

How much medical radiation am I receiving?

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The following tables give dose estimates for typical diagnostic x ray, interventional, and nuclear medicine procedures. Many diagnostic exposures are less than or similar to the exposure we receive from natural background radiation. For comparison, in the United States each person receives about 3.0 milliSieverts (300 millirem) of radiation exposure from background sources every year. The effective dose listed is a comparable whole-body dose from the exam. The effective dose is given in mSv (an international unit of radiation measurement) and mrem (the traditional unit used in the United States).

Note: Digital radiography can reduce the amount of radiation to as much as 80% lower than these reported doses, so one dental film equals 0.001 mSv (0.1mrem).

Typical Effective Radiation Dose from Diagnostic xRay

----- Single Exposure (Mettler 2008)-----

Exam	Effective Dose mSv (mrem)
Foot, Hand Radiograph	0.005 (0.5)
Dental Bitewing	0.005 (0.5)
Dental Panoramic	0.01 (1)
Full Mouth Series (FMX)	0.10 (10)
Chest	0.1 (10)
Skull	0.1 (10)
Cervical Spine	0.2 (20)
Mammogram (2 view)	0.36 (36)
Abdomen or Hip	0.6 (60)
Pelvis	0.7 (70)
Thoracic Spine	1.0 (100)
Lumbar Spine	1.5 (150)

This table shows the dose a patient could receive if undergoing an entire procedure that may be diagnostic or interventional. For example, a lumbar spine series usually consists of five x-ray exams. (Mettler 2008)

Examinations and Procedures	Effective Dose mSv (mrem)
Abdomen Kidney, Ureter, Bladder (KUB)	0.7 (70)
CT Biopsy	1.0 (100)
Pacemaker Placement	1.0 (100)
CT Head	2.0 (200)
Calcium Scoring	2.0 (200)
Intravenous Pyelogram	3.0 (300)
Peripheral Vascular Angioplasties	5.0 (500)
Upper GI	6.0 (600)
Barium Enema	7.0 (700)
CT Chest	7.0 (700)
CT Abdomen/Pelvis	10.0 (1,000)
Whole-Body CT Screening	10.0 (1,000)