

ALASKA RADIATION UPDATE

1 April, 2011

Radiation: Radiation is everywhere, it cannot be avoided. This is typically referred to as background radiation which is the radiation from outer space, buildings and soil. But except for areas where there are high levels of natural radiation sources such as radon the exposure is extremely low. A **rem** or **millirem** (1/1,000) of a rem is the most common unit of measure for radiation. You don't need to understand the physics or biology of radiation to understand what a rem is. Like pounds measures weight and feet, yards, miles measure distance, rems measures radiation.

The typical exposure to people in Alaska from background radiation is about .008 millirems/hour, or 70 mrems/year. People living in other areas can be exposed to higher levels. People in Denver are exposed to about 1,000 mrems/year or 14 times what the average Alaskan is exposed to.

Radiation Surveillance in Alaska: Because of the terrible reactor accidents in Japan radiation surveillance monitors have been established in five locations in Alaska: Fairbanks, Anchorage, Juneau, Nome and Dutch Harbor. The purpose is to determine if radiation from Japan reaches Alaska and if so how much.

This week radiation from the Japanese nuclear reactors has been detected at Alaska surveillance sites, but Health Officials tell us the risk is very low, why? The levels detected are extremely low. At Dutch Harbor the levels average about .009 mrems/hr, at Nome .008 mrems/hr and Juneau .0085 mrems/hr. This is barely above background radiation levels but we believe they are from the Japanese reactors because they are from Iodine and Cesium, the radioactive elements released at those sites.

What is the risk? A good way to assess the risk is to compare the current levels to other sources of radiation. Exposure from a medical X-ray ranges from 380 - 720 rems. That is 42,000 times greater than standing next to the radiation monitor in Dutch Harbor. Exposure to background radiation plus the radiation coming from Japan in Dutch Harbor would amount to about 80 millirems per year.

Radiation and Cancer: Radiation at high doses can cause certain types of cancer. But the exposure has to be many times greater than what one gets from background radiation. Cancer rates in Denver where the exposure is 1,000 mrems/year is not elevated. Studies show that exposures up to 10,000 mrems/year don't result in excessive cancers.

What about radiation in food? Food imports from the four Japanese Prefectures around the damaged reactor sites are not allowed into the US. Other food including seafood

imports from Japan will be tested for radiation by the Food and Drug Administration before entry into the US.

(<http://www.fda.gov/newsevents/publichealthfocus/ucm247403.htm>)

What about Seafood from US waters? Seafood from the United States waters of the North Pacific and Bering Sea areas are currently deemed safe to eat because the great quantity of water in these regions effectively dilutes radioactive material. However if warranted the FDA will work with National Oceanic and Atmospheric Administration (NOAA) to test seafood caught in these areas.

We will continue to add additional information on radiation to our website at:
<http://www.anthc.org/chs/ces/emergmgmt/index.cfm>

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