portable toilet
- Plastic bags
- Masks
- First aid supplies
- Leather/rubber gloves
- Headlights
- Snacks such as jelly drinks

Emergency bag to be kept at workplace

Aside from what your employer has in stock, prepare your own emergency supplies by imagining what you would need if you have to stay overnight at your workplace or walk home.

- Comfortable shoes
- Flashlight
- Sleeping bag
- Water bottle
- Helmet
- First aid kit
- Portable toilet
- Emergency food
- Work gloves
- Raincoat

Important items you should keep together

Keeping certificates or other important documents in a plastic case with a fastener can also protect them from water. It might be a good idea to carry a photograph of your family in case you need it.

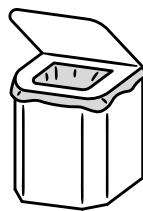
- Photograph of your family
- Bankbook
- Stock certificates, etc.
- Driver's license
- My number card
- Health insurance card
- Medication record
- Pension record

Toilet Preparation



Portable toilet

Portable toilets can be attached to a toilet bowl or even used inside a car in circumstances where flush toilets cannot be used due to a water outage or damage to drain pipes. They are used by excreting into the bag, stabilizing the water content with an absorbent sheet or coagulant, and tying closed the bag each time it is used. It may be several days before garbage is collected. Some types of portable toilets have a deodorizing effect.



Emergency toilet

If a flush toilet cannot be used, it can be assembled using materials such as cardboard. As with a portable toilet, it is best to stabilize excrement with an absorbent sheet or coagulant. As it is simple and portable, it can be used inside a car, a tent, or anywhere if partitioned off with partitioning.

Expect one week's worth of excreted waste to accumulate

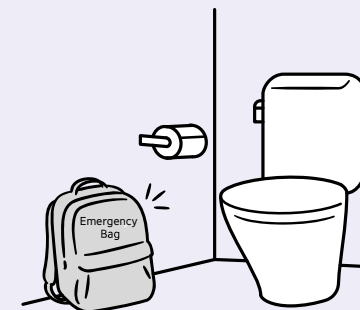
If living in evacuation and flush toilets cannot be used, the excreted waste will need to be stored for a certain period of time. Taking one week as a guide, the amount of waste produced will be the number of times a person excretes per day, multiplied by the number of people, and multiplied by 7. When storing such waste, it is a good idea to keep hygiene in mind and prepare gloves, deodorant, coagulant, zip-lock plastic bags and plastic bags whose contents cannot be seen.



Source: "Introduction to Disaster Preparedness" (Supervised by Nobue Kunizaki, edited by Creative Suite, Natsumesha, 2021)

Prepare an emergency bag for the toilet too

We do not know when a disaster will occur. There is also the risk of becoming trapped in a small space such as a toilet or bathroom. Therefore, it is a good idea to prepare an emergency bag for the toilet that contains drinking water, emergency food, and an emergency radio/light as a minimum. If you are stuck in a small toilet and the power goes out, the light from a flashlight can be very reassuring.



Example of an initiative at Chuo University Suginami High School (Suginami Ward)

Chuo University Suginami High School in Suginami Ward has purchased waste coagulants (portable toilets) in preparation for restrictions on the use of toilets in an emergency. They are packed in backpacks with plastic bags, rubber gloves, wet tissues, sanitary products, etc., and are stored in 69 toilet cubicles within the school. Printed materials explaining how to use the portable toilets are displayed in all of the toilet cubicles, thus disseminating information that will be useful in the event of a disaster.

Source: Tokyo Fire Department "19th Regional Fire and Disaster Preparedness Achievement Award Case Studies" (published January 2023)

🏠 Preparing Inside the Home



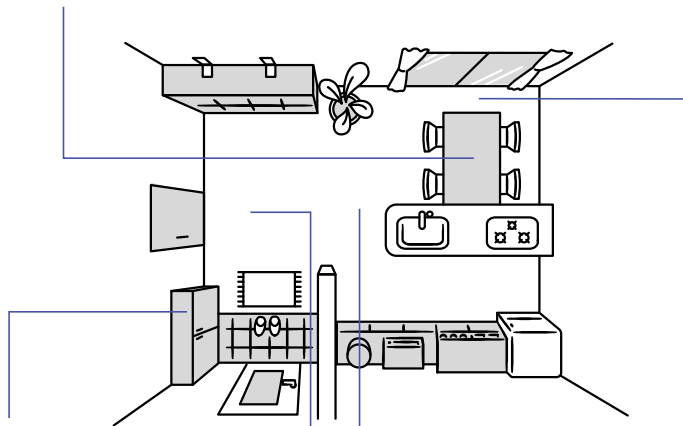
① Check the room's safety

Keep the dining table clear

Tables are particularly slippery, so if items are placed on them, they will scatter during an earthquake and hinder evacuation. Be careful not to place large furniture around the dining table.

Be careful of breakable objects and flying glass

There is a risk of injury during evacuation if strong shaking causes window glass to break, or ceramic or glassware to fall to the floor and break.



Consider ways to move around in the dark

In preparation for an earthquake occurring at night, have footlights that will provide illumination during a power outage. In the bedroom, keep your glasses, walking cane, and cell phone by your bedside.

Reduce the amount of items in the room

Reducing the amount of items you have and keeping them tidy will not only make life easier, but will also improve safety by reducing the number of obstacles when evacuating.

Don't place things in hallways or near doors

The hallways and doors that lead to the entrance will be the evacuation routes in an emergency. Try not to place things in the entrance, hallways, and stairs and keep them easily accessible.

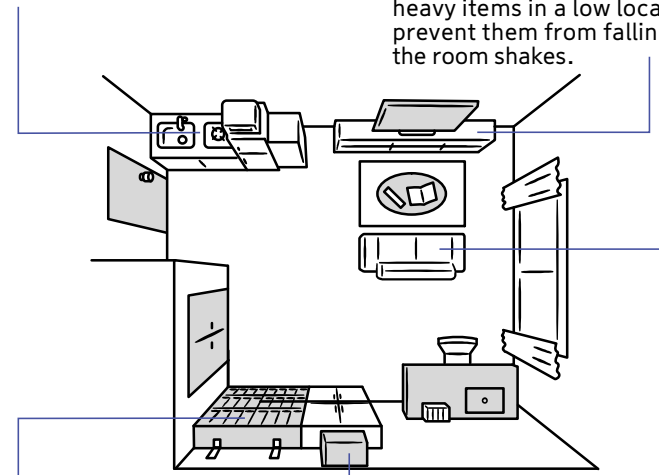
② Consider furniture placement

Do not place flammable items near the gas stove

Place flammable furniture and accessories away from the gas stove.

Lower the center of gravity by placing heavy objects on the bottom

Try to keep the center of gravity low when storing things. Storing heavy items in a low location will prevent them from falling over if the room shakes.



Gather tall bookshelves together

Furniture that is not secured can easily fall over, so arrange them in one place and use them like a walk-in closet.

Relax in a safe space

Unsecured furniture can become a deadly weapon in a major earthquake. Relax in a safe place where furniture will not fall over.

Do not place heavy or breakable objects in high places

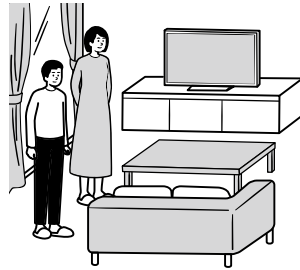
When storing kitchen items, store heavy pots and pans at the bottom, and place lighter items as you move upwards. Avoid storing utensils in wall cabinets.

Source: "Introduction to Disaster Preparedness" (Supervised by Nobue Kunizaki, edited by Creative Suite, Natsumesha, 2021)

③ Prevent furniture from tipping

Secure furniture to reduce risk

If furniture tips over due to a large earthquake, not only is there the risk of being hit by the furniture itself, but the items inside can also fly out, impeding evacuation or causing injuries from falling items. Secure furniture, TV, refrigerator, microwave, etc., and change their layout so that they will have less of an effect even if they fall over.

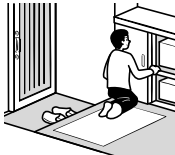


Plan the layout to ensure safety



Reduce furniture too

Reduce not only the amount of small items, but also the amount of furniture too. For storage, be sure to use storerooms, closets, and built-in furniture.



Ensure escape routes

Make sure that household appliances and furniture will not block doors or escape routes if they fall over or move. Also be careful of drawers sliding out.



Be careful of fire too

If furniture hits a stove during an earthquake, it may lead to a secondary disaster such as a fire. Take measures to prevent furniture and appliances which may cause a fire from tipping over, falling, or moving.



Measures to secure furniture at home from tipping over and sliding

If you look inside your home from the perspective of disaster preparedness, the layout of your furniture and the way you place things will also change. Learn about stabilizing furniture and create a home that keeps your family safe.



Furniture Stabilization



Stabilization measures

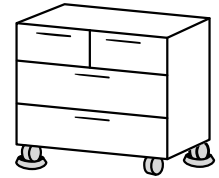
Secure to the wall with screws

Once you have planned the layout of your furniture, it is now time to secure it in place through the use of various stabilizing devices. The surest way to achieve this is to use L-brackets and screws to secure a piece of furniture to the wall. If this is not an option, using tension rods in conjunction with tip-over prevention wedges or anti-slip pads will raise the level of effectiveness.



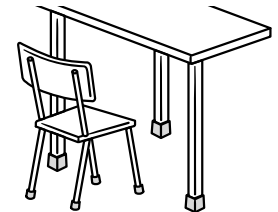
Stabilize furniture on casters

For furniture that you move on a daily basis, lock casters when you are not moving it around. If the piece has a fixed location, attach it to the wall or floor using a detachable safety strap or other means. For furnishings that you do not normally move, install devices such as caster cups or tension rods to stabilize them.



Prevent furniture legs from sliding

Even furnishings not set against a wall that are not tall require measures to prevent them from sliding, especially tables and chairs. Affix adhesive anti-slip pads to furniture legs, or on carpet, use slide prevention mats. On tiled carpet, point the convex side of hook-and-loop fasteners toward the carpet.



Long-period ground motion (see page 238) is a problem, especially on the upper floors of high-rise condominiums. The period refers to the time it takes for a building to sway back and forth once. Compared to low-rise buildings, slow and large swaying with a longer period will occur.

Pros and cons of stabilization methods

L-brackets (installed facing upward with 3 screws)

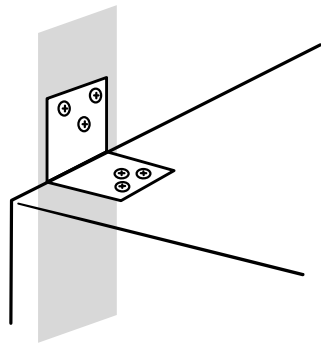
Secure furniture to the wall using wood screws or bolts. L-brackets can be installed using the slide method, facing upward, or facing downward. Installing the brackets facing downward offers the strongest support. Align the L-bracket to the wall's substrate, and secure the top of the furniture to the top of the bracket, and the side of the bracket to the wall's substrate, using three screws on each side.

Pros

They are effective even on higher floors of condominiums that are prone to shaking, as they have higher holding power than two-point fixation.

Cons

Use may be restricted in rental housing, where walls are not allowed to be damaged. In addition, the holding strength is reduced when the substrate is LGS (light steel frame), such as in some condominiums.



Tension rods and pole devices

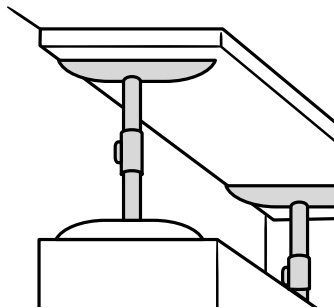
These devices are not secured using screws, but are installed in the space between the piece of furniture and the ceiling. By pairing these devices with anti-slip gel pads and tip-over prevention wedges, stability is increased. Be sure to use a set of two poles and position them close to a beam on the wall-side.

Pros

They can be installed without damaging walls or furniture, and can prevent furniture from falling over.

Cons

They tend to loosen over time and need to be checked once every six months.



Anti-slip sheets (pad type)

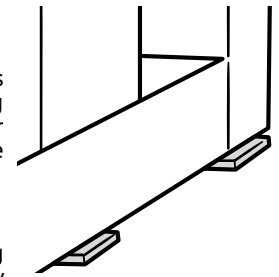
An adhesive sheet is placed under the furniture to fix it to the floor.

Pros

Since it uses surface tension to stick as if it is wet, it can be used easily without damaging the furniture or floor, making it suitable for lightweight and low-line furniture and home appliances.

Cons

Depending upon the strength of the shearing force* applied to the furniture, the sheet may peel off easily. * The force to move something



Detachable furniture safety straps

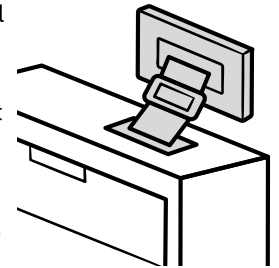
Used for furniture and appliances which cannot be attached to a wall, and fixes them to a wall or a strong substrate.

Pros

Suitable for furniture and appliances that cannot be attached to a wall, and can be moved by attaching and detaching the belt.

Cons

Force is applied to the extra length of the belt by the shaking of an earthquake, and the holding strength is weaker than that of L-brackets.



Chains

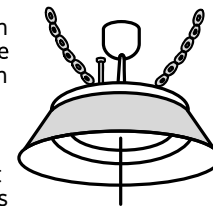
Use chains or wires to attach hanging lighting fixtures to the ceiling to prevent them from moving.

Pros

Effective to prevent lightweight hanging objects from falling due to shaking.

Cons

The chain's connector may become deformed and easily come off.



Anti-slip wedges

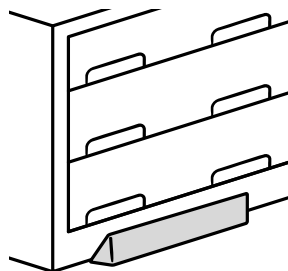
Insert the wedge beneath the front of the piece of furniture and lean it toward the wall. A single piece that matches the width of the furniture can be expected to provide more of an anti-slip effect than several pieces.

Pros

It is easy to install without damaging the furniture or floor.

Cons

There are differences in the effectiveness of preventing movement, depending upon the material and shape.



Caster cups

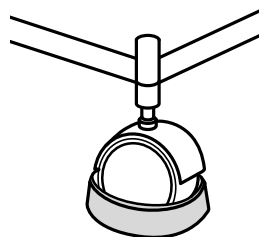
Place the cups under caster wheels to prevent furniture from moving. Place a cup under two wheels on the diagonal.

Pros

They are effective in preventing the movement of furniture that is placed away from a wall.

Cons

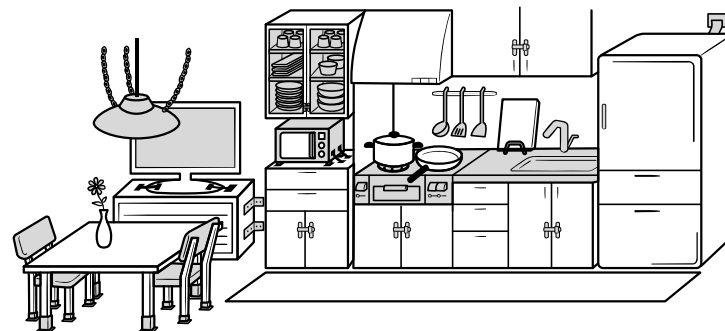
They may not be suitable for use on high floors where there is significant swaying.



Furniture Stabilization Checklist

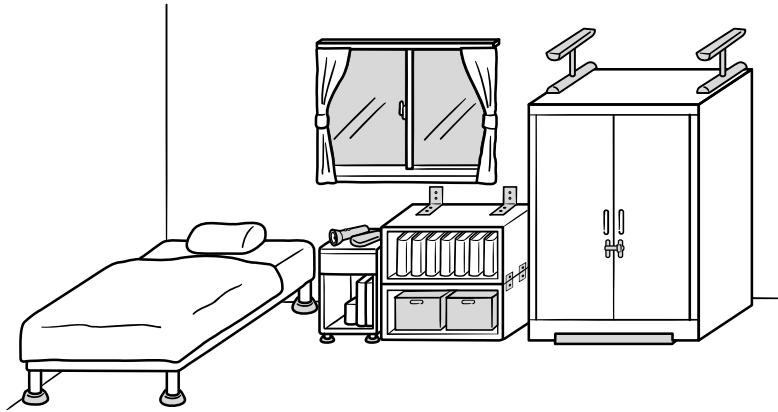


Living room, kitchen



- Hanging lighting fixtures Use chains to prevent fixtures from swinging.
- Television Stabilize the TV on the TV stand using a detachable furniture safety strap or other method. Affix the stand to the wall using L-brackets, use anti-slip pads under its legs, and use strong anti-slip pads to secure the bottom (four corners) of the TV to the TV stand.
- Microwave oven Stabilize the microwave on the stand using anti-slip pads or safety strap devices, and secure the stand to the wall using L-brackets
- Tables and chairs Affix anti-slip pads to the legs of tables and chairs to prevent sliding
- Cupboards, china cabinets Place cupboards where they won't obstruct escape from the house, even if they tip over, and secure them to the wall. Apply anti-shatter film to any glass.
- Drawers Install safety latches to prevent drawers from sliding out
- Wall cabinets To prevent the items stored inside from flying out, install safety latches on cabinet doors
- Refrigerator Place the refrigerator where it won't obstruct evacuation from the house, and secure it to the wall using a safety strap or other device. Don't put items on top that could easily fall off during an earthquake

Bedroom



- Bed

Affix anti-slip pads to the legs of tables and chairs to prevent sliding. Do not attach pictures or clocks to the wall or ceiling near the bed.

- Window glass

Apply shatterproof film

- Furniture on casters

When not moving furniture, lock casters, insert caster cups, and secure the unit to the wall with furniture safety straps.

- Stackable storage boxes, shelves

Join upper and lower units with connectors and secure units to the wall with L-brackets. Don't put items on top that could easily fall off during an earthquake

- Chest of drawers, wardrobes

Place chests and wardrobes where they won't obstruct your escape route and doors. Secure the unit to the wall or ceiling using L-brackets or tension rods, and place a tip-over prevention wedge under the unit.

Making Your Home Safer

Try to change materials that will pose a danger in the event of a disaster when it comes time to replace them, in order to create a home that protects your loved ones.

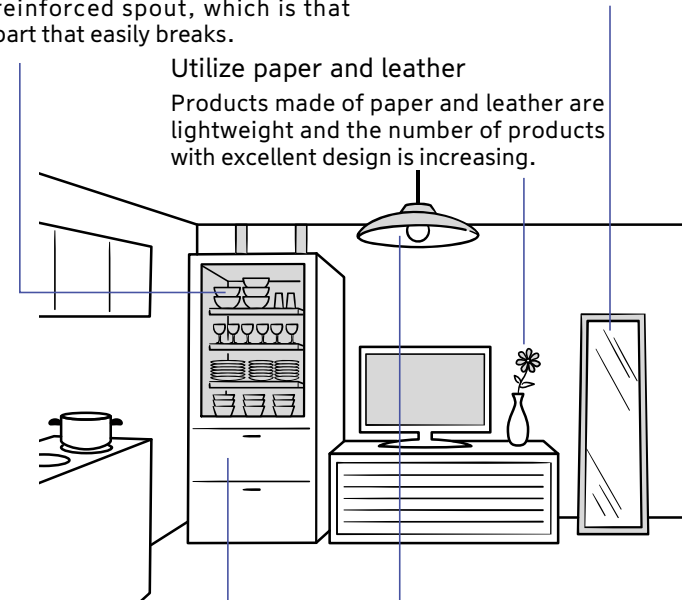
Choose tableware that doesn't break easily

Choose wooden or lacquerware tableware, or glass that has a reinforced spout, which is that part that easily breaks.

Use sheet-type mirrors
Unbreakable mirrors made of acrylic or resin are inexpensive, lightweight, and safe.

Utilize paper and leather

Products made of paper and leather are lightweight and the number of products with excellent design is increasing.



Pay attention to layout

Consideration for glass items

Glass can break when it collides with other objects, so be careful where it is placed and stored.

If possible, glass chandeliers and ornaments should be replaced with unbreakable material.

Source: "Introduction to Disaster Preparedness" (Supervised by Nobue Kunizaki, edited by Creative Suite, Natsumesha, 2021)



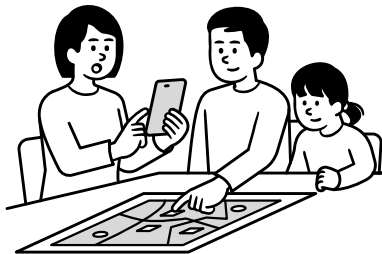
Preparing Ways to Confirm Safety



As preparation for a disaster, it is important to decide how you will confirm your safety and how you will communicate with your family. Ensure that you are not at a loss if a disaster suddenly occurs when you are at work or out.

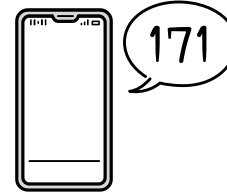
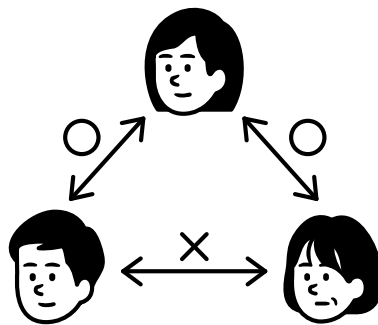
Hold a family meeting and confirm evacuation destinations

Decide with your family in advance how you will confirm your safety if you are not together when a disaster occurs. Prepare multiple contact methods in case it is difficult to connect by phone or email. Also, in case you are unable to make contact, decide on specific evacuation areas, routes to get there, and a meeting place.



Secure various communication methods

It may be difficult to contact people when a disaster occurs. In such cases, consider using the “triangular communication method,” by using the homes of family members, relatives, or acquaintances who live far away as relay points, as well as the Disaster Emergency Message Dial. Also, check whether your family members’ workplaces have rules about contact methods in case of an emergency. If you live alone, regularly discuss what you will do in the event of a disaster with close friends or neighbors you can trust.



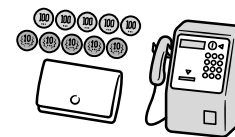
NTT East’s Disaster Emergency Message Dial 171 service

A message service that allows a person in the area affected by a disaster to record a message confirming their safety. This message can then be played back by others trying to reach that person. There is also the “web171” service that provides safety confirmation via the Internet.



Disaster message board services

This service, provided by cell phone carriers, enables people to register information concerning their safety using their cell phone or smartphone. These messages can then be confirmed by others.



Public telephones

When a disaster occurs, it becomes difficult to successfully place a call using regular phone lines. However, it is said that calls go through relatively easily on public telephones.

Use social media

Most people now have smartphones and use social media and messaging apps. If it is difficult to connect to a phone line, it may be easier to make contact through social media. It is best to prepare in advance, such as forming a group with your family.

* In the event of a large-scale disaster, the Wi-Fi service “0000JAPAN” that is provided for disaster relief will be made available for free. It can be accessed by selecting “0000JAPAN” on your smartphone’s Wi-Fi settings screen.

Public telephones may also be available for free during a disaster. Digital public telephones allow calls to be made without a coin or telephone card. Analog public telephones require the insertion of a coin or telephone card, which is returned after the call is finished. However, 100 yen coins sometimes may not be returned.

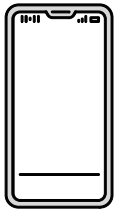


* Connection may not be possible depending on signal conditions.

Source: All About “Proper use of social media during a disaster as recommended by experts (IT Literacy Guide, Akiko Takahashi)” <https://allabout.co.jp/gm/gc/463515/>



Preparing Ways to Access Disaster Information



Install apps that will be useful in a disaster

Smartphone apps are valuable in a disaster, such as for obtaining disaster information and directions to nearby evacuation centers. It is also a good idea to carry a portable phone charger.

Smartphone apps

An app to find nearby evacuation facilities

An app that guides you to a nearby evacuation facility will be useful if you are out or traveling in an unfamiliar area.

An app that sends location information

An app that will notify your location to people you have registered in advance.

Lifesaving apps

Apps such as a first aid app and the light app will help protect you from danger in a disaster.

Radio app

This is recommended so you can listen to the radio on your phone if you don't have a radio with you.

Disaster information app

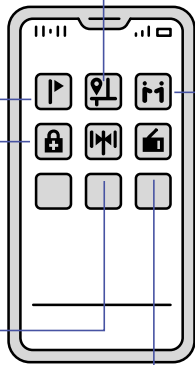
A push-alert app that delivers earthquake early warnings and other warnings to your smartphone is useful.

Social media apps

Useful for communicating with friends and acquaintances and gathering information.



Disaster Preparedness Tokyo's official X (formerly Twitter) account: @tokyo_bousai



Obtain up-to-date information

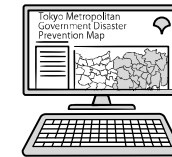
Gather information with your smartphone

In recent years, the use of social media by local governments and lifeline-related companies has been increasing. However, information on personal websites and social media accounts may be of questionable authenticity. Be careful not to get swayed by such information.



Tokyo Metropolitan Government's Disaster Prevention Website

This site provides information on disaster preparedness during normal times and damage status in a disaster, so it is useful to access and check its contents on a regular basis.



Tokyo Metropolitan Government Disaster Prevention Map

You can find the location of disaster prevention facilities, support stations for people returning home following a disaster, and other relevant facilities on the maps on the Tokyo Metropolitan Government disaster prevention website.



Obtain correct information

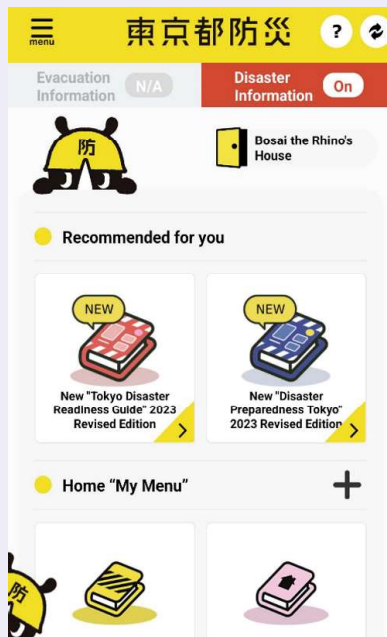
In a disaster, it is important to ensure you obtain correct information. You may be able to help solve problems by posting information on social media as necessary.

Master the Disaster Preparedness Tokyo app

How to download the Disaster Preparedness Tokyo app (page 17)

What is the “Disaster Preparedness Tokyo app”?

This is the Tokyo Metropolitan Government’s official disaster preparedness app, which is useful in daily life and also in an emergency. The app not only allows users to have fun while gaining basic knowledge about disaster preparedness, based on the concepts of “play,” “learn,” and “use,” but also contains content that will be useful in the event of a disaster. You can customize the menu to your liking from a wide range of contents that are useful for disaster preparedness, including the disaster preparedness books “Disaster Preparedness Tokyo” and “Disaster Readiness Guide.”



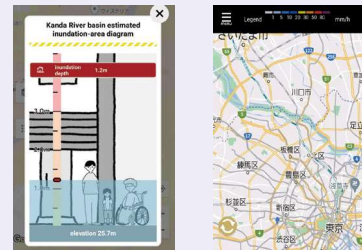
Read the disaster preparedness books

You can read “Disaster Preparedness Tokyo,” “Disaster Readiness Guide,” and “Disaster Preparedness for Condominiums” on your smartphone or tablet.

Flood risk maps, weather radar

Disaster prevention maps

By downloading the maps in advance, it will display your current location even when you are offline and help you navigate to your destination. It can be used to check nearby disaster preparedness facilities.

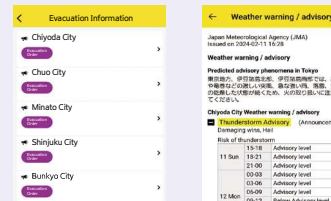


Disaster Information

Push alerts of weather information, earthquake information, evacuation information, etc. will be sent for the municipalities registered as ‘My Area’.

Types of disaster information

Check evacuation information, earthquake information, tsunami information, (warnings and advisories), sediment-disaster alert bulletins, tornado warning information, and eruption warnings and forecasts.



Flood risk map

You can visually check predicted flood risks in Tokyo in an easily understood manner, including from rivers, storm surges, and sediment disasters.

Weather radar

You can check the movement of rain clouds and typhoon information.

Tokyo My Timeline

Helps you organize the appropriate evacuation actions in chronological order according to your environment. You can check the risk of flood damage to your home, and use the chatbot function to navigate through the input of evacuation actions.





Knowing Your Community's Disaster Risk Level



The level of damage that is predicted varies depending on local characteristics such as topography and the ground. Understanding the local disaster risks, such as whether buildings are likely to collapse due to a major earthquake or whether there is a risk that fires associated with an earthquake will spread, is important for making adequate preparations. Make use of the “Community Earthquake Risk Assessment Survey” and the “Disaster Preparedness Tokyo app” to fully understand the disaster risks in your area.

Community Earthquake Risk Assessment Survey

Unlike the “predicted damage” for a specific earthquake, such as an earthquake directly hitting Tokyo, this system evaluates the relative risk of each neighborhood in Tokyo and ranks the degree of risk. 📄 Pages 250-1



Rank	Rank	Rank	Rank	Rank
1	2	3	4	5
2,344 Neighborhood 45.2%	1,653 Neighborhood 31.8%	822 Neighborhood 15.8%	288 Neighborhood 5.6%	85 Neighborhood 1.6%



Community Earthquake Risk Assessment Survey

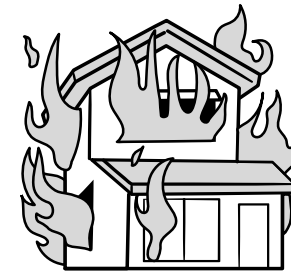
Check the combined risk rankings

The “Community Earthquake Risk Assessment Survey” calculates the local fire risk and building collapse risk and publishes the sum of these risks as the “combined risk” for each neighborhood block. Depending on the ranking, you can understand in detail the risk of buildings collapsing and fires breaking out and spreading in your area due to an earthquake. Please use this information when preparing.



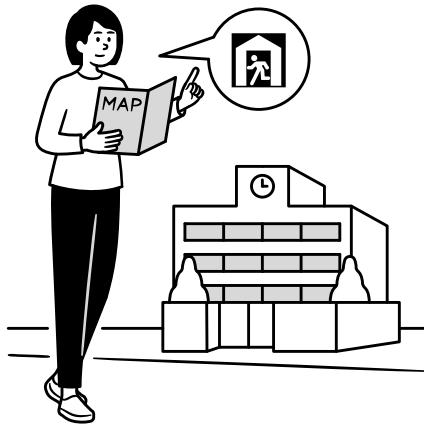
Building collapse risk

The risk of building collapse is measured based on the characteristics of the buildings and ground. High risk areas are alluvial lowlands with soft ground and areas where old wooden and light-gauge steel frame buildings are concentrated. They are distributed in areas such as along the Arakawa and Sumida rivers.



Fire risk

Fire risk is calculated from the risks of fire outbreak and spread. Many communities at high risk exist in areas where there is a high concentration of wooden houses, and are found in areas including those along Kannana dori and the JR Chuo line (ward area).



Know the area around your house

Knowing the topology, geological features, cliffs and other dangerous areas around your house, as well as past disasters and measures that were taken are indispensable disaster measures. Make sure to also confirm the location of evacuation areas, evacuation routes, open spaces such as large parks, and facilities such as community halls and convenience stores. This will facilitate your early response in the event of a disaster, and allow you to evacuate to a safe place.



Check the hazard map

A hazard map contains information such as areas predicted to suffer damage, evacuation area, and evacuation routes, for use in mitigating damage from a disaster and for disaster preparedness. Check the map for your community's risk of damage from hazards such as flood, landslide, and liquefaction.



Hazard Map Portal Site

A portal site on disaster risk operated by the Ministry of Land, Infrastructure, Transport and Tourism. The “Overlapping Hazard Maps” can be used to check disaster risks related to floods and landslides in an area by simply entering the address you want to check, and with “My Town Hazard Map” you can easily search for hazard maps published by municipalities.



Learn about your community's history of disasters

Disaster preparedness measures are formulated based on experience from past disasters. Learning about your community's history of disasters, such as past floods or earthquakes, can enable you to make more practical preparations. Ask neighbors who know about the area's past, or look this information up at a library.

➡ Page 101

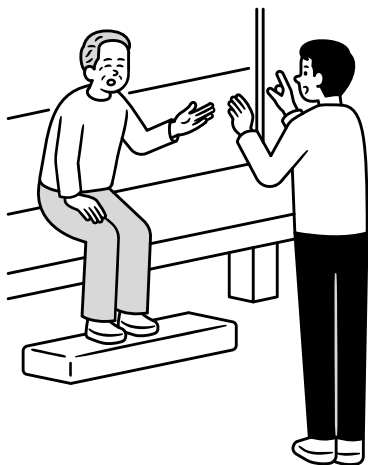


Building Supportive Relationships with Your Neighbors



Exchange greetings with neighbors regularly

Cooperation with neighbors is necessary when a disaster strikes. Expand your network within the community through activities such as exchanging greetings with neighbors on a regular basis and participating in disaster preparedness drills conducted by your community association, so that your life at home or in an evacuation center following a disaster will go smoothly as well.



People who need support

People in need of support such as expectant mothers, children, the elderly, foreign nationals, and those with serious illnesses or disabilities may not be in a position to promptly ascertain information or evacuate. In addition to always being aware of the members of your community who need support, cooperate with commissioned welfare volunteers and others to support them when a disaster occurs.



Joining a Volunteer Disaster Response Team

Join a volunteer disaster response team to protect your town

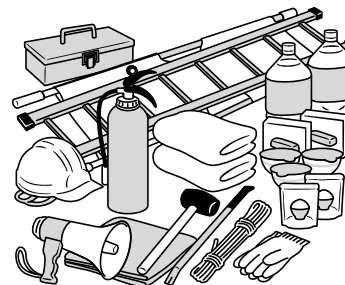
A Citizens Disaster Response Team is an organization that aims for effective community response to disasters under the principle of neighbors cooperating with each other to protect their community. This collaborative organization is mostly based on the unit of community or neighborhood associations. The person in charge of disaster response in the community association, etc., takes a central role in calling for the formation of this team and conduct activities in line with local circumstances. Your participation will lead to the enhancement of your community's strength and disaster preparedness.

Prepare disaster response goods and equipment

Stocking goods and equipment is essential in order to improve local disaster prevention capabilities. Consideration of what is necessary is based on the local circumstances. Storage and management should be done in a manner that will ensure that they can be used flexibly and promptly in an emergency.

Example of disaster response goods and equipment

- Helmet
- Fire extinguisher
- Hammer
- Waterproof sheet
- Blanket
- Emergency food/water
- Crowbar
- Megaphone
- Work gloves
- Rope
- Shovel
- Jack
- Towel
- Stretcher
- Ladder





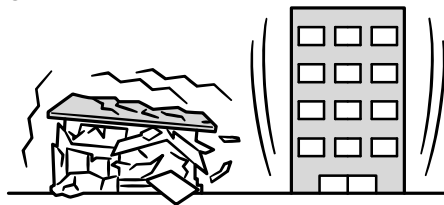
Disaster Preparedness in Condominiums

Approximately 9 million Tokyo residents live in communal housing such as condominiums. If the damage is minor in a condominium that meets seismic resistance standards, you may be able to shelter at home. In order to continue sheltering at home, each household and the entire condominium must be prepared. Mutual assistance through mutual cooperation with residents living outside of the condominium is also essential. First, let's learn the strengths and weaknesses of condominiums.

Strengths of condominiums

Seismic-resistant structure

Condominiums that meet seismic resistance standards may suffer cracks or damage due to strong shaking, but they are less likely to collapse compared to buildings built to old seismic resistance standards and sheltering at home is more likely to be possible.



Weaknesses of condominiums

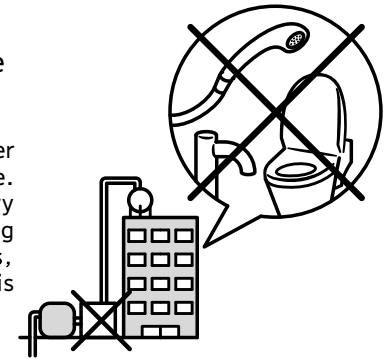
Elevators cannot be used

Occupants may be trapped if an elevator stops between floors due to a major earthquake or power outage, and residents on higher floors, the elderly, and wheelchair users may not be able to return to their home from outside. Also, if restoring the elevators takes time, there may be problems with access to and from the first floor.



Water supply and common facilities cannot be used due to power outages

If pumps stop working due to a power outage, it will lead to a water outage. Additionally, equipment necessary for ensuring safety, such as lighting in common areas and fire alarms, may also stop working, so caution is required.



Toilets cannot be used

There is the possibility that sewage pipes are damaged by an earthquake. If a resident on an upper floor uses the toilet without noticing that the sewage pipe is broken, sewage will overflow on the floors below, causing considerable trouble and bad odors. Do not use the toilet until you are told by the administrator that it may be flushed.

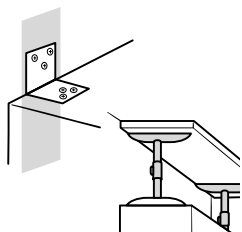


Long-period Ground Motion

When long-period ground motion occurs in a high-rise condominium, slow and large swaying occurs, which can cause furniture to fall over.

If an earthquake occurs (regular preparation)

It is important to always be prepared in case an earthquake occurs.



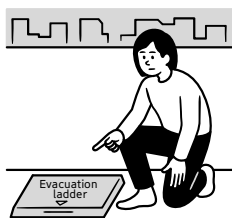
Ensure your home's safety and secure furniture

Secure the furniture in your home to ensure safety in the event of an earthquake. Using fittings such as L-brackets provides greater safety. Pole devices (tension rods) can also be used in rental housing where the walls cannot be damaged, or on walls with a light-gauge steel substrate.

➔ Page 48

Secure evacuation routes and check emergency stairs

Do not use an elevator when moving from floor to floor during an evacuation, and instead use the emergency stairs. This is because even if the elevator is working, there is a possibility that it will stop suddenly due to the earthquake detection sensor functioning, a malfunction, or power outage, and you may become trapped. Confirm the location of the emergency stairs in advance.



Evacuation ladder

Evacuation ladders are installed in condominiums as an emergency escape route from the evacuation hatch on the floor of the balcony. Confirm in advance where they are located on your floor.



Breakable wall

If a disaster occurs, kick or strike with a hard object the balcony wall that has a sign which says "Break here to evacuate in an emergency" in order to evacuate in an emergency. Do not place anything in front of the breakable wall.

Fire extinguishing (fire extinguisher, fire hydrant)

The entire condominium may become uninhabitable if a fire or gas leak occurs in one unit. As preparation for a fire breaking out, regularly check the location of fire extinguishers and fire hydrants.



Stockpiling

The elevators in a condominium may stop working due to a major earthquake or power outage, making it difficult to get to and from the first floor. Therefore, it is recommended that each residence stocks up on one week's worth of water, food, and daily necessities in order to shelter at home.

Be prepared with "daily stockpiling"

The key to stockpiling is to always have a little extra of the items you regularly use (daily stockpiling). The items and quantities you need to stockpile will vary depending on factors such as the structure and age of your family. Use the Tokyo Stockpiling Navi to check what your family should stockpile and prepare accordingly.

➔ Pages 36-7

Emergency Bag

In preparing an emergency bag, it is important to think about what each of you would need, and select items to be put in the bag.

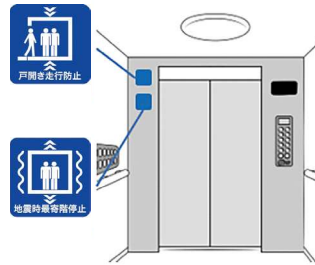
➔ Page 40

- Portable toilet
- Headlights
- Helmet (a foldable type is convenient)
- Raincoat
- Disaster preparedness whistle
- Towel
- Water (one or two 500ml bottles)
- Masks
- Jelly drinks, etc.
- First aid supplies
- Portable phone charger (dry cell type, solar rechargeable type)
- Water bag
- Dry-cell batteries
- Leather/rubber gloves

Responding to elevators and lifelines stopping

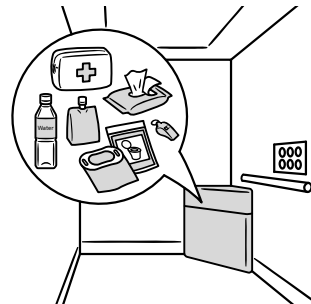
Elevator safety measures

In August 2012, the Ministry of Land, Infrastructure, Transport and Tourism began a voluntary system of displaying signs in an easily seen location inside elevators, so that general users can easily tell whether the elevator has a safety device installed or not. Check whether your condominium's elevators have such displays. When an elevator equipped with such a device detects an earthquake, it immediately stops at a nearby floor and opens its doors. If your building's elevators do not have such a device, if an earthquake occurs be sure to press the buttons for all floors to stop the elevator immediately.



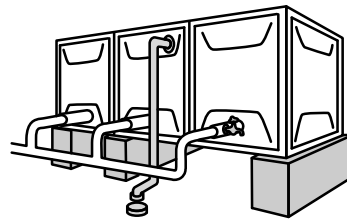
Install an emergency cabinet

Install an emergency cabinet and stock it with drinking water, food, portable toilets, etc. on the assumption that people may be trapped in the elevator for a long time.



Secure water in a condominium

In condominiums, if the water is cut off for an extended period of time, it will be difficult to secure drinking water and water for daily use, making it difficult to shelter at home. Therefore, consider ways to secure water for your building, such as underground water tanks or elevated rooftop water tanks.

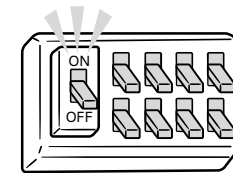


Source: Building Performance Standardization Association, <https://www.seinokyo.jp/evs/sm/>

Respond to power and gas outages

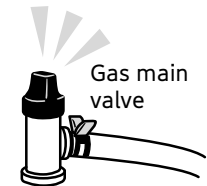
If a power outage occurs during a disaster, unplug appliances and turn off the circuit breaker.

* If the power is left on, it may cause a fire when the power is restored. Also consider installing an earthquake-tripped circuit breaker. ➔ Pages 82, 88



Circuit breaker

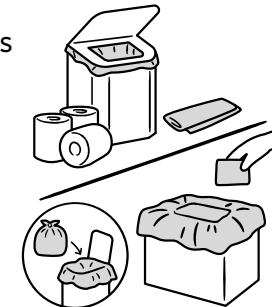
If strong shaking or a gas leak is detected, the micom-meter (intelligent gas meter) will automatically shut off the gas. A micom-meter is installed inside the meter door, in the common hallway next to the entrance.



Gas main valve

Prepare portable toilets

After a disaster, if a resident on an upper floor uses the toilets without noticing that the sewage pipes are damaged, sewage will overflow on the floors below. Do not use the toilet until the pipes have been checked. Do not forget to prepare portable toilets and emergency toilets in your disaster stockpile.



➔ Page 42

Promote mutual assistance

There are many people living in a condominium. If there is a problem, consulting with and helping each other is a great source of strength.

Improve disaster preparedness

Be familiar with each other

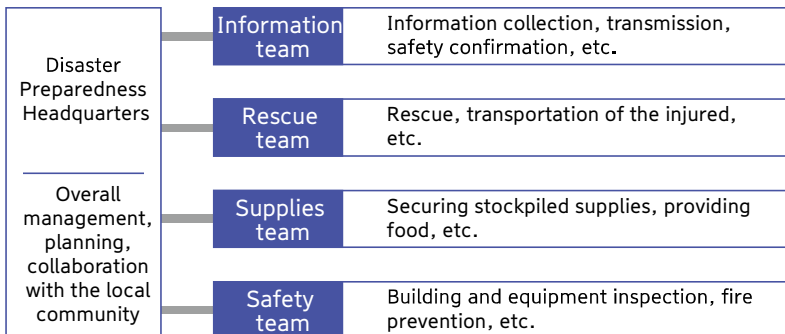
Building face-to-face relationships by exchanging greetings regularly and participating in events and joint activities will provide strength in an emergency. Knowing in advance whether there are elderly people, people with physical disabilities, infants, etc. will make it easier to confirm their safety and provide support for them to live in the event of a disaster.



Form a disaster preparedness organization

A variety of responses are required after a disaster, including information gathering, relief, procurement of supplies, and ensuring safety. Creating an organization by dividing up the roles among everyone will be of assistance.

Organization chart (example)



Disaster preparedness manual

It is important to decide in advance what actions each person should take when a disaster occurs. Compile the details into a manual and share it with all residents. Consider the details based on the circumstances of your condominium, such as its size, structure and location.

Large condominiums:

Equipped with a disaster preparedness office and equipment, and often have a manager permanently on site. Activities should be conducted at the block level.

Small, medium condominiums:

Often not equipped with a disaster preparedness office or equipment, and the manager is not on site on weekends or at night. The role of each resident should be identified.

Rental condominiums:

Consider establishing a communication system centered around the management company.

Stockpiling by the condominium as a whole

For condominiums, the management association should create a disaster preparedness manual and make sure there is a stockpile of portable toilets, etc. (at least one week's supply). An emergency supplies storeroom should also be set up on each floor or every few floors.



Make sure these goods and equipment are prepared!

- | | |
|--------------------|--|
| ▫ Rescue set | Fire extinguishers, generators, carts, jacks, saws, axes, pickaxes, rescue ropes, etc. |
| ▫ First aid set | Bandages, slings, disinfectant, gauze, etc. |
| ▫ Flashlights | Prepare spare batteries too |
| ▫ Elevator cabinet | Water, food, portable toilets, flashlights, radios, cold weather clothing, etc. |

Disaster preparedness drills in condominiums

In addition to initial firefighting drills, first aid drills, rescue drills from upper floors, and evacuation drills, which raise disaster preparedness awareness throughout the condominium, it is also effective to conduct tours of the equipment that residents don't usually get to see, such as water tanks and power generators, and explain how to use them in the event of an earthquake.



Residents' list

Ascertain who may especially need help in the event of a major earthquake. If a list of residents cannot be prepared, cooperate with the manager to identify those who require special consideration.



If it is difficult to form a disaster preparedness organization, such as in rental housing

Even in cases where there is no management association or disaster preparedness organization, such as in rental housing, residents must carry out the emergency disaster response themselves. Although it may not be possible to organize immediately, it is important from the perspective of disaster response that, in addition to building a communication system centered on the management company, residents get to know each other, such as through greeting each other.

Tokyo Todomaru Condominiums

The Tokyo Metropolitan Government registers and publishes information on privately-owned and rental condominiums in which disaster preparedness measures having been taken that make it easy to continue living in after a disaster, such as securing an emergency power source so that elevators and water pumps can operate in the event of a power outage, the creation of a disaster preparedness manual, and stockpiling of goods.



Todomarukun

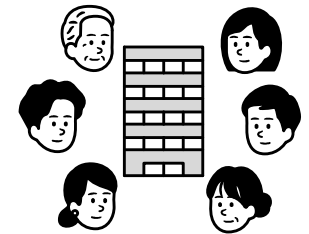


Collaboration with the local community is essential

Cooperation with the local community is essential to further enhance disaster preparedness capabilities. Deepen your interaction by regularly participating in local events such as disaster preparedness drills.



One way to promote cooperation with the local community is to join the neighborhood association, or form a neighborhood association to connect with the community. Participating in neighborhood association activities is not only about interaction, but also leads to being able to help each other in a disaster and crime prevention.



For large condominiums, considering the creation of a neighborhood association and promoting community formation is an effective way to prepare for disasters. If you live in a small or medium-sized condominium or rental housing where it is difficult to form a standalone neighborhood association, consider joining a nearby neighborhood association.

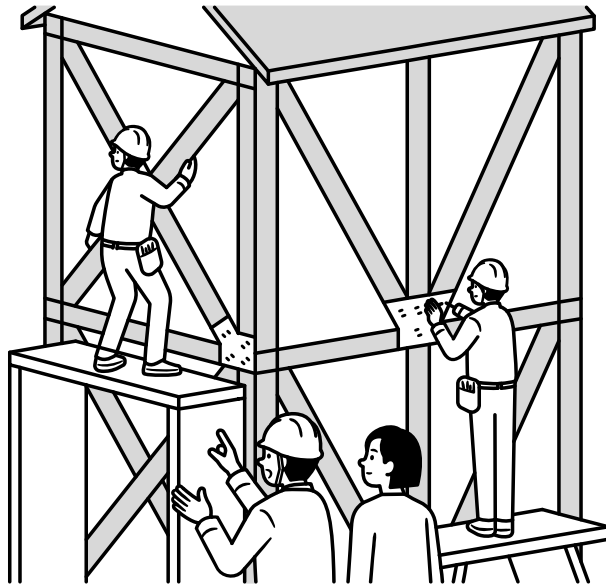
Utilization of common areas

Common areas can be used for various purposes, including as the location of the disaster preparedness headquarters, a place for residents to stay when elevators are stopped, a place to temporarily store supplies, and a place to collect disaster garbage outdoors. Also consider establishing rules for opening common areas up to the community if nearby evacuation centers are full.





Seismic Retrofitting a Detached House



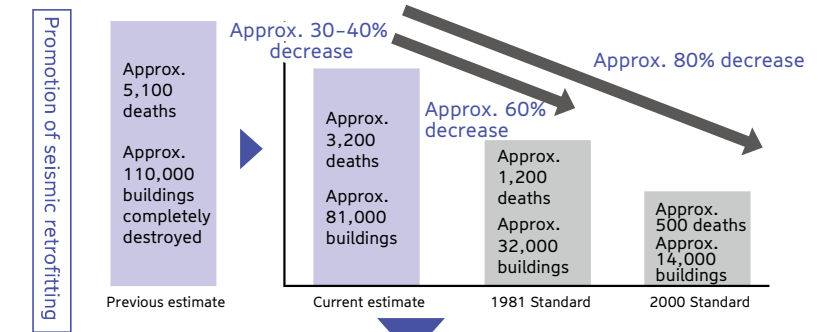
Importance of seismic retrofitting to prevent being crushed to death

Some 90% of the people who were killed in the Great Hanshin-Awaji Earthquake were due to collapsed buildings or furniture falling over. It is said that buildings that were constructed over 40 years ago, before revisions to the building code for seismic resistance came into effect on June 1, 1981, have low safety against a major earthquake. It is also recommended to check the safety of wooden buildings whose construction began between June 1, 1981 and May 31, 2000. People living in detached houses should have their home inspected for seismic resistance.

Damage reduction effect of seismic retrofitting (disaster prevention and mitigation measures)

The diagram below is an estimate of the damage reduction effect if seismic retrofitting measures continue to be taken, based on damage estimates for detached houses built prior to the revision of the Building Standards Law Enforcement Order in 1981. Compared to the previous estimates, the number of deaths (damage to buildings due to shaking) and the number of completely destroyed buildings will decrease by 30–40% by promoting the increase of the rate of seismic retrofitting of houses to 92%. It is expected that the number of deaths and the number of completely destroyed buildings can be significantly reduced through further promotion of countermeasures; the seismic retrofitting of 100% of houses built to the 1981 standard will result in a reduction of approximately 60%, and the seismic retrofitting of 100% of houses built to the 2000 standard will result in a reduction of approximately 80%.

(Winter, evening, wind speed 8m/s)



Promoting various countermeasures can significantly reduce the damage.

Seismic resistance checklist

First, check your seismic resistance by yourself using the following list. If a lot of the check points apply to your house, have a professional conduct a seismic inspection.

- The house was built before June 1, 1981

- The house is a wooden house built between June 1, 1981 and May 31, 2000

- New extensions have been built two or more times.
A section of the wall or column was removed for the extension

- The house has suffered major damage from flooding, fire, or an earthquake in the past

- The house is located on reclaimed land, swampy lowland, or developed land

- The building's foundation is made of something other than reinforced concrete

- A window makes up a whole wall

- Relatively heavy roofing materials such as Japanese tiles or western tiles are used,
and the ground floor has few walls

- The building is an L-shape or T-shape, and has an uneven structure

- There is a large atrium

- It seems like the doors and windows are badly fitted, and the pillars and/or floor are tilted

- There is a crack in a wall

- The veranda or balcony is damaged

Tokyo Metropolitan Seismic Certification Mark

So that Tokyo residents can feel safe using buildings, this mark shows the safety of the building against earthquakes. Buildings with this mark have been confirmed to comply with seismic resistance standards.



Seismic Retrofitting Consultation Desk

The Tokyo Metropolitan Government has established the Tokyo Disaster Preparedness and Architectural Community Building Center as a consultation desk for seismic retrofitting. General and specialist consultations are provided free of charge, and an advisor may also be dispatched. Some municipalities have programs to subsidize part of the costs of seismic inspections and retrofitting.



[Seismic Retrofitting Consultation Desk]

Consultations are conducted online, in addition to by telephone, email, fax, and in-person. For an in-person consultation, come to the office and consult with a specialist. Please call to make a reservation before visiting.

〒160-8353

2nd Floor, Odakyu Nishi-Shinjuku O-PLACE, 7-7-30 Nishi-Shinjuku,
Shinjuku-ku, Tokyo

Tel: 03-5989-1470

Email: taishin@tokyo-machidukuri.jp



Tokyo earthquake-resistant portal site

Fire Prevention Measures



Importance of measures to prevent the outbreak and spread of fires

It is critical to prevent the outbreak of fires and stop their spread. To equip your house with fire extinguishers, household fire alarm systems, ground fault circuit interrupters, and earthquake-tripped circuit breakers are also said to be effective. When evacuating, close the main gas valve, and turn off the circuit breakers.

Use a fire extinguisher to fight a fire that breaks out

Extinguishing fires quickly is very important, as can be seen from the fact that about 10% of the deaths in the Great Hanshin-Awaji Earthquake were caused by fire. If you discover a fire, use a fire extinguisher or bucket to extinguish the fire while it is still small. However, remember that your safety comes first when fighting a fire. If the situation seems dangerous, such as the flames reaching the ceiling, stop trying to extinguish the fire and evacuate the area. When evacuating, don't forget to close the door to slow down the spread of fire due to the suffocation effect!



Install a fire extinguisher

There are two types of fire extinguisher agents, water and alkali salt, and powder. There is also an even more simple and compact aerosol spray type. The expiration period differs by type, so be sure to note the date and replace them accordingly. Keep them where you can easily get your hands on them, such as near the kitchen, in the hallway, or by the front door.



Fire extinguisher disposal

It is recommended that the following fire extinguishers are inspected, disposed of or recycled.

- (1) Fire extinguishers that have exceeded their expiration period
- (2) Rusty or corroded fire extinguishers
- (3) Fire extinguishers with large scratches or deformation

To dispose of a fire extinguisher that is no longer needed, contact your local municipality or the Fire Extinguisher Recycling Promotion Center (Tel: 03-5829-6773). Fire departments do not dispose of fire extinguishers.



Fire Extinguisher Recycling
Promotion Center

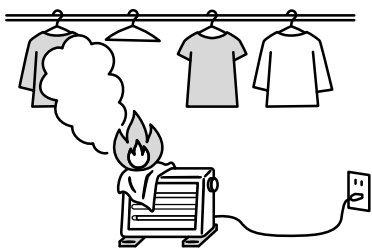
* Contact your local government regarding the disposal of aerosol fire extinguishers.



Installing an Earthquake-tripped Circuit Breaker

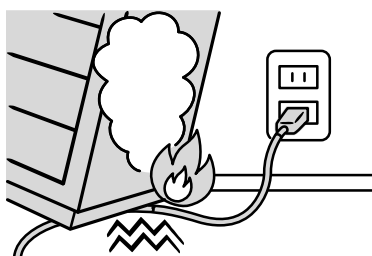
Approximately 60% of fires that occur after an earthquake are said to be caused by electricity, including fires from electrical equipment caused by the earthquake's shaking and fires that occur when power is restored. One way to prevent such fires is an earthquake-tripped circuit breaker that detects the strong shaking of an earthquake and automatically shuts off the electricity. Earthquake-tripped circuit breakers are an effective method for preventing electrical fires if you are unable to trip the breaker or unplug electrical appliances due to not being at home or having to evacuate urgently when the earthquake occurs.

Examples of electrical fires following an earthquake



Fire immediately after an earthquake

The shaking of the earthquake causes a flammable material to fall or come into contact with an electrical appliance, causing a fire.



Fire after power is restored

If the power cord is damaged, a fire will occur when the power is restored after a power outage.

Types of earthquake-tripped circuit breakers

There are different types such as socket types, distribution switchboard types, and simple types, with various things to consider when using them, such as securing lights during a power outage, and regular inspections. Please install the appropriate type, taking into account the characteristics and precautions of each product.

Precautions when installing an earthquake-tripped circuit breaker

Prepare for a power outage

It is important to prepare flashlights and lights that automatically turn on when the power goes out, so that you can see an evacuation route in the dark in case the power goes out at night. Also, if you have medical equipment, prepare extra batteries in case of a blackout.

Confirm safety before restoring the power

When using electricity again after an earthquake-tripped circuit breaker has been activated and the shaking has subsided, be sure to check that there are no gas leaks and check the safety of electrical appliances beforehand. If you notice a burning smell after the power is restored, you should immediately trip the breaker, check the safety again, and stop using the electricity if you cannot identify the cause.

Mandatory Fire Alarm Systems

Early detection of a fire is the first step in extinguishing it while it is still small. A fire alarm is a device that sounds an alarm if it detects smoke or heat, thereby alerting you quickly to the outbreak of a fire. Within the jurisdiction of the Tokyo Fire Department (the entire Tokyo metropolitan area, excluding island areas and Inagi City), all residences are required to have fire alarms installed, pursuant to the Fire Prevention Ordinance.

Replace the device every 10 years

Fire alarms that were installed many years ago may fail to detect a fire due to aging. Check the installation date and replace the device if 10 years have passed since its installation.

Be sure to install fire alarms

As a general rule, a smoke-type fire alarm should be installed. However, a thermal fire alarm can be installed if there is a risk of detecting smoke that comes from a source other than a fire, such as in the kitchen. Fire alarms can be purchased at stores that sell disaster preparedness equipment, electronics stores, home centers, and electronics retailers.

Fire alarm installation locations

Fire alarms must be installed on the ceiling or wall of each room, including the dining room, living room, children's room, and bedrooms, as well as stairs and the kitchen.

* The bathroom, toilet, washroom, storage room, etc. are not included.

* Installation is not required in a room that has automatic fire alarm equipment or sprinkler equipment.

Fire prevention checklist

There are three main causes for the outbreak of fire at the time of an earthquake: fire from electrical current leaks or when power is restored, fire from gas leaks, and fire from oil stoves. Inspect your house for fire prevention and take measures to prevent fires from occurring.

- | | |
|--------------------|--|
| Electricity | <ul style="list-style-type: none">□ Carpet or furniture is not covering the power cords□ Electrical appliances not in use are unplugged□ Fish tanks, flower vases or other containers of water are not located near electrical appliances□ You know where the circuit breaker panel is |
| Gas | <ul style="list-style-type: none">□ Propane gas tanks are fixed with chains, etc., to prevent them from falling over□ In the case of city gas or propane gas, the micom-meter (intelligent gas meter) is still within its period of validity□ The space around the kitchen range is not cluttered, and has no flammable objects□ The gas hose is not degraded |
| Oil stove | <ul style="list-style-type: none">□ There are no flammable objects around the oil stove□ The oil stove has a safety device |
| Other | <ul style="list-style-type: none">□ No flammable objects are placed in locations that could be evacuation routes such as the hallways or stairs |



Government Measures to Prevent the Outbreak and Spread of Fires

Fire-safe areas

The Tokyo Metropolitan Government has designated “fire-safe areas” where there is no fear of large-scale spread of fires and no need for area-wide evacuation. As of July 2022, 40 areas and approximately 11,500 hectares have been designated where fireproofing has progressed, including the whole of Chiyoda ward and the Ginza and Nihonbashi areas in Chuo ward.

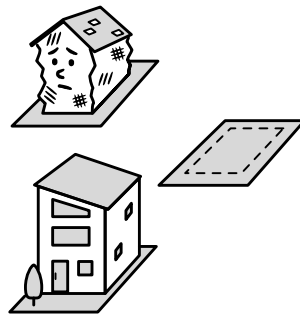


Special fireproofing zone system and designated routes for improvement initiatives

The Tokyo Metropolitan Government is carrying out focused and intensive efforts until FY2025, targeting development areas that are expected to suffer particularly severe damage in the event of an earthquake, and is implementing the following initiatives to turn dense wooden housing areas into towns where fire will not spread or burn.

Special fireproofing zones

The Tokyo metropolitan government and municipalities are working together to promote the fireproofing of buildings by designating areas that need particularly focused and intensive improvement as special fireproofing zones, and providing subsidies to promote rebuilding and reductions and exemptions for fixed asset taxes and city planning taxes. Initiatives are underway in 52 zones, covering approximately 3,350 hectares (as of April 2021).



Designated routes for improvement

In order to achieve “towns where fire does not spread” in development areas, city-planned roads under the Tokyo metropolitan government’s jurisdiction that are effective in improving disaster prevention, such as blocking the spread of fire, evacuation, and rescue, were selected as designated routes for improvement in 2012, and development is progressing in 28 sections, totaling approximately 25 km in length. A consultation desk using private business operators has been set up for the development to provide support for rebuilding lives based on the wishes of the rights holders concerned, such as providing information on relocation locations and proposing plans for the rebuilding of buildings.

Dense wooden housing areas

These are areas where wooden houses are densely packed, and are distributed over a wide area centered on the outer periphery of the JR Yamanote Line. Under the Tokyo Metropolitan Government’s Disaster Preparedness City Development Promotion Plan, supporting initiatives are currently continuing with the aim of creating a safe and secure city that is earthquake-resistant by not burning or collapsing.



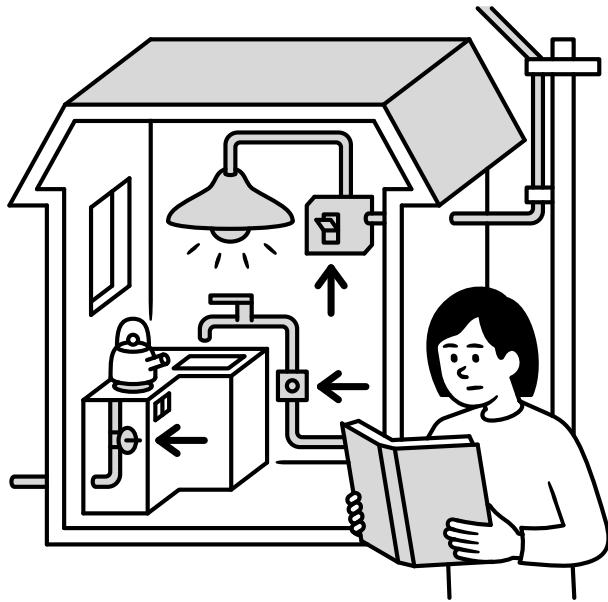
“Special Fireproofing Zones”: [Tokyo Metropolitan Government Bureau of Urban Development website]



“Designated Routes for Improvement”: [Tokyo Metropolitan Government Bureau of Construction website]



Checking Electricity, Gas and Water Supply



Check how to shut down and restore supply

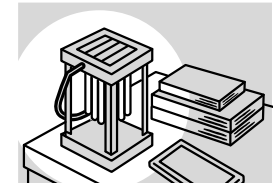
In an earthquake, the supply of electricity, gas, and water may stop. When you evacuate, turn off your circuit breakers, close the gas valve, and close the main valve of the water meter. Confirm where these are in advance, and learn how to turn them off and turn them back on.



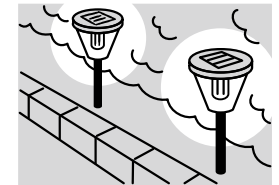
Preparing for Power Outages

Prepare for power outages by incorporating solar lights into your life

Solar lights are disaster preparedness goods that are powered by sunlight and do not use any electricity. Incorporating lights that do not require batteries or fuel into your regular life will come in handy when there is a power outage due to a disaster. Garden solar lights that are inserted into the soil are recommended for detached houses with a garden. If you live in an apartment, choose a wall-mounted type or lantern-type that can be installed on the balcony. As they are easy to carry, they can be brought inside and used as a light in the event of a disaster.



Lantern type



Inserted type

Keep your car's gas tank full

In the event of a disaster, a car is useful not only as a means of transportation for evacuation, but also as an excellent disaster preparedness tool. You can gather information or charge your smartphone by starting the engine. For this reason, it is a good idea to always keep your gas tank full. After a disaster, infrastructure is disrupted and it is difficult to acquire fuel. It is a good idea to fill up the tank when it is about half full.

Keep both solar-powered and battery-powered smartphone chargers

Smartphones are essential for communicating and gathering information in a disaster. It is important to always carry a charger with you. In addition to getting into the habit of putting a charged portable phone charger in your bag, prepare a portable solar panel or battery-powered charger for long-term evacuation.

Source: "Introduction to Disaster Preparedness" (Supervised by Nobue Kunizaki, edited by Creative Suite, Natsumesha, 2021)

🏠 Preparing for Gas Outages

Respond to a gas outage

After an earthquake, you can check the status of gas supply and restoration in your area via the “Gas Service Restoration Map.” (Available in English, Chinese, Korean, and Spanish)

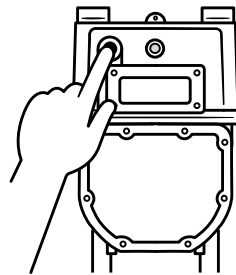


English page



Gas Service Restoration Map

A gas micom-meter automatically shuts off the gas supply when it detects a gas leak or an earthquake with a seismic intensity of 5 or higher. After that, you can restart the gas supply yourself by performing a simple reset operation. First, check the status of gas supply restoration in your area using the Gas Service Restoration Map mentioned above, then follow the steps below.



- ① Turn off all gas appliances.
- ② Remove the cap from the restore button.
- ③ Press the restore button firmly and slowly release it.

* If the gas is not restored after performing the above steps, please call Tokyo Gas Network at 0570-023388.

* This applies to houses where city gas is supplied from the Tokyo Gas Network.

Secure heat sources in case the gas is cut off

In situations where lifelines have been cut off, water shortages can cause deterioration in the sanitary environment, so it is important to cook food to prevent food poisoning.

Prepare a portable gas cooking stove

Be sure to have at least one portable gas cooking stove, which is the easiest to use as a heat source during a disaster, so you can have hot meals.

🏠 Preparing for Water Outages

Emergency Water Supply Station

In Tokyo, there is an emergency water supply station within a radius of approximately 2 km. Check the location of stations near your home in advance. When using a station, you must bring your own water container and transportation equipment.

How to store tap water

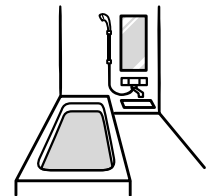
Store for drinking water

When collecting water, fill a clean container such as a plastic bottle to the brim with tap water. It can be used as drinking water for about 3 days if kept away from direct sunlight.



Store for domestic use

A regular household bath can hold approximately 180 liters of water. If the bathtub is kept filled with water, it can be used for daily life such as washing, cleaning, the toilet, and watering.



Stay clean with less water

Wipe your body using a small amount

By wiping your body with a towel soaked in a cleaning agent, you can keep yourself clean without using much water.



Brush your teeth without a toothbrush

Wrap a 15 cm square piece of gauze or tissue paper around your finger and rub your teeth until the feeling of roughness disappears. Wipe your gums and tongue as well, then rinse with water.



Evacuating with a Pet

Care for pets as an owner and family

It is not only humans who are affected by a disaster. Pets are also susceptible to falling ill during the difficult circumstances of life during evacuation. To prevent pet-related problems during evacuation, it is necessary to make preparations such as ensuring they are trained. A pet must be protected by its owner. Think now about what you can do as a pet owner. Additionally, each area has different policies regarding evacuation with pets, so it is important to check the local disaster prevention plan.

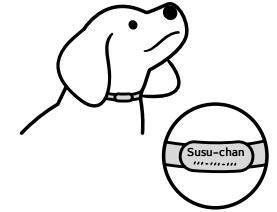
Think about your pet when evacuating

If possible, evacuate with your pet. However, it is not always possible to live with your pet at an evacuation center. In particular, it may be difficult for animals other than dogs, cats, and small birds to be accepted. Please follow the rules of the evacuation center. However, if your home is safe and you are able to return regularly to care for your pet, then not taking your pet to the evacuation center is also an option. It is also a good idea to look in advance for a place which can look after your pet, other than the evacuation center and your home.



Pet health and identification is important

The immune system of a pet also weakens during life in evacuation, so be sure to take good care of its regular health, including vaccinations and parasite prevention and removal. Also, in case your pet gets lost, it is also important to identify it with a name tag or microchip, and take and save a photo of your pet. For dogs, be sure to attach a name tag and rabies vaccination tag to its collar.



Bring your own pet supplies

Stock up on food, water, medicines, toiletries, etc., as well as its favorite toys for stress relief. Also, don't forget to prepare a cage or carrier bag in case you have to evacuate with your pet.



Daily training is important

Daily training is essential to prevent problems with pets. Daily training will also help alleviate the animal's stress in an emergency.



Teach your dog basic commands such as "stay" and "lie down" and train them not to bark unnecessarily.



Train it to use a designated place for the toilet

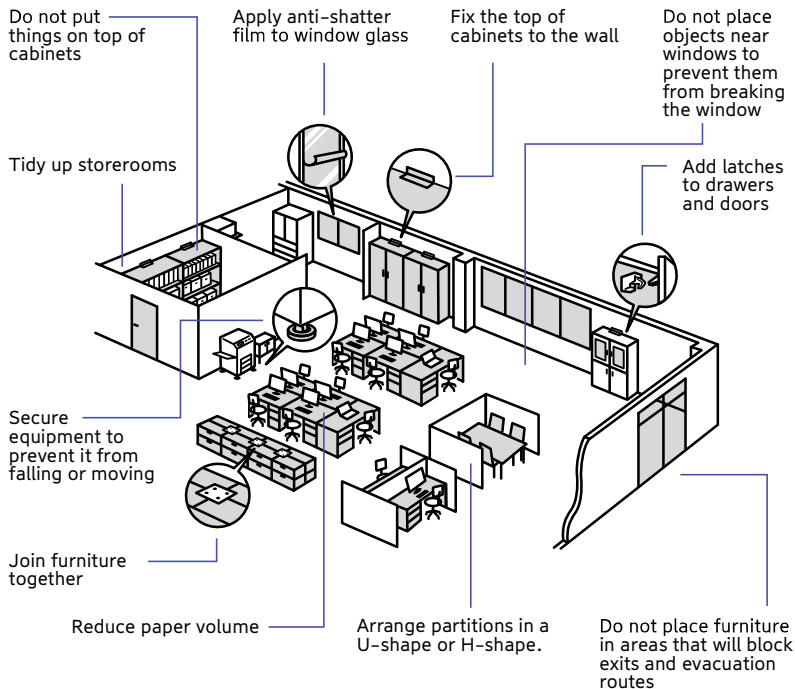
Train it to not be afraid or aggressive towards people or animals



Have it get used to being in a carrier

Disaster Preparedness at Work

We do not know when a disaster will occur. Therefore, disaster preparedness at work is just as important as at home. Promote safety within your company to prevent injuries to customers and employees. It is also important to keep corridors and emergency stairs clear of obstructions.



Prepare emergency supplies and disaster response goods and equipment

It is necessary to prepare the equipment that will be needed in the event of a disaster, decide where to store it, and have it ready for use at any time. Flashlights, generators, and three days' worth of drinking water, food, portable/emergency toilets, hygiene products, and blankets per person should be prepared in case of power or water outages.

Create a manual and rules

At your company, decide on persons to be in charge of disaster preparedness, hold a disaster preparedness meeting, and make rules such as how to confirm the safety of employees and facility users, how to conduct safety inspections of facilities, how to evacuate, where to evacuate to, and an emergency contact list. Also, identify whether there are any tasks that must be continued as a priority even in an emergency. Since the general rule on returning home following a major earthquake or disaster is to avoid moving unnecessarily and to wait until after 72 hours have passed, prepare a stockpile of supplies and equipment for employees and visitors to your office.



Have preparations led by a Workplace Disaster Preparedness Leader

Disaster information is sent by the Tokyo Metropolitan Government to Workplace Disaster Preparedness Leaders.



Utilize the “Workplace Disaster Preparedness Leader” system to promote disaster preparedness measures within your company’s sites. By registering the person in charge of disaster preparedness at each business site as a Workplace Disaster Preparedness Leader, they can directly receive disaster-related information sent by the Tokyo Metropolitan Government using their registered email address or LINE account. In addition, a variety of disaster preparedness content can be referred to through the dedicated office page prepared by each Workplace Disaster Preparedness Leader.

Tokyo Metropolitan
SME Support
Center’s BCP
formulation support
project





Learning About Disaster Preparedness



Participate in drills

In order to minimize damage in the event of a disaster, it is important for every resident in the area to learn about disaster preparedness. In addition to participating in local disaster preparedness drills and touring disaster preparedness centers and disaster experience facilities in Tokyo, experiencing a disaster preparedness camp at home is also a great drill.



Disaster drills held by the Tokyo Metropolitan Government

Each year, the Tokyo Metropolitan Government and the municipalities jointly hold comprehensive disaster drills with resident participation.



Disaster drills held by municipalities

Municipal governments conduct drills by school district or evacuation center that several thousand people participate in. They are mainly held at public schools.

Disaster drills held by neighborhood associations

Centering on first response fire fighting and first-aid training, these drills include rescue and relief drills, communication drills, evacuation drills, and drills to protect yourself using an earthquake simulator.

Condominiums, companies, welfare facilities, etc.

Disaster preparedness drills in condominiums

In addition to initial firefighting drills, first aid drills, rescue drills of people trapped in elevators, and evacuation drills, which raise disaster preparedness awareness throughout the condominium, it is also possible to conduct tours of the equipment that residents don't usually get to see, such as water tanks and power generators, and explain how to use them in the event of an earthquake. In rental condominiums, disaster prevention drills may be conducted by the management company.



Company disaster preparedness drills

Companies should conduct disaster preparedness drills with the same goal of ensuring safety in the event of a disaster, but also for the purpose of continuing business operations. It is effective to conduct disaster preparedness drills from the perspective of how quickly the organization can be returned to its pre-disaster state after ensuring safety.



Disaster preparedness drills at welfare facilities, etc.

At small social welfare facilities and medical institutions used by people who are unable to evacuate on their own, facility staff should conduct the initial response in the event of a disaster. Although there are restrictions on the personnel and time that are available, regular disaster preparedness drills are important for firefighting and guiding residents to evacuate smoothly.



Cooperation between residents and businesses is important

It is important for neighborhood associations, condominiums, and businesses to work together in the event of an earthquake disaster to prevent the damage from increasing. Build a cooperative structure by making agreements between groups and work together to conduct firefighting drills, rescue drills, and equipment handling drills.

Source: Rescue Now "What are the differences between disaster drills conducted by companies and local governments for citizens?"
https://www.rescuenow.co.jp/blog/column_20230524#646733a4cd72ce03707f2461-1684494101204
Ministry of Internal Affairs and Communications, Fire and Disaster Management Agency, "Smooth evacuation of residents with limited personnel"
<https://www.fdma.go.jp/mission/prevention/items/manual.pdf>

Visit disaster education facilities

There are facilities in Tokyo where you can have a realistic experience of a major earthquake and wind and flood disasters, and learn about disaster preparedness. Learn the necessary disaster preparedness knowledge and think about how you will act in a disaster and how to prepare in advance. Disaster preparedness experience tours and events are also held (reservations are required). There is also Japan's only library that is dedicated to disaster preparedness.

[List of facilities]

Ikebukuro Life Safety Learning Center	03-3590-6565
Honjo Life Safety Learning Center	03-3621-0119
Tachikawa Life Safety Learning Center	042-521-1119
Tokyo Fire Department Firefighting and Disaster Prevention Reference Center (Fire Museum)	03-3353-9119
Shinagawa Disaster Preparedness Experience Center	03-5742-9098
Tokyo Kita Ward Disaster Preparedness Center (Earthquake Science Museum)	03-3940-1811
Nerima Disaster Preparedness Learning Center	03-5997-6471
Sona Area Tokyo (Tokyo Rinkai Disaster Prevention Park Management Center)	03-3529-2180
Meteorological Science Museum	03-6758-3900 (Japan Meteorological Agency main line)

* There are also other disaster preparedness learning facilities than those listed in the list of facilities.



Experience disaster preparedness at a Life Safety Learning Center

The Tokyo Kita Ward Disaster Preparedness Center (Earthquake Science Museum) has facilities that use seismic equipment to recreate the shaking of major earthquakes that actually occurred in the past, so you can experience the shaking. You can also experience the situation inside a room filled with smoke from a fire, as well as initial firefighting training. The Tokyo Fire Department's Life Safety Learning Centers are also experiential facilities where both adults and children can have fun learning about earthquakes and fires.

Disaster prevention education portal site for "Let's go to disaster preparedness experience facilities in Tokyo."

Scan here for information on how children can properly learn about disaster preparedness, such as facilities for experiencing and learning about disaster preparedness.



Learn how to survive a major earthquake at Sona Area Tokyo

At Sona Area Tokyo, the disaster prevention experience-learning facility located in the Tokyo Rinkai Disaster Prevention Park, the "Tokyo Direct-Hit Earthquake 72h Tour" is held from time to time. It is a disaster prevention experiential learning tour where you can learn how to survive on your own during the first 72 hours after a major earthquake, which is said to be the approximate time it will take until support systems from the national and local governments are fully in place.

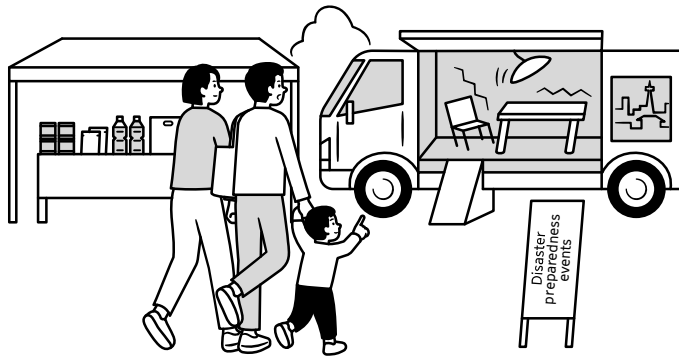
Sona Area Tokyo

3-8-35 Ariake, Koto-ku, Tokyo
03-3529-2180
(Tokyo Rinkai Disaster Prevention Park Management Center)



Source: Tokyo Metropolitan Board of Education disaster preparedness education portal site
<https://www.anzenedu.metro.tokyo.lg.jp/bosaikyoku/>

Attend disaster preparedness events



As many disasters occur in Japan, the opportunities to attend disaster preparedness-themed exhibitions and events are increasing. There are a variety of opportunities, from exhibitions that introduce the latest disaster preparedness systems and equipment for local governments and companies to events that you can enjoy and participate in with your children and loved ones, and they are effective in increasing your interest in and deepening your knowledge of disaster preparedness.

Disaster preparedness events held by the Tokyo Metropolitan Government

The Tokyo Metropolitan Government holds disaster preparedness events every year to deepen residents' understanding of self-help and mutual assistance, and to promote preparation for disasters such as an earthquake directly hitting Tokyo.



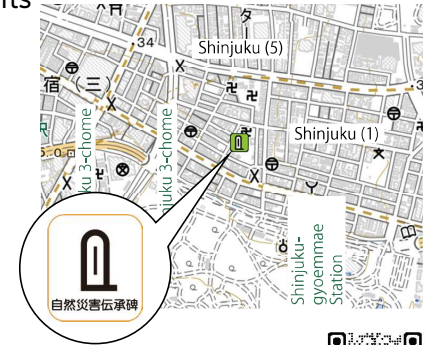
(Image from a disaster preparedness exhibition)

Search for natural disaster monuments

Natural disaster monuments are monuments erected by our ancestors who survived disasters and preserved their experiences in stone monuments for future generations. Disasters occur repeatedly throughout history, so it is very important to know and utilize the history and past experiences of your area.

Example of the new map symbol for natural disaster monuments

The Geospatial Information Authority of Japan is currently collecting information on natural disaster monuments across the country, and announced it as a new map symbol in 2019. In addition to being displayed on the GIA's maps, you can also view the natural disaster monuments in each prefecture on the GIA's website, which is updated from time to time.



Natural disaster monument



Learn about local traditional legends

Are there any legends in the area where you live, such as “don't cross the bridge in the morning if there's thunder” or “a huge tsunami comes the year after a huge catch”? Knowing the legends passed down among residents will help improve your disaster preparedness awareness.

Source: Created from the Geospatial Information Authority of Japan's "Geographical Survey Institute Map (light color map)"
Map symbol source: Geospatial Information Authority of Japan website
<https://www.gsi.go.jp/KIDS/map-sirn-tizukigou-2022-shizensaigaidenshouhi.htm>



Understanding Disaster Volunteers


Disaster Volunteers

Disaster volunteers are supporters who willingly take on restoration and recovery activities in the event of a disaster such as earthquakes, tsunamis, and wind and flooding from typhoons. You may have a strong image of volunteers conducting activities such as removing rubble and garbage at the stricken site, helping out at evacuation centers, and transporting and distributing relief. But their activities cover a broader range, including providing mental care to the disaster survivors, holding consultations and study meetings on rebuilding life, and providing information over the Internet.

Fundamentals of volunteer activities

Disaster survivors can request various kinds of support from volunteers working in the disaster-stricken area, such as removing rubble. However, volunteers are volunteers. Depending upon the details of the request, they may not be able to assist. It should be understood that they will not always respond to requests when, for instance, it could be dangerous or if there are not enough volunteers.

Disaster Volunteer Center

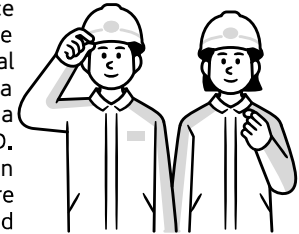
The Disaster Volunteer Center is a hub of volunteer activities to be installed in the event of a disaster. In general, organizations, such as the social welfare council of the affected area, are responsible for the operation of the Disaster Volunteer Center in cooperation with administrative officials, NPOs and volunteers for smooth volunteer activities.  Page 145

Main activities

- Collecting and comprehending the needs of the disaster site
- Preparing and loaning out needed tools
- Preparing to receive and take in people wishing to volunteer
- Feeding back and reporting on the results of activities and matters that were noted during activities
- Adjusting the number of volunteers according to needs, and arranging their activities
- Discussion on points to be improved

Tokyo Fire Department (TFD) disaster volunteers

The TFD disaster volunteers are specialized volunteers who are registered in advance with the TFD to provide support in the event of a large-scale accident or natural disaster such as an earthquake with a seismic intensity of 6-lower or more in a district under the jurisdiction of the TFD. These volunteers assemble at their own initiative at the fire station where they are registered or at a nearby fire station and provide support for firefighting activities.



Details of activities

Activities after an earthquake, etc.

The following support activities are conducted under the guidance and advice of fire department personnel.

- Emergency relief activities
- Logistics support activities within fire stations (meal support activities, setting up temporary toilets, etc., providing directions for stranded commuters and others, etc.)
- Logistics support activities outside fire stations (transporting food and drinking water, setting up emergency water tanks, etc.)

Main regular activities

- Earthquake disaster preparation drills
- Instruction and support for fire prevention and disaster preparedness drills and first aid training conducted by the fire department for neighborhood associations

To register:

Visit the Tokyo Fire Department website for more information.



Volunteer Fire Corps

What is a volunteer fire corps?

Fire corps are firefighting organizations established by the special wards and municipalities. Fire corps play an important role not only in firefighting, but also as a cornerstone of local disaster prevention, including rescue operations and evacuation guidance in the event of earthquakes, wind and flood disasters, etc. Fire corps members have a different status from firefighters, and members of fire corps are people who usually have their own jobs, such as company employees or self-employed people, as well as local residents, such as housewives and students.



Treatment of fire corps members

The status of fire corps members is that of part-time (special position) local public servants. Upon joining a fire corps, you will be provided with activity uniforms and clothing, and you will have the opportunity to participate in seminars and training sessions to acquire the knowledge and skills necessary for fire corps activities. In addition, members are paid a fixed annual salary as well as compensation based on their performance at disasters and training which they attend. Meritorious service and accomplishments are recognized with awards from the Governor of Tokyo or the Fire Chief.



Activities during normal times

During normal times, training that simulates activities at disaster sites is conducted, and guidance is provided to local residents in first aid, firefighting training, and evacuation training. Fire prevention awareness activities are also conducted during disaster prevention week and local events. Vigilance activities are also conducted when festivals and events are held in the area.



Activities during a disaster

When a fire breaks out, fire corps members attend the scene from their homes and workplaces to fight the fire, and in the event of a large-scale disaster, they work with the fire department immediately after the disaster to carry out rescue and first aid operations. In the event of storm and flood damage, they carry out activities such as monitoring the water level of rivers.



Join a fire corps

Healthy people over the age of 18 who live, work, or go to school within Tokyo (qualifications vary by region) can join a fire corps. Use your power to protect the safety and security of your area. If you would like to join, please contact your nearest fire station (if you live in the 23 wards) or your local municipality (if you live in a municipality).

About joining a fire corp

You can apply to join a fire corp online. If you would like to join or are interested, please register using the QR codes below.



Scan here if you live within the 23 wards



Scan here if you live in a municipality