

What is radiation?

Radiation is invisible and odorless. How exactly does it exist?

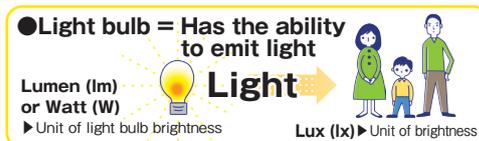
Editor’s note: Herein, “radiation” refers to ionizing radiation.



I’m not sure about what radiation is ...

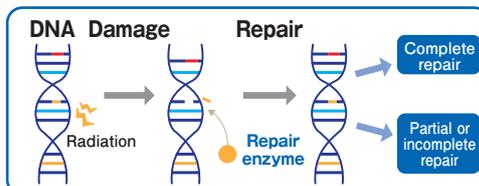
● By taking light as an example, you can easily understand it.

Radiation is just like invisible light emitted by radioactive materials. By analogy using a light bulb, think of the light bulb as radioactive and the light coming out of it is radiation. The ability of the light bulb to emit light is radioactivity.



● Radiation has the power to pass through things.

Radiation has penetrating power, the ability to pass through things. Radiation that passes through our bodies can damage our cells, but living cells have some power to repair the damage.



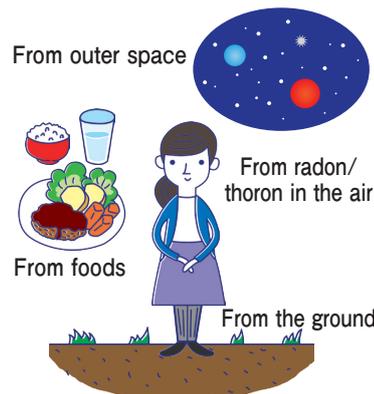
Based on BOOKLET to Provide Basic Information Regarding Health Effects of Radiation published by the Ministry of the Environment(FY2019)



Where does radiation exist?

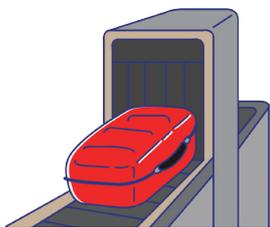
● It exists all around us.

In daily life, we are exposed to radiation coming from outer space, the ground, the air, and food. Radiation received by our bodies does not spread from person to person.



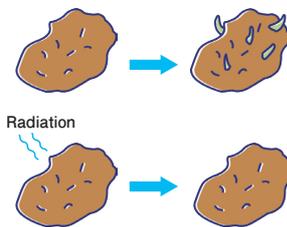
● Radiation is used for many things around us.

◎ Airport security screening



The power of radiation to pass through things is useful. As the contents of bags can be examined without opening them, it helps to prevent the transport of dangerous or illegal goods.

◎ Prevents growth of potato sprouts

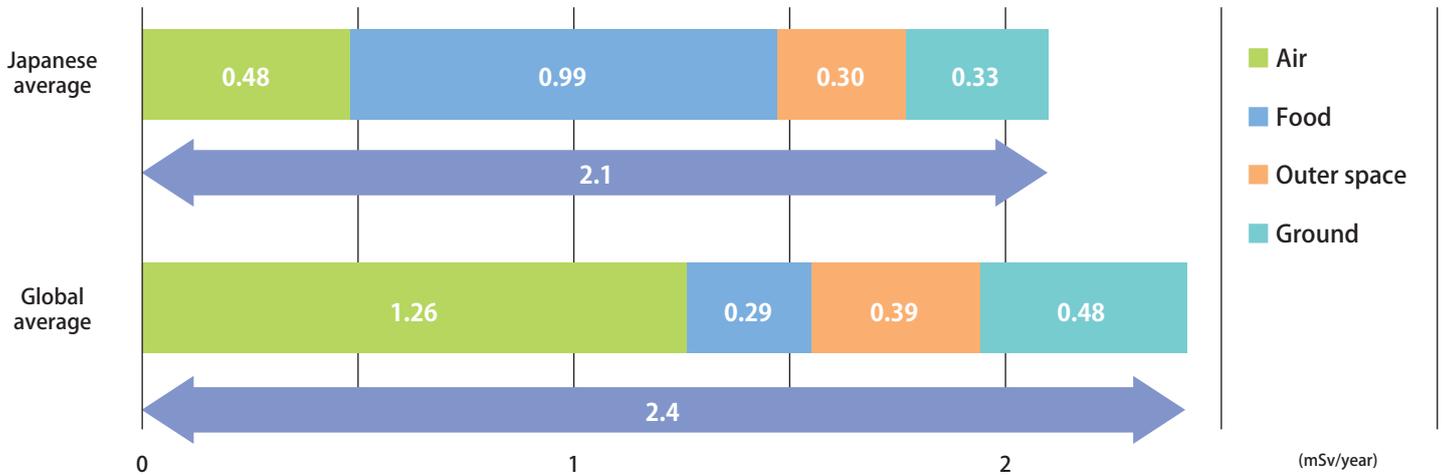


Intense radiation can suppress the growth of cells that would otherwise cause potato sprouts. Germination stops, which enables long-time storage.

Radiation dose amounts in daily life (annual)

It is estimated that the average annual dose of radiation that a Japanese person receives from nature is 2.1 millisieverts (mSv).

As for the sources of natural radiation, doses received from food are relatively large in Japan, while doses received from air are large elsewhere around the world, because geological deposits and eating habits differ from place to place.



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Change in air dose rates in Fukushima Prefecture

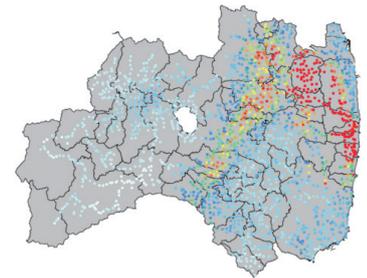
Due to the 2011 nuclear power plant accident, the dose amounts of environmental radiation per hour (air dose rate) increased in some areas, but have decreased over time and because of decontamination work.

Currently, air dose rates are not significantly different from place to place in the inhabitable areas of the prefecture.

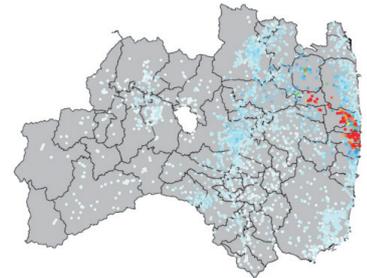


Change in air dose rates shown on a map

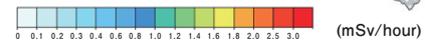
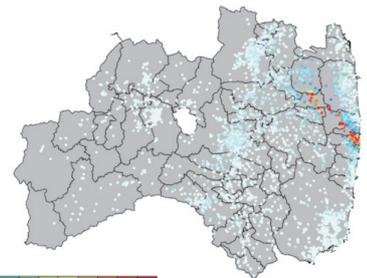
April 2011



April 2015

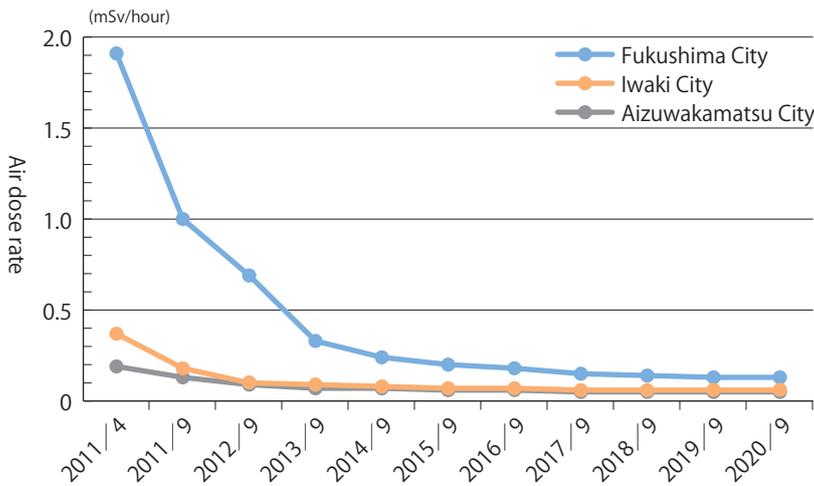


April 2019



Based on Change in Radiation Dose Rates, Fukushima Prefecture Radioactivity Measurement Map <http://fukushima-radioactivity.jp/pc/>

Change in air dose rates shown in graphic form



*The data are monthly averages. Based on Fukushima Prefecture's environmental radiation monitoring newsletter "Fukumoni" (March 2021)

Got it! Radiation is invisible, but it has always been around us and we can measure it!



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