



Fact Sheet

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Common Exposures to Radiation

What are some of the most common exposures of/to radiation?

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| Gastrointestinal series (upper & lower) | → 1,400 millirem per exam |
| Cigarette Smoking (average – several packs/day) | → 1,300 millirem per year |
| CT Scan (head & body) | → 1,100 millirem per exam |
| Nuclear medicine examination of the brain | → 650 millirem per exam |
| Average annual background dose to humans | → 620 millirem per year |
| Nuclear medicine examination of the thyroid | → 509 millirem per exam |
| Barium Enema | → 405 millirem per exam |
| Upper gastrointestinal tract series | → 245 millirem per exam |
| Radon in average household | → 200 millirem per year |
| Dose to members of airline crews | → 170 millirem per year |
| Nuclear medicine examination of the lung | → 150 millirem per exam |
| Computerized tomography of the head | → 110 millirem per exam |
| Plutonium-powered pacemaker | → 100 millirem per year |
| Natural radioactivity in your body (120,000 pCi/L) | → 40 millirem per year |
| Cosmic radiation | → 31 millirem per year |
| Mammogram | → 30 millirem per exam |
| Smoking Cigarettes (1 cigarette/day) | → 15 to 20 millirem per year |
| Consumer products | → 11 millirem per year |
| Using natural gas in the home | → 9 millirem per year |
| To spouses of recipients of certain cardiac pacemakers | → 7.5 millirem per year |
| Chest X-ray | → 6-8 millirem per exam |
| Foods grown on lands (where phosphate fertilizers are used) | → 5 millirem per year |
| Road construction material | → 4 millirem per year |
| Dental X-ray | → 3 millirem per exam |
| The use of gas mantles | → 2 millirem per year |
| Domestic water supplies | → 1 to 6 millirem per year |
| Living near a nuclear power station | → 1 millirem per year |
| Air travel (every 2006 miles) | → 1 millirem per trip |
| (Cross-country flight) | → 2 millirem per trip |
| Television receivers | → 1 millirem per year |
| Eating one-half pound of Brazil nuts | → 0.5 millirem per bag |
| Combustible fuels (i.e.-coal, natural gas, liquefied petroleum) | → 0.3 millirem per year |
| Drinking a quart of Gatorade each week | → 0.2 millirem per year |
| Sleeping with one's spouse (or "significant other") | → 0.1 millirem per year |

Sources: - U.S. DOE Oak Ridge
 - 2004 DOE Annual Site Environmental Report Summary

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| Compact fluorescent light bulb (Krypton-85) | → 15,000 p/Ci per year |
| Salt Substitute | → 2,400 p/Ci per teaspoon |
| Airborne radioactivity from nuclear power plants | → 550 p/Ci per year |
| Common lawn & garden fertilizer | → 30 to 50 p/Ci per 50-lb. bag |
| Loose leaf of spinach | → 8 p/Ci per salad |
| Bananas | → 4 p/Ci per banana |
| Waterborne radioactivity from nuclear power plants | → 0.6 p/Ci per year |

- Sources:**
- KAPL Analysis, 2000
 - NCRP Report # 95, Radiation Exposure from Consumer Products and Miscellaneous Sources, 1987
 - U.S. NRC Report NUREG/CR-2907, Vol. 14, Annual Report 1993

Most 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.



- **Source:** American Nuclear Society
http://www.aboutnuclear.org/view.cgi?fc=Radiation_and_Radioactivity,Sources_of_Radiation

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

No. No effects have ever been observed at doses below 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 well over 500,000 millirem (500 Rem) to cause a fatality.

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

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