

**An urgent message to citizens:
Preparing for compound disasters of infectious disease and natural hazards**

Board of Directors
Japan Academic Network for Disaster Reduction
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The current situation of the novel coronavirus (COVID-19) outbreak continues to be unpredictable. While protecting ourselves from this virus, we need to be vigilant against incoming natural hazards, which causes compound disasters with other infectious diseases. Before the rainy season begins, we would like to share some information on how to protect ourselves and others.

Please read this information and prepare for risks of such compound disasters.

1. Recognizing the increasing risk of compound disasters of the infectious disease and natural hazards

- The world is struggling to cope with the novel coronavirus, and Japan is not an exception. Considering the fact of natural disasters occurring every year in Japan in recent years, some communities might suffer from so-called compound disasters with both the infectious disease and natural hazards. When this becomes a reality, it will be very complicated with other adversities, such as the collapse of the healthcare system.
- To reduce risks of compound disasters and other disaster risks, by checking hazard maps and the local disaster management plan of your town, you could be aware of risks of earthquakes, volcano eruptions, river flooding and sediment disasters as well as the necessity to evacuate by yourself immediately.
- To prevent an epidemic breakout in the community affected by natural hazards, we need to take full care of victims, as well as local disaster management groups, volunteers, city officials and medical and welfare workers. Special supports are necessary for the elderly, children, and the mobility impaired persons.

2. Consider the risk of infection in evacuation

- Public shelters will be opened for people to evacuate when natural disasters are anticipated. But we need to find different ways in evacuation considering the high risk of virus infection.
- We should take a comprehensive approach that considers providing public shelters for evacuation and, at the same time, preventing cluster-infection in the shelters. It will be necessary to increase the number of evacuation shelters by using not only gymnasiums but also classrooms at schools. We need to secure spaces between evacuees, set partitions, and preparing disinfectants and other equipment. Isolation is essential to prevent the spread of infection. Infected patients and potential patients must stay in separate spaces depending on the level of severity. The government and related parties of prefectures/municipalities should work together to prepare. People should cooperate with them.
- You should decide in advance where to go when you need to evacuate. It does not have to be a public shelter; you could ask your close relatives or friends to stay at their homes that are safer as a private shelter. It is also useful to consult with people in the neighborhood to make the upper floors of a sturdy building in the area as an evacuation shelter.
- You may decide to “stay at home” instead of moving to a public shelter. In that case, please make sure you have enough food, water and other necessities of life. Note that “stay at home” might not be possible depending on the type and severity of the disaster.
- Please consult with responsible parties such as local disaster management organizations and a neighborhood association on measures to prevent infection in the event of a disaster.

- To avoid the “Three C’s” (Closed spaces with poor ventilation, Crowded places with many people nearby, and Close-contact setting such as close-range conversations), it is important for local disaster management organizations and neighborhood associations to notify the number and information of people who will use public shelters to municipalities in the areas where evacuation is necessary.

3. Remain vigilant, especially about earthquakes, volcanic disasters, and compound disasters triggered from these

- Japan is one of the most tectonically active countries in the world with a long history of frequent and destructive earthquakes, tsunamis and volcanic eruptions. Damaging earthquakes occur almost every year, such as the huge Tohoku earthquake in 2011 and the moderate Yamagata earthquake in 2019. We should recognize that a severe event can occur at any time.
- Awareness is a crucial first step, but we need to go further. Simple actions forestall risk and damage from disasters and help to cope with disasters caused by earthquakes, tsunamis and volcanic eruptions. Please take actions from what is possible. For example, secure furniture to walls so as not to fall due to the earthquake motion. Keep enough emergency food, water, and other supplies, and check evacuation routes and decide where to go when the earthquakes, tsunamis, or volcanic eruptions occur.

4. Be prepared for weather disasters

- Beginning in Okinawa after the golden week holiday season (long holiday season), the rainy season continues from summer to autumn in Japan. During this season, heavy rainfalls, heatwaves and typhoons often bring dangerous effects on our daily life.
- Always check the weather and updated information about evacuation. The climate change distorts weather patterns like more frequent, increased, and prolonged heavy rains in Japan. For example, the 2018 western Japan floods and Typhoon Hagibis in 2019 made many people suffer from severe flood and landslides caused by heavy rains spread over a wide area. Please set up an emergency plan for weather disasters coming in this year.
- Please take actions from what you can for disaster prevention measures for flood inundation and landslides by preparing necessities for life and checking evacuation routes and shelters, which have been announced so far as countermeasures against such disasters.
- In the case of voluntary/mandatory evacuation orders for weather disasters, prepare to leave, and do not hesitate to go to an evacuation shelter for protecting your life.

5. Preventing heatstroke

- We need to safeguard ourselves from heatstroke. The Japan Meteorological Agency (JMA) forecasts higher temperatures during this summer than usual years. As temperatures continue to rise, it could lead to heatstroke, which weakens the human immune system and increase the risk of virus infection. Take suggestions and advice for preventing heatstroke by keeping healthy conditions to cope with the hot summer, and preparing electric fans or air conditioners in advance before summer.

We are all fighting together against COVID-19 and keep on working hard in each one’s own way to prevent the spread of the virus; however, we should take further steps and be aware of compound disasters, of which, the risk is emerging soon. Be aware and be prepared, and take measures that you can to reduce disaster risk.