



## **Department of Health Indoor and Radiological Health Branch**

### **Frequently Asked Questions about Radiation** (Updated March 17, 2011)

According to the Nuclear Regulatory Commission (NRC), Japan's nuclear emergency presents no danger to Hawaii. The Hawaii State Department of Health is working closely with our state and federal partners, including NRC, U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy, FEMA Region IX, and State Civil Defense.

#### **Q. What's the risk for Hawaii from the current nuclear power emergency in Japan?**

A. At present, the Nuclear Regulatory Commission (NRC) indicates Japan's nuclear emergency presents no danger to Hawaii.

#### **Q. What is being done to test for radiation that might be coming or is present in the environment?**

A. Federal, State, and County monitoring is ongoing and will be supplemented as needed. The DOH, in conjunction with the EPA, uses a number of radiation monitoring systems capable of detecting any significant increase in radiation levels. No elevated levels of radiation have been detected by monitors in Hawaii. Based on all available information, state and federal experts do not anticipate a risk of harmful radiation exposure to Hawaii.

Even before any radioactive dust is detected here, modeling based on weather patterns and other information can predict radiological risk to our state days before any exposure is possible. There will be more than sufficient time to provide information to the public before a risk is detected.

#### **Q. Does Hawaii have a plan in place to respond to a radiological emergency?**

A. The department's Indoor & Radiological Health Branch plans for and responds to radiological emergencies affecting Hawaii and works closely with State Civil Defense, the Department of Defense, EPA, and other state, county

and federal agencies. The branch participates in annual exercises and practice drills to test and update response plans regularly.

**Q. Is there a stockpile of supplies for such an emergency?**

A. Hawaii has a stockpile of emergency supplies, including potassium iodide (KI) tablets for emergency responders. All states have access to the CDC's Strategic National Stockpile (SNS), a cache of medicines and medical supplies ready for public distribution in the event of a public health emergency such as a radiological disaster. Go to <http://hawaii.gov/health/BT/SNS.html> for more information on this.

Potassium iodide tablets are not recommended at this time, and can present a danger to people with allergies to iodine, shellfish or who have thyroid problems. Potassium iodide tablets should not be taken unless directed by authorities.

**Q. Why are potassium iodide tablets used during emergencies involving radiation exposure?**

A. Potassium iodide tablets may be recommended to individuals who are at risk for radiation exposure or have been exposed to excessive radiation to block the body's absorption of radioactive iodine. Using potassium iodide when inappropriate could have potential serious side effects such as abnormal heart rhythms, nausea, vomiting, electrolyte abnormalities and bleeding.

**Q. Should I be taking potassium iodide to protect myself?**

A. No. Potassium iodide tablets are not recommended at this time, and can present a danger to people with allergies to iodine, shellfish or who have thyroid problems.

**Q. Should I purchase potassium iodide as a precaution?**

A. No. Potassium iodide is only appropriate within a very close proximity to a nuclear event. Using potassium iodide when inappropriate could have potential serious side effects.

For more information on potassium iodide, please see CDC's website

<http://emergency.cdc.gov/radiation/ki.asp> and FDA's website <http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismDrugPreparedness/ucm072265.htm>

**Q: Should I continue my travel plans to Japan?**

A: The U.S. Department of State is asking people to defer all non-essential travel to Japan at this time. For more information go to:

[http://travel.state.gov/travel/cis\\_pa\\_tw/pa/pa\\_5382.html](http://travel.state.gov/travel/cis_pa_tw/pa/pa_5382.html)

**Q: Are there any safety concerns about water or seafood?**

A: There is no immediate or anticipated threat of harmful radiation reaching Hawaii or its waters; therefore there is no risk of harmful radiological contamination in food items produced in Hawaii. For further information on food safety go to:

<http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm247403.htm>

**Q. Are there any protective measures I should currently take?**

A. The best thing anyone can do is to stay informed. DOH and other state and federal partners are monitoring the situation. If circumstances change, officials will alert the public to appropriate precautionary procedures. But, again, at this time, the NRC reports Japan's nuclear emergency presents no danger to Hawaii.

For information:

Call 2-1-1 (Monday-Friday, 6 a.m. – 9 p.m., excluding holidays)  
or toll free (877) 275-6569\*

Centers for Disease Control and Prevention (CDC):

1-800-CDC-INFO (1-800-232-4636), Seven days a week, 24 hours a day  
cdcinfo@cdc.gov

Other Resources:

U.S. Environmental Protection Agency

<http://www.epa.gov/radiation/>

U.S. Centers for Disease Control and Prevention

<http://emergency.cdc.gov/radiation/>

U.S. Nuclear Regulatory Commission

<http://www.nrc.gov/>

General Information about Radiation

**Q: What Is Radiation?**

A: Radiation is energy that travels in the form of waves (like light or radio) or high speed particles (like dust blown in the wind). It can be naturally occurring or man made and is all around us in different forms (for example: radio waves, x-rays, or cosmic radiation from space).

Different types of radiation exist; some of which have more energy than others. The forms of radiation that we tend to worry about as being harmful include alpha, beta, and gamma rays. Microwaves and radio frequency waves are forms of non-ionizing radiation. Alpha, beta, gamma and x-rays are forms of ionizing radiation.

**Q: How Can Exposure Occur?**

A: People are exposed to small amounts of radiation every day, both from naturally occurring sources (such as elements in the soil or cosmic rays from the sun), and man-made sources such as medical sources (x-rays, certain lab tests, and treatments).

The amount of radiation from natural or man-made sources to which people are exposed is usually small and not considered harmful; a radiation emergency (such as a nuclear power plant accident or a terrorist event) could expose people to small or large doses of radiation, depending on the situation and how close a person is to the source.

### **Common Radiation Exposures**

Some common ways that people are exposed to radiation and the associated doses are shown in the table below. Doses are shown in rem.

- Exposure to cosmic rays during a roundtrip airplane flight from Honolulu to Los Angeles 3 mrem
- One dental x-ray 4-15 mrem
- One chest x-ray 10 mrem
- One mammogram 70 mrem
- One year of exposure to natural radiation (from soil, cosmic rays, etc.) ~300 mrem

### **Q: How does the DOH measure radiation risk to the public?**

A: The Department of Health in conjunction with other state and federal entities studies both the risk of exposure (the way materials may move through the environment) and the potential for human contact (exposure and potential health risks). Several key factors are involved in determining risk:

- Monitoring of the environment for above-normal background levels of radiation.
- Use of data from studies of effects from exposure of people to radiation.
- Development of models to estimate potential exposures and their health effects.

Hawaii is a member of the RADNET system that looks at real-time data as well as particulate sampling from monitors located on different islands which are analyzed both in Hawaii and at a central lab in Alabama. For more information on the RADNET system go to: [www.epa.gov/radiation/rert/monitoring.html](http://www.epa.gov/radiation/rert/monitoring.html)

### **Q: What preparations can I make?**

A: In preparation for any type of disaster, residents are advised to have a basic emergency kit and a family emergency plan. The department's Plan to Be Ready guide provides essential checklists and worksheets to help anyone prepare. The guide can be found at <http://hawaii.gov/health/BT/Kit.html>.

Below is a list of emergency items everyone should have on hand to prepare for a disaster.

1. Water
2. Non-perishable Food
3. Cash and Important Documents
4. Clothes
5. Flashlight
6. First Aid Kit
7. Prescription Medication
8. Radio
9. Hygiene Items
10. Tools such as a can opener

For more information on disaster preparedness go to:

<http://hawaii.gov/health/BT/Kit.html>

[www.ready.gov](http://www.ready.gov)

[www.prepare.org](http://www.prepare.org)