

Radiation Fact Sheet

Common Exposures to Radiation

Updated 2020



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Common Exposures to Radiation

Whole body CT.....	1,000 mrem per exam
Upper gastrointestinal X-ray.....	600 mrem per exam
Radon in average U.S. home.....	228 mrem per year
Head CT.....	200 mrem per exam
Cosmic Radiation living in Denver.....	80 mrem per year
Mammogram.....	42 mrem per exam
Cosmic radiation at sea level.....	30 mrem per year
Radiation in the body.....	29 mrem per year
Terrestrial radioactivity.....	21 mrem per year
Chest X-Ray.....	10 mrem per exam
Living near a nuclear power station.....	<1 mrem per year

Sources: Environmental Protection Agency - <https://www.epa.gov/radiation/radiation-sources-and-doses>

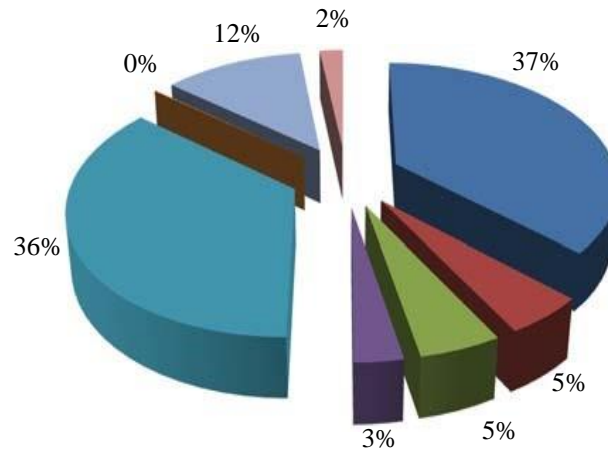
Millirem is an extremely small measure of energy; much like millimeter is an extremely small measure of length. These amounts are well within what is acceptable and not harmful to health or life.

A significant amount of radiation comes to us from the sun and from cosmic radiation – so that people at higher elevations like Colorado and adjacent Rocky Mountain States receive more than those who live at sea level. However, a lot of radiation also comes from the soil and rocks around us. Granite and marble have background levels of radioactivity. A relatively small additional amount comes from our man-made technology (non-medical). In fact, American’s receive an average dose of 620 millirem* per year from all sources of radiation (natural and man-made).

Sources: National Council on Radiation Protection and Measurements. *Ionizing radiation exposure of the population of the United States. National Council on Radiation Protection report no. 160. Bethesda, Md: National Council on Radiation Protection and Measurements, 2009*

Sources of Radiation Exposure in the United States

- Radon and Thoron (natural, background) - 37%
- Cosmic (space, background) - 5%
- Internal (background) - 5%
- Terrestrial (soil, background) - 3%
- Medical Procedures (manmade) - 36%
- Industrial and Occupational (manmade) - 0.1%
- Nuclear Medicine (manmade) - 12%
- Consumer Products (manmade) - 2%



Source: Oak Ridge Reservation Annual Site Environmental Report 2018 Appendix E- Radiation : https://doeic.science.energy.gov/ASER/aser2018/E%202018%20ASER_App%20E%20FINAL.pdf

Is a radiation dose of 620 millirem (or 0.62 Rem) in a year harmful?

No. No effects have ever been observed at doses less than 5,000 millirem (5 Rem) delivered over a one-year period. In fact, effects seen when humans are exposed to 100,000 millirem (100 Rem) over a short time period are temporary and reversible. It takes a short-term dose of greater than 500,000 millirem (500 Rem) to cause a fatality. For additional information on radiation visit: <https://www.scdhec.gov/disaster-preparedness/radiation-nuclear-safety>

For more information on radiation and DHEC's role in response, contact:

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