Earthquake Preparedness Handbook



STEP 1 Know How to React in an Earthquake

Complete the following True or False questions to test your Earthquake Survival Knowledge!

EARTHQUAKE SURVIVAL QUIZ!

·····	LANTIIQUAKE SUNTIVAE QUIZ:			
1.	Take cover in a place where nothing can topple over, fall onto	True / False		
	you or move towards you.			
2.	If you are inside a building, rush towards the exit and open the	True / False		
	door.			
3.	If you are in an elevator, stay calm and wait until it reaches the	True / False		
	ground floor then evacuate.			
4.	If you are in a large hall, stay away from pillars, doors or	True / False		
	staircases.			
5.	If there is nothing to hide under, try to remain standing and be	True / False		
	ready to run when the shaking stops.			
6.	If you are walking on the street, try to stay away from large glass	True / False		
	windows/buildings and brick walls.			
7.	Avoid sheltering near gas stations.	True / False		
8.	Trains in Japan stop automatically for any earthquake over	True / False		
	Shindo 4.			
9.	If the train stops, you must get out immediately.	True / False		
10.	When you decide to leave your car and evacuate by foot, make	True / False		
	sure to lock your car to prevent car theft.			
11.	Collect as much information as possible by listening to people	True / False		
	around you.			
12.	If you are near the ocean, run towards higher ground.	True / False		



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ANSWERS

- 1. True It is important to assess the situation instantly and move to the safest place possible to take cover. In a strong quake, even furniture as large and heavy as a piano or a refrigerator can move. Be aware of heavy furniture on wheels too, like copy machines and white boards.
- 2. False To avoid stampedes and secondary injuries, take cover first. When the shaking stops, you can check and open the door to secure your exit.
- 3. False If you happen to be in an elevator, push all the floor buttons and get out at the nearest floor. If you need to evacuate from the building, take the stairs and never evacuate by elevator or escalator.
- 4. False Large halls and theaters with fewer pillars have a higher risk of collapsing ceilings. Drop down into a low position near pillars or walls with a sturdy structure.
- 5. False In a strong quake, it is hard to remain standing and you are at risk of injuring yourself by falling over or being hit by falling objects. The most important thing to do is to protect your head. Drop down into a low position and protect your head with your arms in a *Dangomushi* (pill bug, roly poly, wood louse) posture.
- 6. True Glass windows and brick walls have proven to be very vulnerable in a quake. A brick weighs about 10kg! Be aware of the buildings around you and avoid these types of structures in your daily life if you can.
- 7. False Gas stations are built under very strict construction codes and are designed to deal with hazardous situations. They have proven to be safe in case of earthquakes and fire, and are designated Support Stations for people walking home.
- 8. True The train will make an automatic stop. To prevent injury, hold on tightly to handrails and face the direction of travel when standing. Cover your head if seated.
- 9. False You may be asked to leave the train but it can be dangerous especially on the subway. Please follow the instructions given by train or station staff.
- 10. False You are advised to leave the keys in the ignition (engine off) so your car can be moved to allow emergency vehicles to pass.
- 11. False In a panic situation, rumors abound. Please make sure you gather accurate information from local media sources.
- 12. True Tsunami can arrive in less than 15 minutes and come in a series of waves. Go as high as you can and stay there until the warning is called off.

STEP 2 Acquire Earthquake Literacy

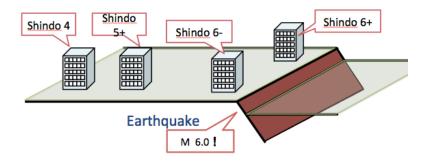
EARTHQUAKE LITERACY QUIZ!

1) Tectonic Plates



Source: Tokyo Research Institute, The University of Tokyo

- ✓ Out of all earthquakes in the world, _____% occur in Japan.
- ✓ There are _____ plates surrounding Japan, namely, _____ Plate, ____ Plate, ____ Plate.
- 2) Magnitude vs. Shindo

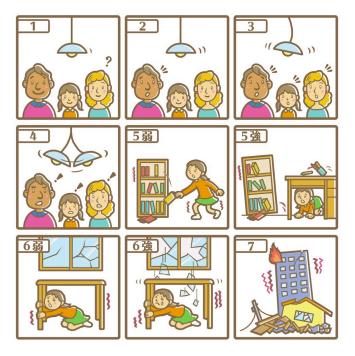


Source: Dr. Satoko Oki, Faculty of Environmental Information, Keio University

- ✓ An earthquake is caused by a rupture at a fault line and the amount of energy generated by the rupture is measured by _____.
- ✓ The ground motion is the consequence of the rupture and is measured
 by _____. This scale describes how strongly you feel the quake at a certain
 point.

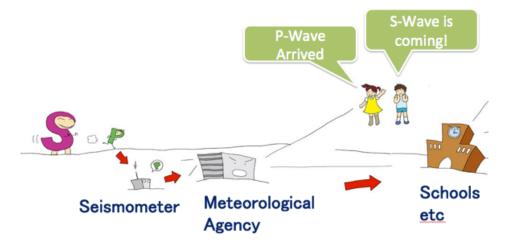
Answers: 1) 10%, 4, Eurasia, Pacific, North American, The Philippines Sea. 2) Magunitude, Shindo

3 Shindo



- ✓ In Japan, trains stop automatically once they detect an earthquake over Shindo ____.
- Elevators stop and gas meters shut down automatically when they detect an earthquake over Shindo ____.

4 Earthquake Early Warning System



Source: Dr. Satoko Oki, Faculty of Environmental Information, Keio University

✓ When there is a _____ wave detection from seismometers installed throughout Japan, the JMA automatically analyzes and predicts the rough area of the earthquake's _____. These rough predictions allow the JMA to warn people in affected prefectures through TV, radio and cell phones if a strong quake caused by _____ wave is expected.

Answers: 3) Shindo 4, Shindo 5. 4) P-wave (Primary wave), epicenter, S-wave (Secondary wave)

5 Tsunami Warning



Source:NHK

- ✓ When an earthquake occurs that could generate a disastrous tsunami in coastal regions of Japan, JMA issues Major Tsunami Warnings, Tsunami Warnings and/or Tsunami Advisories for individual regions based on estimated tsunami heights around _____ minutes after the initial quake.
- ✓ Expected tsunami height:

Major Tsunami Warning: Over_____ m (Coastline colored red)

Tsunami Warning: Over _____ m up to _____ m (Coastline colored orange)

Tsunami Advisory: Over _____ m up to _____m (Coastline colored yellow)

6 Tsunami Evacuation



- ✓ If you are near the coast, always check the _____ and the location of the nearest higher ground, and the fastest route to get there.
- ✓ A quake lasting over ____ minutes has a high risk of causing a tsunami.

 The length of the quake has a direct correlation to the size of the _____.
- ✓ You will be swept away by a tsunami of less than _____m.

Answers: 5) 3m, 1m-3m, 0.2m-1m 6) Above Sea Level (ASL), 1 minute, magnitude, 0.5m

STEP 3 Collect Information

DISASTER INFORMATION QUIZ

What can you understand from these NHK news screenshots?

Source: NHK

✓ This is an epicentral / ocean-trench type of earthquake.

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- ✓ There is / isn't a risk of tsunami.
- ✓ The magnitude of this earthquake was
 ...
- ✓ In Tokyo bay area, the shindo was _____.

2)



Source: NHK

- ✓ This is an <u>epicentral / ocean-trench</u> type of earthquake.
- ✓ There is / isn't a risk of tsunami.
- ✓ The magnitude of this earthquake was _____.
- ✓ In the Tokyo bay area, you need to / don't need to evacuate to higher ground.

Answers: 1) epicentral, isn't, M6.0, Shindo 3. 2) Ocean-trench, is, 7.3, don't need to

STEP 4 Get Connected with Your Loved Ones

LAST RESORT COMMUNICATION METHOD



Please practice using 171 NTT Disaster Message Board System with your loved ones.

FAQ

Q1: Can this system be accessed from overseas?

A1: The "dial 171" is domestic use only, however, it is accessible from overseas through internet, from "web171.jp".

Q2: Can you practice this service before an earthquake occurs?

https://www.web171.jp/

A2: Yes, you can practice on the 1st and 15th of each month and during the Bosai (disaster prevention) Weeks in September and January.

Q3: Can you use your mobile phone to access this system?

A3: Yes, however, mobile phone lines maybe unavailable due to line congestion. You will most likely have to use a public telephone.

* For more details, see 171 Tutorial (https://www.ntt-east.co.jp/en/saigai/voice171/index.html).

STEP 5 Understand Hazards and Evacuation Shelters/Areas in Your Neighborhood

Please take 10 minutes to sit down with your family and create your family emergency plan by filling out the template below. After you are finished, copy the information onto your help cards. Make sure all family members carry one each.

FAMILY EMERGENCY PLAN

Contact Information

Fill out the following information for each family member and keep it up to date

Name	Phone Number	Date of Birth	Passport Number	Important Medical Info Ex. Allergic to wheat, egg, etc. Name of regular medicines, pre-existing diseases.	Blood Type

Write down where your family spends the most time: work, school and other places they frequently visit.

Name	Address	Phone Number	Evacuation Procedures and Meeting /Pickup Place Ex. Parents to pick up at school. If damaged, meet at Arisugawa Park.

Communication Method

List your communication methods: Email, SMS, Skype, Twitter, Line, Facebook and 171. Agree which communication method to use when one is not available.

Priority	Communication Means	Protocol
	Ex. 171	Ex. Leave messages at 03-XXXX-XXXX
1		
2		
3		
4		

Meeting Places

Agree on meeting places and landmarks near your home, when you are not in Tokyo Metropolitan area and when evacuating the city.

	-
Meeting Point (Small parks in your neighbourhood to gather and assess the situation)	
Evacuation Area (Large parks to escape from large scale fire) (Tsunami Evacuation Sites)	
Emergency Shelter (Local schools for shelter if your house becomes unliveable)	余
Accommodation outside Tokyo (Homes of friends or family, or hotels outside of Tokyo Metropolitan area)	

Evacuation Map

Attach Map from Tokyo Metropolitan Government Bosai Map

http://map.bousai.metro.tokyo.jp/

If you live near the sea, also check your ASL

http://www.mapion.co.jp

Disaster Related Facilities

Check the following facilities and mark them on your map.

Support Stations	NAME OF THE PARTY	Temporary shelter for people walking home	
Disaster Hospitals	ຝ	Water Supply Point	(
Designated Roads for Walking		Public Toilets	ÅÅ
Home			TI
Gas Stations	80	Public Telephones NTT Public Phone Search: (http://service.geospace.jp/ptd-ntteast/ PublicTelSite/TopPage/)	
Hazards (Tsunami)	A	Hazards (Landslides)	

STEP 6 Earthquake Proof Your Home

HOME PROOFING CHECKLIST

In the Hanshin-Awaji Earthquake in 1995, 80% of deaths were caused by falling furniture and collapsed houses. It is critical to secure your furniture to minimize the risk of injury and death. Take the time to walk around your home and earthquake proof your home.



		YES	NO
1	Have you secured large furniture such as cupboards, bookshelves, and refrigerators?		
2	Have you placed locks/stoppers on your cupboards and bookshelves?		
3	Have you attached guards to prevent books from falling out?		
4	Have you placed gel mats under your TV, PC, Microwave, etc.?		
5	Have you protected your windows/glass doors with shatter-resistant film?		
6	Have you placed flashlights/lanterns in all rooms?		
7	Have you secured any lights hanging from the ceiling?		
8	Have you placed a fire extinguisher in the kitchen?		
9	Have you made sure you don't have heavy picture frames/ornaments in high places?		
10	Have you made sure the layout of your room will not block the exit if furniture falls over?		

TOOLS TO SECURE YOUR FURNITURE

Anti-Toppling Devices

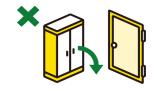


Furniture Alignment

✓ Make sure furniture will not fall on to ✓ Make sure furniture will not block you exits









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STEP 7 Prepare Your Emergency Kit

EMERGENCY SUPPLY CHECKLIST

Items to Have on a Daily Basis

Basic Items	
Mini LED Flashlight 小型LED懐中電灯	
Whistle ホイッスル	
Mobile Battery Charger 携帯電話用充電器	

Sanitary	
Tissues ティッシュ	
Wet Tissues ウェットティッシュ	
Large Handkerchief 大判ハンカチ	

Food	
Candy / Gum 飴・ガム	
Energy Bar 栄養補助食	
Water 水	

Specia	al Needs	
Medicine 薬		
Presciptions	お薬手帳	

Walking Home

Basic Items	
LED Flashlight LED懐中電灯	
Helmet ヘルメット	
Mask マスク	
Whistle ホイッスル	
Rain Poncho 雨合羽・レインコート	
Gloves 手袋	

Sanitary	
Wet Tissues ウエットティッシュ	
Towel タオル	
Disposable Toilet Bags 携帯簡易トイレ	

	Food	
Energy Bar	栄養補助食	
Water 水		

Other Emergency Route Map 帰宅マップ

Blanket ブランケット

Sp	ecial Needs	
Medicine	薬	

Stocking Your Home (If your home is a viable shelter)

Basic Items	
LED Flashlight LED懐中電灯	
Lanterns ランタン	
Radio ラジオ	
Work Gloves 軍手	
Food Wrap サランラップ	
Paper Plates, Cutlery 紙皿、フォーク等	
Portable Stove カセットコンロ	
Gas Canisters ガス缶/ガスカセット	
Candles ろうそく	
Head Light ヘッドトーチ	
Matches/Lighters マッチ・ライター	
Packing Tape ガムテープ	
Bucket バケツ	
Trolley / Handcart 台車	
Helmet ヘルメット	
Can Opener 缶切り	

Sanitary	
Band Aids バンドエイド	
Bandages 包帯	
Sanitizer 消毒液	
Tissues ティッシュ	
Surgical Masks フェイスマスク	
Sanitary Napkins 生理用品	
Dry Shampoo 水なしシャンプー	
Toiletries 洗面用品	
Toilet Paper トイレットペーパー	
Paper Towels ペーパータオル	
Emergency Portable Toilets 簡易トイレ	
Garbage Bags ゴミ袋	

Food	
Emergency Food 非常食	
Water 水	
Vitamins ビタミン剤	
Snacks (Chocolate, etc.) スナック	
Tea Bags, Instant Coffee ⊐-ヒ-	
Canned Food 缶詰食品	
Alpha (Precooked) Rice アルファ米	: 🗆
Rice 米	

In case of Fire/ Rescue	
Fire Extinguisher 消火器	
Hammer 金づち	
Axe 斧	
Shovel シャベル	
Crowbar バール(鉄挺)	
Saw ノコギリ	

Baby Goods	
Diapers オムツ	
Wipes おしりふき	
Baby Blanket 毛布	
Baby Bottle 哺乳瓶	
Infant Formula 粉ミルク	
Baby Food ベビーフード	
Baby Snacks おやつ	
Paper Cups 紙コップ	

Special	Needs	
Medicine 薬		
Medical Device	医療機器	

Supplementary Items to Bring to the Shelter (If your home is unlivable)

Basic Items	
Slippers スリッパ	
Towel Wraps ラップタオル	
Inflatable Camping Mats エアーマット	
,	

Valuables	
Money Belt マネーベルト	
Cash (Coins) 現金(小銭)	
Health Insurance Card 健康保険証	
Passport パスポート	
Residence Card 在留カード	

Sanitary
Underwear, Socks 下着·靴下
Wet Towels ウェットタオル
Deodorant Towelettes 消臭タオル 🗌
Toothbrush/Floss 歯ブラシ・フロス 🗌
Mouthwash マウスウォッシュ
Mirror 鏡
Hairbrush ヘアブラシ
Sanitary Napkins 生理用品

Nice to Have (Stress Control)			
Emergency Food 非常食			
Snacks おやつ			
Tea Bags, Coffee コーヒー等			
Books, iPad/iPod, etc. 本、iPhone等			
Essential Aroma Oil アロマオイル			

Baby Goods	
Baby carrier だっこひも	
Toys/Books おもちゃ・本	
Nursing Cover 授乳カバー	

Special Needs			
Medicine 薬			
Presciptions お薬手帳			
Medical Device 医療機器			
Medical Certificates 手帳(母子・障害)			

If You Are Sheltering On Your Own

Basic Items	
LED Flashlight LED懐中電灯	
Lanterns ランタン	
Radio ラジオ	
Work Gloves 軍手	
Plastic Wrap サランラップ	
Paper Plates, Cutlery 紙皿、フォーク等	
Blanket ブランケット	
Rain Poncho 雨合羽・レインコート	
Mobile Battery Charger 携帯充電器	
Trolley / Handcart 台車	
Portable Stove カセットコンロ	
Gas Canisters ガスカセット	
Scissors キッチンばさみ	
Packing Tape ガムテープ	
Camping Mats/Sleeping bags エアマット・寝袋	
Tent テント	

Sanitary	
Band Aids バンドエイド	
Bandages 包帯	
Sanitizer 消毒液	
Tissues ティッシュ	
Surgical Masks マスク	
Sanitary Napkins 生理用品	
Dry Shampoo 水なしシャンプー	
Toiletries 洗面用品	
Toilet Paper トイレットペーパー	
Paper Towels ペーパータオル	
Emergency Portable Toilets 非常用トイレ	
Garbage Bags ゴミ袋	
Bath Towels タオル	

Food
Emergency Food 非常食
Water 水
Water Filterage 水フィルター
Valuables
Money Belt マネーベルト
Cash (Especially coins) 現金(小銭)
Health Insurance Card 健康保険証□
Passport パスポート
Residency Card 在留カード

Certificates(i.e. maternity) 母子手帳等

Baby Goods				
Diapers オムツ				
Wipes おしりふき				
Baby Blanket 毛布				
Baby Bottle 哺乳瓶				
Infant Formula 粉ミルク				
Baby Food ベビーフード				
Baby Snacks おやつ				
Paper Cups 紙コップ				
Baby Carrier だっこひも				
Toys/Books おもちゃ・本				

Special Needs			
Medicine 薬			
Prescriptions お薬手帳			
Medical Device 医療機器			

TIPS FOR PACKING YOUR EMERGENCY BAG

- Use a backpack to keep your hands free.
- Pack only the amount you can carry (less than 10-15 kg).
- · Keep your emergency bag near the door so you can grab and go!

TIPS FOR STOCKING YOUR HOME

· We need	liters of water per day per person for hydration.	
· We need	liters of water per day per person for daily use	
	i e cooking washing hands body rinsing mouth etc	

• Make sure to check the expiration date of your supplies every 6 months and renew your stock as necessary.

Rolling Stock Method

Specially designed food for disaster situations with life of 3 to 7 years can be quite expensive. But you can utilize packaged food that you normally find in your local supermarket. Apply the "Rolling Stock Method" to make sure your supplies do not expire!

Step 1 Ready 3 days of food

Step 2 Add three more extras

Step 3 Eat one meal, once a month

Step 4 Refill one meal, once a month

The whole stockpile will be renewed in 12 months!

	Breakfast	Lunch	Dinner	Refill	Refill	Refill
Day 1				I	I	Ç
Day 2				I	L	S
Day 3				I	S	S
Extra				I	J	I

ASSEMBLE YOUR PERSONAL BOSAI KIT

BOSAI is the Japanese word for disaster prevention. A Personal Bosai Kit is a compact and portable set of useful and essential items in the event of an earthquake. It consists of items that will help you survive the first few hours after the disaster. It contains minimal items in terms of size and amount and is small enough to be carried in a bag by an individual on a daily basis.

There may not be enough space for everything, so it is important to customize and prioritize the contents according to your needs.

There are 3 types of items to include: (1) Must Have Items, (2) Useful Items and (3) Comfort Items.



BOSAI items are available at Tokyu Hands, home centers, large-scale supermarkets and Amazon. For WaNavi Japan's original prepacked Personal BOSAI Kit (¥2000), please contact us at contact@wanavi.org.



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