Estimate Your Personal Annual Radiation Dose

| Factors | Common Sources of Radiation | Your Annual Dose (mrems) |
|------------------|---|--------------------------|
| Where You Live | Cosmic Radiation (from outer space) Exposure depends on your elevation (how much air is above you to block radiation). Amounts are listed in mrem (per year). | mrem |
| | At sea level26 mrem 0-1000 ft28 2-3000 ft35 mrem 6-7000 ft66 mrem 7-8000 ft79 1-2000 ft31 4-5000 ft47 8-9000 ft96 5-6000 ft52 | |
| | (Elevation of cities (in feet): Atlanta 1050; Chicago 595; Dallas 435; Denver 5280; las Vegas 2000; Minneapolis 815; Pittsburg 1200; St.louis 455; Salt lake City 4400; Spokane 1890.) | |
| | Terrestrial (from the ground) If you live in a state that borders the Gulf or Atlantic Coasts, add 16 mrem If you live in the Colorado Plateau area, add 63 mrem If you live anywhere else in the continental US, add 30 mrem | mrem |
| | House Construction If you live in a stone, adobe, brick or concrete building, add 7 mrem | mrem |
| | Power Plants If you live within 50 miles of a nuclear power plant, add 0.01 mrem If you live within 50 miles of a coal-fired power plant, add 0.03 mrem | mrem |
| Food, Water, Air | Internal Radiation ² From food (Carbon-14 and Potassium-40) & from water (radon dissolved in water) | 40 mrem |
| | From air (radon) | 228 _mrem |
| How You Live | Jet Plane Travel | mrem |
| | If you have porcelain crowns or false teeth ³ 0.07 mrem | mrem |
| | If you go past luggage x-ray inspection at airport | mrem |
| | If you view a TV or computer screen which uses CRT technology ⁴ 1 mrem | mrem |
| | If you smoke 1/2 pack of cigarettes every day of the yearadd 18 mrem | mrem |
| | If you have a smoke detector | mrem |
| Medical Tests | Medical Diagnostic Tests — Number of millirems per procedure ⁵ X-Rays: Chest-10 mrem, Mammography (2 views)-72, Skull-10, Cervical Spine-20, Lumbar Spine-600, Upper GI-600, Abdomen (kidney/bladder)-700, Barium Enema-800, Pelvis-60, Hip-70, Dental Bitewing/Image-0.5, Extremity (hand/foot)-0.5 | mrem |
| | CT Scans: Head-200 mrem, Chest-700, Abdomen/Pelvis-1000, Extremity-10, Angiography (heart)-2000, Angiography (head)-500, Spine-1000, Whole Body-1000, Cardiac-2000 | mrem |
| | Your Estimated Annual Radiation Dose | mrem |

We live in a radioactive world - humans always have. Radiation is part of our natural environment. We are exposed to radiation from materials in the earth itself, from naturally occurring radon in the air, from outer space, and from inside our own bodies (as a result of the food and water we consume). This radiation is measured in units called millirems (mrems). The average dose per person from all sources is about 620 mrems per year. It is not, however, uncommon for any of us to receive less or more than that in a given year (largely due to medical procedures we may undergo). Standards allow exposure to as much as 5,000 mrems a year for those who work with and around radioactive material.¹

- See http://www.nrc.gov/about-nrc/radiation/healtheffects/info.html
- 2. Average values.
- Some of the radiation sources listed in this chart result in an exposure to only part of the body. For example, false teeth or crowns result in a radiation dose to the mouth. The annual dose numbers given here represent the "effective dose" to the whole body.
- 4. The value is less than 1, but adding a value of 1 would be reasonable.
- Exposures for medical tests vary depending upon equipment and the patient. The doses listed are an average for an actual exposure.

Primary sources for this information are National Council on Radiation Protection and Measurements Reports: #92 Public Radiation Exposure from Nuclear Power Generation in the United States (1987); #93 Ionizing Radiation Exposure of the Population of the United States (1987); #94 Exposure of the Population in the United States and Canada from Natural Background Radiation (1987); #95 Radiation Exposure of the U.S. Population from Consumer Products and Miscellaneous Sources (1987); #100 Exposure of the U.S. Population from Diagnostic Medical Radiation (1989); and #160 Ionizing Radiation Exposure of the Population of the United States (2009).

