

For all residents

Let's discuss & learn together!

Matsuyama Disaster Preparedness Workbook

– Disaster Risk Reduction Project for Multicultural Communities –

Emergency Contacts

Matter	Tel. no.	Contact
Fire / Emergency / Rescue	119	Fire Department
Incidents / Accidents	110	Police
Disaster-related problems	089-987-7000	Matsuyama City Disaster Mgmt. HQ

Other Contacts

Matter	Tel. no.	Contact
Learning about disaster risks, evacuation shelters, etc. near where you live	089-948-6795	Matsuyama City Disaster & Crisis Management Div.
Problems in daily life	080-4783-5253	Ehime Prefecture International Center (EPIC)
Problems in daily life	089-943-2025	Matsuyama International Center (MIC)

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Matsuyama City General Affairs Dept. Disaster & Crisis Management Div.,
Matsuyama City Disaster Preparedness Education Promotion Council,
Matsuyama Bosai Leaders Training Center

[Cooperation] Matsuyama International Center,
にほんご町内会, ゆい・結・Yui

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Council of Local Authorities for International Relations.



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Exercises: ? Consider 📖 Learn 🖐️ Try

This workbook is meant to be discussed and worked on together by Japanese and foreign residents in order to:

- ◆ Learn about disasters and how to prepare for them
- ◆ Cultivate deeper mutual understanding transcending national boundaries

Please have an enjoyable time together working on the 10 included exercises.



Jishin 1. 地震 Earthquakes

- Earthquakes are difficult to predict.
- Large earthquakes may also be followed by aftershocks.



Yoshin 余震
Aftershocks

Smaller earthquakes that may occur repeatedly in the same place following a large earthquake. Try to stay in a safe location for about 1 week after an earthquake occurs.

Nankai Trough Megaquake

A large earthquake expected to occur in Matsuyama.

Megaquake projections

- Max. seismic intensity: 7
- 2-3 mins of shaking
- Tsunami arriving within 2 hrs

Earthquake with seismic intensity of 7



Damage projections

Harm to people



Fatalities 715
Injuries 5,707

Damage to buildings



Completely destroyed 35,759
Partially destroyed 25,974

Evacuees (after 1 day)



89,002

Source: Ehime Prefecture Earthquake Damage Projection Survey, Dec. 2013

"Scale of earthquake: M9.0; Scenario for projections: late at night in winter for Harm to People, 6pm in winter for other categories; Wind speed: gale force"



① What places in the home are dangerous?



Learn about what kinds of preparations can be taken in Exercise 📖 ⑧ (⇒ p. 10)

1. Earthquakes

 **Kinkyū jishin sokuhō**
緊急地震速報
 Earthquake Early Warnings (EEW)

Automatic announcements delivered to mobile phones when powerful quakes are set to occur

Actions to Take When Earthquakes Occur

 ② What should you do first during an earthquake?



DROP!
Crouch down low



COVER!
Protect your head



HOLD ON!
Stay put during shaking

Actions to Take When the Shaking Subsides

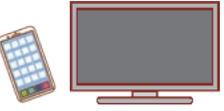
After 0-5 mins : Check yourself and your surroundings



Injuries



Dangerous things nearby



Evacuation information

After 5-20 mins : People in dangerous places move to safe locations

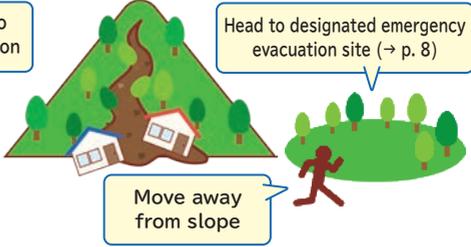
If you're near the sea
 ⇒ a tsunami might come



Evacuate to higher location

Don't return home until tsunami warning is lifted

If you're near a steep slope
 ⇒ the slope might come crashing down



Head to designated emergency evacuation site (→ p. 8)

Move away from slope

After moving to safe location : People worried about staying at home, go to a designated evacuation shelter (→ p. 8)

2. 大雨・台風 Heavy Rain & Typhoons

- In Japan, beware of heavy rain in June and July, and typhoons from August to October.
- Heavy rain may cause flooding and sediment disasters (landslides).
- Typhoons may also cause storm surges.

 **Takashio**
高潮
 Storm Surge

When powerful low-pressure systems such as typhoons cause tide levels to surge to abnormal heights. Seawater may flood into houses near the sea.

③ What kinds of things happen during storm surges and sediment disasters?

Flooding



● Water overflows from rivers and comes surging through



● Houses and cars may be swept away by river water

* Provided by Seiyō City General Affairs Dept. Crisis Management Div.

Sediment disasters



● Earth comes surging down from hills or mountains



● Houses and cars may be swept away by earth

All photos show results of heavy downpours in July 2018. Photos of flooding show Seiyō City; sediment disaster photos show Matsuyama City.

2. Heavy Rain & Typhoons

Actions to Take During Heavy Rain & Typhoons



④ Check up on dangerous places around where you live.

Use the Matsuyama Hazard Map Web Edition
(available in 5 languages)



① Select a type of disaster



② Colored areas are hazardous



③ Indicate disaster risks that apply to your home with checkmarks

Sediment disasters Flooding Tsunamis Storm surges

Check for evacuation information

- People who live in areas with disaster risks should evacuate to a designated evacuation shelter nearby when evacuation information is announced.
- Evacuation information will be announced through sources including the Matsuyama City Disaster Management Portal (⇒ p. 14) and TV.
- If it is dangerous to go outside, shelter indoors on the 2nd floor of a building or higher.



More about evacuation information
(Cabinet Office website)

3. Trouble You May Experience During a Major Disaster

Ōkina saigai ga okitara komarukoto

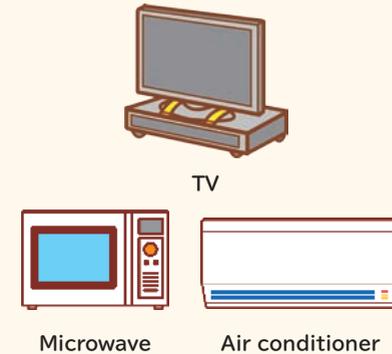
3. Trouble You May Experience During a Major Disaster

- If a major disaster occurs, help won't arrive immediately.
- You should try to be prepared to manage on your own for about 3 days to 1 week.

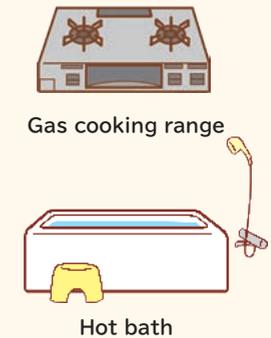


⑤ What will you be unable to use if you lose access to electricity, gas, water, telephone service, or the internet?

If the power goes out...



If the gas is cut off...



If water service is cut off...



If telephone or internet service goes down...



Amount of time until lifeline services were restored (2016 Kumamoto earthquake)

Source: Responses to the 2016 Kumamoto Earthquake (MLIT)



4. 避難所 Evacuation Shelters

4. Evacuation Shelters

- Places to temporarily keep yourself safe from disasters such as earthquakes, heavy rain, and typhoons.
- Available for everyone to use free of charge.
- People sheltering at home can also receive food supplies, etc. from nearby designated evacuation shelters.

Shitei kinkyū hinanbasho
指定緊急避難場所 Designated Emergency Evacuation Sites

- Places to seek shelter after major earthquakes.
- Places that are spacious and safe, such as public parks and school playing fields.
- Not for overnight use.

Shitei hinanjo
指定避難所 Designated Evacuation Shelters

- Places for people who are uneasy about staying in their own home.
- Places such as community centers and school gymnasiums.
- Reservations not required.

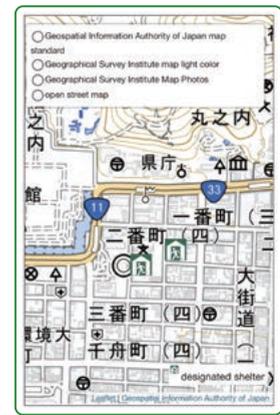
⑥ Find out about designated evacuation shelters near where you live.

Use the Matsuyama Hazard Map Web Edition
(available in 5 languages)

① Select “Designated Evacuation Shelters” under “Evacuation Shelters”



② Search for designated evacuation shelters near where you live



⑦ What will you find at evacuation shelters?



① Living spaces
Many different people live together here.



② Distribution of food & daily necessities
You and your family will receive just the amount you need.



③ Bulletin boards with information
Details such as times for receiving food will be posted.



④ Dedicated space for pets
Please bring pet food and cages or kennels that you will need.

Photo ③ source: Institute of Scientific Approaches for Fire & Disaster, Disaster Photo Database

- Be sure to bring items necessary for your daily life. (⇒ p. 11)
- Evacuation shelters are equipped with staff members. Feel free to consult with them if you are experiencing a problem or need help understanding something.
- Everyone works together when staying at evacuation shelters. Try to help out as you are able.



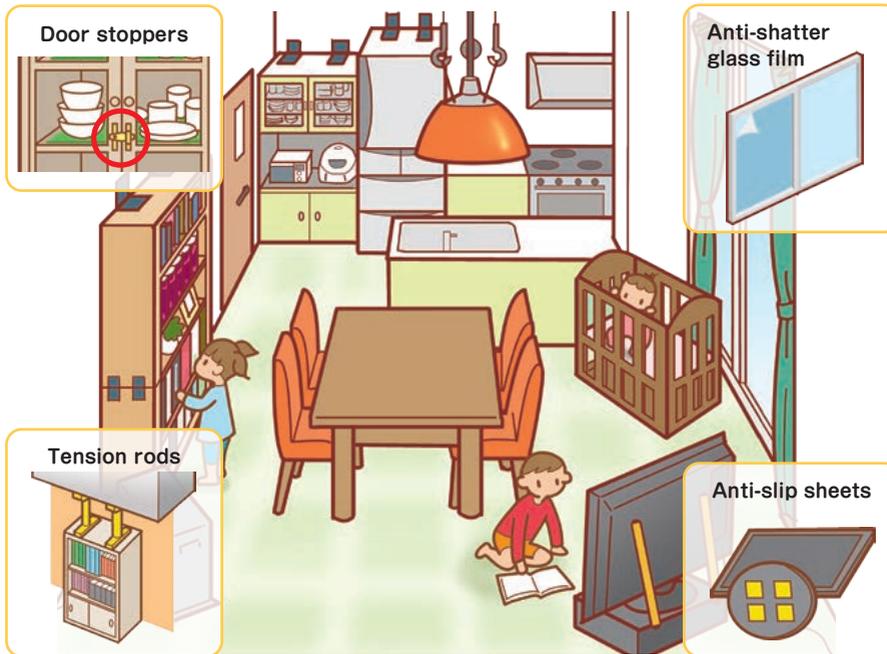
Evacuation shelter staff

① Make the inside of your home safe

- Make preparations inside your home to keep from being injured during an earthquake.

⑧ What kinds of goods are available to help make the inside of your home safer?

Many can be found at 100-yen shops and home improvement centers.



Bedroom

Keep curtains closed

× Large furniture

Keep ready at bedside:



Hallway to entrance

Emergency backpack

× Packages, etc.



② Put together a backpack with an emergency kit

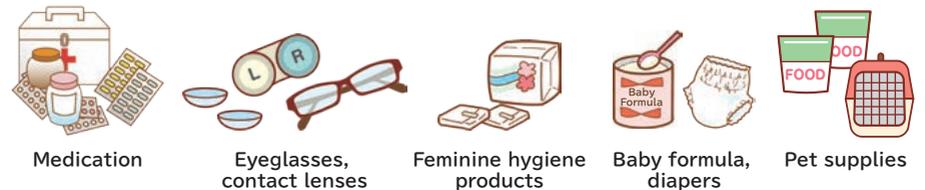


- In times of disaster, things you need may not be immediately available.
- Put together a backpack with an emergency kit including things you need and take it with you when evacuating.

Things everyone will need

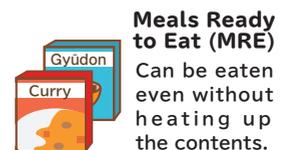


Things to prepare if necessary/if applicable



⑨ What are emergency rations?

- Food supplies that can be eaten without using electricity or gas.
- Shelf-stable for 3-5 years.
- Available for purchase at home improvement stores, grocery stores, from online merchants, etc.
- Halal-certified and hypoallergenic options are available.



③ Prepare things you will need so that you can stay at home

- In times of disaster, things you need may not be immediately available.
- Try to have on hand enough necessities to last **at least 3 days; preferably 1 week.**



Water, food

• Things you can consume right away without cooking.

• Be sure to make your own preparations of special types you may need, such as halal-certified or hypoallergenic options.

3 ℓ / person / day

Rōringu sutokku
ローリングストック
"Daily Stockpile" Method

- ① Stock up on extra daily necessities
- ② Use them as you go, starting with the oldest
- ③ Replenish what you use

① Stock up
② Use
③ Replenish

Plastic water containers, emergency water bags

Fill with water at evacuation shelters and carry home.

Portable stove

Use for cooking, etc.
Be sure to have gas cylinders on hand too.

Emergency toilet

Toilet for disposable use

5 times / person / day

• 2 bags
• Coagulant

Flashlights, lanterns

Power bank

⑩ Try using an emergency toilet.

During major disasters, flush toilets may not be usable. At such times, use emergency toilets instead.

④ Arrange ways of communicating with family members & people you know

- During major disasters, telephone and internet service may be unavailable or unreliable.
- Be sure to have regular discussions with people who are important to you about how you will stay in touch with each other.

Confirming safety status during disasters

171 Disaster Emergency Message Dial

- Connect via telephone
- Record/review voice messages

Register → Confirm

I'm safe

I'm safe

(Japanese) (English)

Google Person Finder

- Connect through internet
- Post/review text-based messages (79 languages)

Register → Confirm

I'm safe

I'm safe

• Useful communication methods during disasters

Public wireless LAN service

Free Wi-Fi that can be used during major disasters.

Public telephones

Can be used free of charge during major disasters.

Be sure to review where they are located in your area.

In times of disaster, you may not be able to use smartphones. It's a good idea to write down friends' and family members' phone numbers and keep them with you in your wallet, purse, briefcase, etc.

6. Helpful Websites & Apps for Times of Disaster

■ Websites

● Matsuyama City Disaster Management Portal (5 languages)

Website operated by Matsuyama City to facilitate disaster preparedness. The latest information will be posted here in times of disaster.



● Japan Meteorological Agency (JMA) website (15 languages)

Website with Japanese weather-related information.



Matsuyama City Disaster Management Portal

The screenshot shows the Matsuyama City Disaster Management Portal interface. It features a language selection dropdown menu with options for Japanese, English, Chinese (Simplified), and Chinese (Traditional). Below the menu, there are two main sections: 'Evacuation information' and 'Evacuation information' (likely a typo for 'Shelter information'). The 'Evacuation information' section displays 'No evacuation information.' and a link to view information on a map. The 'Shelter information' section displays 'No shelter information.' To the right, there is a table titled 'Hinan jōhō 避難情報' (Evacuation information) showing 'Alert level 3 Evacuation of elderly people' with columns for target area name, date and time of issue, number of target households, and target number of people. Below this is another table titled 'Hinanjo jōhō 避難所情報' (Shelter information) with columns for shelter name, opening status, location, number of evacuated households, and number of people evacuated.

■ Apps



Android

● NHK WORLD-JAPAN (18 languages)

Provides news from NHK, as well as emergency information for earthquakes.



iOS



Android

● Safety tips (15 languages)

Useful app for finding out disaster-related information.



iOS



Android

● VoiceTra (31 languages)

Provides voice and text translations of your speech.



iOS

7. Japanese Words Related to Earthquakes, Heavy Rain & Typhoons

Earthquakes:

Word	Meaning
Shindo 震度	Seismic intensity of an earthquake. The scale goes from 0 to 7.
Shingenchi 震源地	Epicenter: the point where an earthquake originates.
Tōkai 倒壊	Collapse and destruction of houses and buildings.
Takadai 高台	High ground: locations high above sea level.

Heavy rain / Typhoons:

Word	Meaning
Tsuyu 梅雨	Rainy season from June to July when Japan gets a lot of rainfall.
Fūsuigai 風水害	Storm and flood damage caused by strong rain, wind, etc.
Chūihō 注意報	Advisory providing notice that a disaster might occur.
Keihō 警報	Warning providing notice that a major disaster might occur.
Kasen no zōsui 河川の増水	River swelling when water levels rise in rivers.
Kasen no hanran 河川の氾濫	River flooding when rivers overflow.
Kaoku no shinsui 家屋の浸水	Inundation of houses when water flows in.

Earthquakes / Heavy rain / Typhoons:

Word	Meaning
Bōsai gyōsei musen 防災行政無線	Emergency Broadcast System: a city operated wireless system. Notifications from Matsuyama City can be heard even outside houses.
Anpi kakunin 安否確認	Safety confirmations conducted in times of disaster to check on the well-being of family members, friends, etc.
Hisai suru 被災する	To be afflicted by disaster, including suffering injury, having family members or friends perish, having one's house destroyed, or experiencing difficulties and disruptions to life due to disasters.
Takidashi 炊き出し	Distribution of food; cooking and providing hot meals to all at evacuation centers, etc.
Futsū 不通	Interruption of service, such as telephone or internet service outages. Also used for railways, roads, streets, etc. that are cut off due to damage.
Fukkyū suru 復旧する	Restoration of something that has been broken or out of use so that it can be used once again.