

Japanese government plans to scientifically test oft-repeated earthquake instructions

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"When an earthquake strikes, hide under a table." "Don't rush outside immediately." Are these actually life-saving actions in an earthquake? The Education, Science and Technology Ministry plans to see if such commonly given advice stands up to scientific scrutiny.

The ministry's plan would formulate the first national guidelines for approved safety actions in earthquakes for schools, homes and workplaces. The evaluations will be made by experts who will study duplicated experiments and evidence from past earthquakes.

Until now, the Fire and Disaster Management Agency and each municipality have informed people through brochures and other means about what actions to take in the event of an earthquake or fire. But most of the content is compiled from supposition and anecdotal evidence based on past experiences, not scientific confirmation.

A facility that can simulate quakes as strong as the Great Hanshin Earthquake of 1995 was completed in Miki, Hyogo Prefecture, in 2005. Experiments there found unexpected dangers caused by strong shaking, such as desks and TV sets being tossed about and heavy copy machines sliding across the room.

Tests at the facility also showed how buildings of different designs collapse, and found that it is safer to be on the second floor of a building that has low quake resistance than to be on the ground floor.

When the Niigata Prefecture Chuetsu Offshore Earthquake struck in 2007, it was reported that some people barely escaped death as they ran out of collapsing houses. Incidents such as these and growing test results are showing that traditionally recommended actions could actually be the wrong thing to do.

The ministry plans to gather experts starting in July to verify the appropriate actions based on experiment data and testimonies of people who have been through major earthquakes.

The ministry also will examine how people physically react during strong shaking by putting them through earthquake simulations.

In addition, the examinations will look into whether the effectiveness of certain actions varies depending on the type of shaking and the scale of seismic intensity involved, by mimicking the effects on cities that are located above focus of land-based earthquakes, including long-period ground motions characterized by a rocking motion.

The ministry plans to compile the reports by the end of this fiscal year and issue guidelines within the next fiscal year. The guidelines are expected to include measures for when emergency [earthquake](#) alerts are issued and disaster-prevention lessons required at school and medical institutions.

"Researchers have long argued over disaster prevention when it comes to evacuating buildings. I think it's important for the government to study these things," Gunma University Professor Toshitaka Katada said.

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