

How much radiation is that?

We are all exposed to small amounts of radiation daily from soil, sun, rocks, air and water and cosmic radiation. This type of radiation is called naturally occurring background radiation. We typically compare the radiation used in X-rays and CT Scans to the amount of background radiation we are exposed to daily. In general, the information provided from the imaging study significantly outweighs the risks associated with radiation.

Dangerous levels of radiation exposure * **5,000 mSv**

Natural Radiation

Medical Treatment



* Radiation risk posed by medical scans are less than 100 mSv and therefore pose minimal to no risk to patients.

Sources:

NRCR Report No. 160 = National Council on Radiation Protection and Measurements. Report No. 160, Ionizing Radiation Exposure of the Population of the United States

1. Annual effective dose received by an individual living in Denver, Colorado from Cosmic (space) radiation 0.8 mSv (4 mSv for 5 years). NRCR Report No. 160 & US EPA graphic Relative Doses from Radiation Sources
2. Average annual effective dose received by an individual member of the U.S. from natural background radiation sources = 3.1 mSv. NRCR Report No. 160
3. Round Trip Airline Flight from Washington D.C. to Los Angeles, CA = 0.04 mSv. Average effective dose in the U.S. from exposure to Radon in home = 2.28 mSv. NRCR Report No. 160
4. Average effective dose to an individual member of the U.S. from terrestrial "ground" (rocks, soil, etc) radiation = 0.21 mSv. If at sea level (low elevation) annual effective dose = 0.3 mSv. NRCR Report No. 160
5. Adult CT Abdomen and Pelvis = 10 mSv. NRCR Report No. 160
6. Skeletal Scintigraphy (Bone Scan) i.e. radionuclide imaging using using Tc-99m = 6.3 mSv. Bone Density (DEXA) whole body single exposure = 0.001 mSv. Mettler FA, et al. "Effective Doses in Radiology and Diagnostic Nuclear Medicine: A Catalog," Radiology (July 2008), Vol. 248, pp. 254–63.
7. Lumbar Spine Conventional X-ray = 1.5 mSv. NRCR Report No. 160
8. Thoracic Spine Conventional X-ray = 1.0 mSv. NRCR Report No. 160