

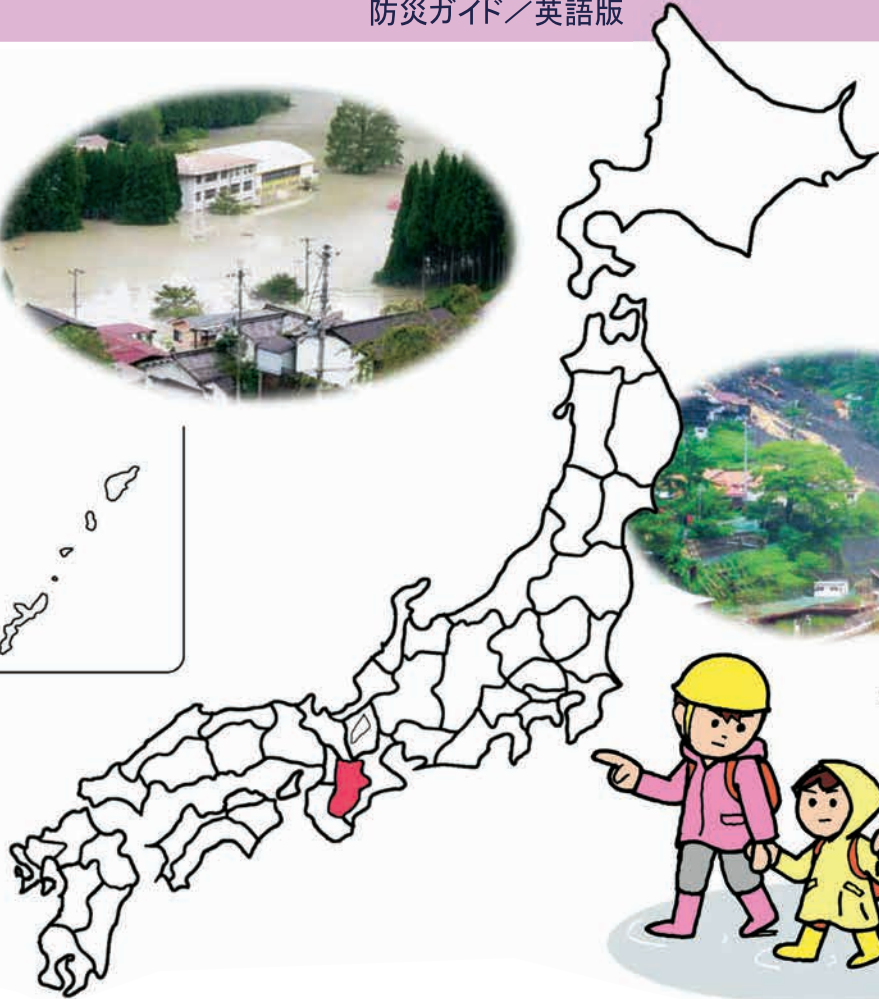
Disaster Prevention Handbook

English



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ぼうさいが い ど えいごばん
防災ガイド／英語版



な ら け ん
奈 良 県
Nara Prefecture

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出典 表紙写真 : 奈良県「わが家の防災対策」より左上 天川村、右中 五條市大塔町
(いずれも紀伊半島大水害当時)

表紙イラスト : 右下 気象庁HPより

1ページ断層図 : 「第2次奈良県地震被害想定調査報告書(平成16年10月公表)」より

Introduction はじめに

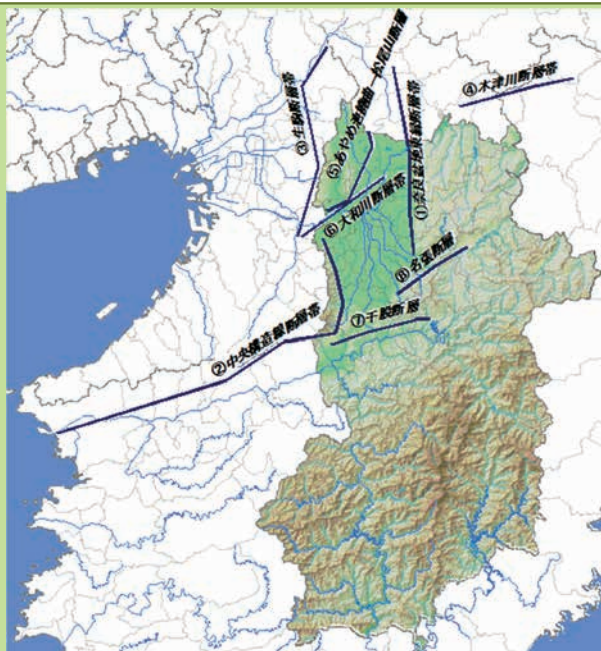
Japan has a lot of earthquakes.

Heavy rain and typhoons are also common.

In order to minimize damage during natural disasters, it's important to be prepared on a daily basis and act calmly in case of an emergency.

Faults that may cause an earthquake in Nara.

な ら け ん おお じ しん ひ おお か の う せい だん ぞう
奈良県で大きな地震を引き起こす可能性のある断層



- ① 千股断層 Chimata fault (M7.1)
- ② 中央構造線断層帯 Medial line fault zone (M8.0)
- ③ 生駒断層帯 Ikoma fault zone (M7.5)
- ④ 木津川断層帯 Kizugawa fault zone (M7.3)
- ⑤ あやめ池撓曲-松尾山断層 Ayameike flexure-Matsuyama fault (M7.0)
- ⑥ 大和川断層帯 Yamatogawa fault zone (M7.1)
- ⑦ 名張断層 Nabari fault (M6.9)
- ⑧ 奈良盆地東縁断層帯 Narabonchi toen fault zone (M7.5)

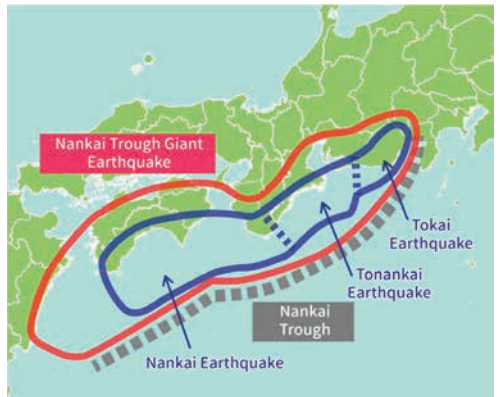
Disaster in Nara なら さいがい 奈良の災害について

Earthquakes じしん 地震

An earthquake is where the ground shakes. Earthquakes that occur directly below Nara prefecture can create harsh local quakes.

Furthermore, there are fears that earthquakes that occur in the open sea surround the Japanese isles (The Nankai trough earthquake etc.) may lead to quakes affecting large areas and tsunami is along the coastlines.

If a large earthquake does occur, it can lead to the loss of many lives as well as cause damage to property and roads making travel by vehicles impossible. There may also be water, gas and power cuts with people being cut off from food supplies or other life necessities. Therefore, it is important to ensure that you stock at least one weeks' worth of food available for your whole family.



和歌山県「津波から逃げ切るために」を編集

Great Hanshin-Awaji Earthquake(1995) はんしん あわじだいしんさい 阪神・淡路大震災

On January 17th 1995, in Hyogo prefecture, located close by Nara prefecture, the great Hanshin-Awaji earthquake struck at a seismic intensity of 7. The damages were great with 6,434 death, 3 people missing, 43,792 injured and the complete destruction of 104,906 homes. The earthquake registered in Nara as scale four and lead to 12 injuries.



気象庁「阪神・淡路大震災写真集」より

Rain storm • Typhoon おおあめ たいふう 大雨 • 台風

Typhoons are a combination of strong winds and heavy rainfall and occur prominently from July until October, and can lead to water damage and landslides due to flooding etc. It is important to pay attention to weather broadcasts to ensure quick countermeasures.

Landslide としゃさいがい 土砂災害

Landslides can occur along with heavy rainfall, typhoons and earthquakes. In a landslide earth, rock and water mix together and break away flowing along the surface. This can occur several different ways.

3 patterns of landslides

gakekuzure (massif collapse)



jisuberi



dosekiryu



イラスト:土砂災害防止広報センターHPより

Kii Peninsula Great Flooding (2011) きいはんとうだいすいがい 紀伊半島大水害

In the southern part of Nara, spanning from the 3rd till the 4th of September 2011, the largest rain fell in the history was registered. It reached 1650mm in 72 hours and caused landslides that took the lives of 24 individuals.



<Photo of the day>
← Nosegawa Village
Tenkawa Village→



奈良県「紀伊半島大水害の記録」より

Earthquakes じしん 地震 へん 編

Summary of the JMA (Japan Meteorological Agency) Seismic Intensity Scale

Scale: 1

じしん つよ 地震の強さ (震度) と揺れ しんど ゆ かた 方

Scale: 2

Scale: 3

Scale: 4



- Most people are startled.
- Hanging objects such as lamps swing significantly.
- Unstable ornaments may fall.

Scale: LOW 5



- Many people are frightened and feel the need to hold onto something stable.
- Dishes in cupboards and items on bookshelves may fall.
- Unsecured furniture may move, and unstable furniture may topple over.

Scale: Strong 5



- Many people find it difficult to walk without holding onto something stable.
- Dishes in cupboards and items on bookshelves are more likely to fall.
- Unsecured furniture may topple over.
- Unreinforced concrete-block walls may collapse.

Scale: Low 6



High earthquake resistance

Low earthquake resistance

- It is difficult to remain standing.
- Many unsecured furniture moves and may topple over. Doors may become wedged shut.
- Wall tiles and windows may sustain damage and fall.
- In wooden houses with low earthquake resistance, tiles may fall and buildings may lean or collapse.

Scale: Strong 6



High earthquake resistance

Low earthquake resistance

- It is impossible to move without crawling; People may be thrown through the air.
- Most unsecured furniture moves, and is more likely to topple over.
- Wooden houses with low earthquake resistance are more likely to lean or collapse.
- Large cracks may form, and large landslides and massif collapses may be seen.

Scale: 7



High earthquake resistance

Low earthquake resistance

- Wooden houses with low earthquake resistance are even more likely to lean or collapse.
- Wooden houses with high earthquake resistance may lean in some cases.
- Reinforced-concrete buildings with low earthquake resistance are more likely to collapse.

Tips to protect yourself from earthquakes じしん からだ まも地震から体を守るために

If you feel a tremor . . . Stay calm and secure your personal safety! !

If you see/hear an EEW . . .

Earthquake Early Warning (EEW) Earthquake Early Warnings are announced by the JMA, Disaster prevention administration radio (Large speakers set up in towns). Television, Radio, Cellphone etc. From your cell phone there will be a sound and the warning, "Mamonaku okina yure ga totatu shimasu" (There will be a large quake shortly). When you hear this warning, please evacuate to a safe location.

At Home

- Protect your head and shelter under a table while the shake is continuing.
- Don't rush outside.
- Don't worry about turning off the gas in the kitchen.



Outdoors

- Look out for collapsing concrete-block walls.
- Be careful of falling signs or broken glass.



In Public Buildings

- Follow the attendant's instructions.
- Don't rush the exit.

Near the coast

- There may be a tsunami, so run to higher grounds and away from the coast as quickly as possible.



In the Car

- Carefully stop the car on the left side of the road to leave room for any ambulances or fire trucks.
- Leaving the car keys inside and without locking the doors, walk out and evacuate.



On Buses or Trains

- Hold on tight to a strap or a handrail.

Rain storm and Landslide 大雨・土砂災害 編

おおあめ どしゃさいがい へん

What to do when a rain storm and typhoon is coming おおあめ たいふう ちか 大雨と台風が近づいたら



- Check the TV, radio, and internet for the most recent weather information from the Meteorological Agency when a typhoon is heading your way.
- Make sure to access evacuation information from your municipal government.

Warning Process from JMA(Japan Meteorological Agency)

Information regarding heavy rainfall

Warning/advisory announcements up to 5 days prior

At this stage, please pay attention to warnings

Heavy rainfall warning advisory
"Oame chuiho"

Notice that natural disasters may occur.

Heavy rainfall danger warning
"Oame Keiho"

Notice that serious natural disasters may occur.

Heavy rainfall continues,
High probability of a serious disaster occurring

Heavy Rainfall High-risk warning
"Oame tokubetsu keiho"

Protect yourself immediately!



- During a typhoon, strong winds can knock object down. Clean up your gardens and balconies, and move all loose objects inside in advance.
- Stay at home during strong winds.
- Do not go near mountains, rivers, or oceans



Evacuating during a rain storm おおあめ と き ひなん に 大雨の時の避難(逃げること)

- During rainfall rivers can overflow, houses can be flooded and landslides may occur. If this happens, evacuate immediately.
- Evacuation announcements will be issued from local cities, towns and villages.
 - Once an evacuation call is made, move immediately to an evacuation center.
 - When leaving the home is dangerous, move to the safest part of your house (2nd Floor etc.).

**Evacuation
Preparation Info
Elderly etc.
Begin Evacuation**

The elderly, disabled, people with children, people who may take longer to evacuate, should begin moving to a designated evacuation point. If that is not possible, at least move to a safer location.

**Evacuation
Advisory**

Evacuate immediately. If it is too dangerous to evacuate outside, move to the highest level within the building.

**Evacuation
Order
(Emergency)**

The situation has become dangerous, evacuate immediately. If it is too dangerous to evacuate outside, move immediately to the highest level within the building.