

Having an imaging procedure?

You may be wondering how much radiation is safe.

Radiation is the process by which energy waves or particles pass through objects, the atmosphere, or people. Radiation comes from both man-made sources, such as X-rays and cell phones, and natural background sources, such as cosmic rays and our own bodies. Radiation is measured in millisieverts (mSv). The average person receives about 3 mSv per year from natural background sources. The radiation dose you receive during a procedure depends on several factors, including your weight and size, the procedure you're having, as well as the medical equipment being used.

Region/type	Procedure	Approximate effective radiation dose:	Comparable to natural background radiation for:
Abdomen and pelvis	Computed Tomography (CT)	10 mSv	3 years
Abdomen and pelvis, repeated with and without contrast material	Computed Tomography (CT)	20 mSv	7 years
Chest	Computed Tomography (CT)	7 mSv	2 years
Chest	X-ray	0.1 mSv	10 days
Colon	Computed Tomography (CT)	6 mSv	2 years
Hand, foot	X-ray	0.001 mSv	3 hours
Head	Computed Tomography (CT)	2 mSv	8 months
Head, repeated with and without contrast material	Computed Tomography (CT)	4 mSv	16 months
Heart	Cardiac catheterization	9 mSv	3 years
Heart	Coronary Computed Tomography Angiography (CTA)	12 mSv	4 years
Spine	Computed Tomography (CT)	6 mSv	2 years
Spine	X-ray	1.5 mSv	6 months
Nuclear medicine	Positron Emission Tomography-Computed Tomography (PET/CT)	25 mSv	8 years
Nuclear medicine	Nuclear stress test	7mSv	2 years

The benefits of imaging procedures usually outweigh the risks. They provide valuable information about your health and help doctors make accurate diagnoses. Talk to your doctor about any concerns you may have so the two of you can choose what's right for you.

Sources: American College of Radiology, American Heart Association, Harvard Health Publishing