

Medical Exams: Differences Between X-Ray CT and MRI

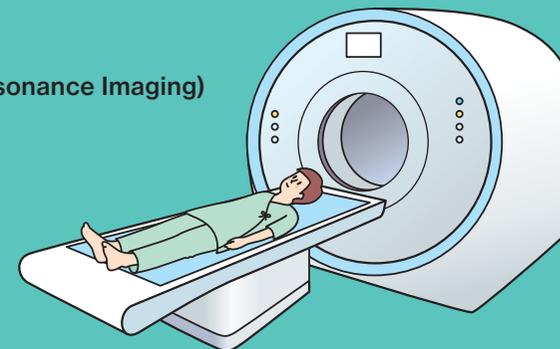
X-Ray CT

(Computed Tomography)



MRI

(Magnetic Resonance Imaging)



Mechanism	Uses radiation (X-rays)	Uses magnetism and electromagnetic waves
Time required and effect of patient movement	Short examination time (1 body part: about 10 min.)	Long examination time (1 body part: about 20 to 60 min.), image becomes distorted easily if the patient moves
Noise	Quiet	Loud
Radiation exposure	Yes	No
Tissue contrast	Inferior to MRI for some body parts	Very clear contrast
Detailed rendering	Possible (better than MRI)	Possible
Body parts enclosed in bone	Highly distorted image	Low distortion of image
Imaging of bleeding condition	Possible	Possible (better than X-ray CT)
Imaging of condition of blood vessels	Not possible (but possible by using radiocontrast agent)	Possible
If metal is inside body	Imaging is possible (but may not be possible if there is a pacemaker or other device)	Imaging not possible (but may be possible if the metal inside body is non-reactive to magnets)