

# Japan earthquake

Japan may be thousands of miles away, but the ramifications of the earthquake earlier this year brought about a public health response closer to home.

Japan lies at the interface of three major tectonic plates and has a high frequency of earthquakes. The earthquake that struck Japan on 11 March 2011 took place about 80 miles off the east coast of Japan near Sendai at a depth of about 15 miles. This was the fifth largest seismic event to take place since 1900.



The ensuing tsunami caused catastrophic damage along the east coast of Japan. Most of the coast consists of relatively flat low-lying areas and, when tsunamis come ashore, they can penetrate deep and destroy whatever is in their path. Indications suggest that the majority of the deaths have been the result of the tsunami and not the earthquake itself, which reflects the damage mitigation efforts in building codes.

The earthquake caused damage to reactors at two nuclear power plants at the Fukushima nuclear facility. Although initially, the damage did not appear to suggest a radioactive release, scientists encountered difficulties in bringing the system back into a controlled state quickly, and national and international monitoring of the situation intensified.

## Health Protection Agency

The organisation leading the international response to the events at the Japanese nuclear power plant is the International Atomic Energy Agency (IAEA). The Health Protection Agency (HPA) has a wide range of public health expertise on the effects of radiation, chemicals and environmental hazards.

The agency is advising that on the basis of current information, UK citizens outside the exclusion zone will not have been exposed to potentially harmful levels of radiation. They are also advising that any radiation that could potentially reach the United Kingdom would be miniscule and no threat to people's health.

Further advice and information on the radiation incident is available on the [HPA website](#)

. There will be a significant long-term burden of post-traumatic stress disorder from this event, and mechanisms need to be developed to help survivors and responders. This is a generally undiagnosed epidemic in the aftermath of large events, and it needs to be confronted much more explicitly and systematically. Like many countries that experience disasters of such magnitude, the recovery for Japan will be very long and painful.

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