



Radiation Protection

You are here: [EPA Home](#) [Radiation Protection](#) [Topics](#) [Understanding Radiation](#) [Health Effects](#) [Radiation Doses in Perspective](#)

[Students/Teachers](#) [Librarians](#) [Reporters](#) [General Public](#) [Technical Users](#)

[PROGRAMS](#) [TOPICS](#) [REFERENCES](#)

Understanding Radiation: [Ionizing & Non-Ionizing Radiation](#) [Health Effects](#) [Radiation Protection Basics](#)

Radiation Doses in Perspective

Health Effects

Recent news reports from Japan have made frequent references to radiation measurements and doses. A dose is the amount of radiation energy absorbed by the body.

[Main Page](#)
[Exposure Pathways](#)
[Calculate Your Dose](#)
[Estimating Risk](#)
[Radiation Doses in Perspective](#)

On this page:

[Units of Measure](#)
[Average U.S. Radiation Doses and Sources](#)
[Doses from Common Radiation Sources](#)

Units of Measure

Japan measures radiation dose in the metric system unit of Sieverts (Sv). The press in Japan has reported doses in milliSieverts (mSv). A milliSievert is one thousandth of a Sievert (1000 mSv = 1 Sv). The United States' unit of a measurement for radiation dose is the rem (Roentgen Equivalent Man). In the U.S., doses are most commonly reported in millirem (mrem). A millirem is one thousandth of a rem (1000 mrem = 1 rem).

Converting Sieverts to rems is easy. One sievert equals 100 rem. (1 Sv = 100 rem). One milliSievert equals one hundred millirems (1 mSv = 100 millirems).

Average U.S. Radiation Doses and Sources

All of us are exposed to radiation every day, both from natural sources such as minerals in the ground, and from man-made sources such as medical x-rays. According to the National Council on Radiation Protection and Measurement, the average annual radiation dose per person in the U.S. is 620 millirem (6.2 millisieverts). The pie chart below shows the sources of this average dose.

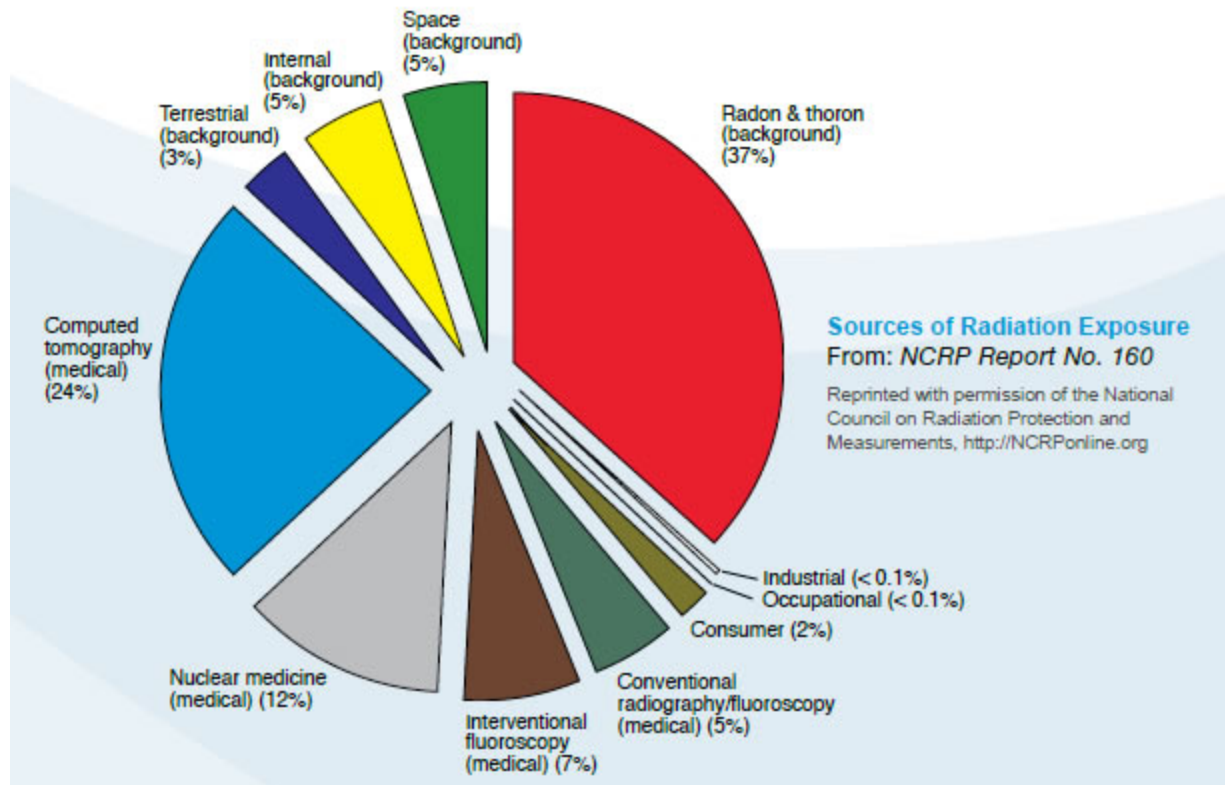


Figure reprinted with permission of the [National Council on Radiation Protection and Measurements](http://www.nrc.gov).

[EXIT Disclaimer](#)

Half of our average dose comes from natural background sources: cosmic radiation from space, naturally occurring radioactive minerals in the ground and in your body, and from the radioactive gasses radon and thoron, which are created when other naturally occurring elements undergo radioactive decay. Another 48 percent of our dose comes from medical diagnostics and treatments.

Doses from Common Radiation Sources

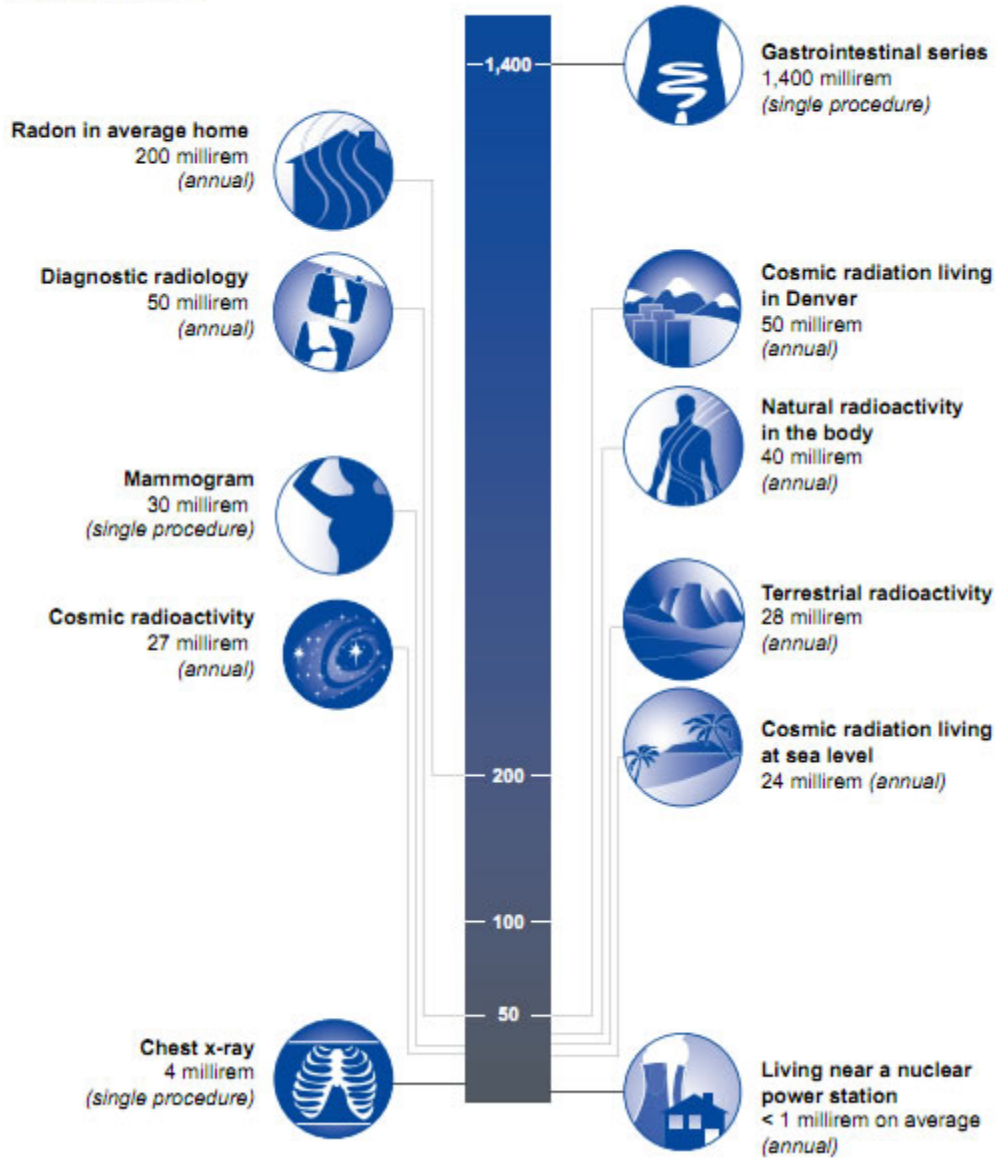
The following diagram compares radiation doses from common radiation sources, both natural and man-made.

RELATIVE DOSES FROM RADIATION SOURCES

http://www.epa.gov/radiation/understand/perspective.html

Last updated on Thursday, March 24, 2011

Millirem Doses



Understanding Radiation in Your Life, Your World

[Programs](#) · [Topics](#) · [References](#)