

X-ray (roentgenogram) basic level

Overview

An X-ray, also called a roentgenogram, uses radiation waves, called x-rays, and photo sensitive film to allow your doctor to see your body tissues. This test is commonly used to diagnose fractures, fluid in the lungs, and tumors.

How does an X-ray work?

An X-ray beam is shot through your body, and the calcium in your bones blocks the beam from passing through. This creates a shadow that is picked up on film placed on the opposite side of the beam—much like when you hold a flashlight up to your hand and cast a shadow on a wall.

What does an X-ray show?

An X-ray shows a black and white image of your bones, lungs, heart, and some muscles. It is not good at showing nerves or herniated discs.

Who performs the test?

A radiology technologist will perform the test at the hospital, or at an outpatient imaging center. The radiologist will review the images and report the findings.

How should I prepare for the test?

You should wear loose clothing and remove all objects that would get in the way of the X-ray, such as hairpins or necklaces. You may need to change into a hospital gown, depending on what part of your body is being imaged.

What happens during the test?

You will stand positioned against the film, which looks like a large board. The X-ray technician will leave the room or stand behind a barrier when the picture is taken. You'll be asked to take a deep breath before each picture, and you'll likely have pictures taken from both the front and sides.



Figure 1. A sample X-ray

What are the risks?

X-rays expose you to a small amount of radiation—about the amount you get from a cross-country flight. The amount of radiation in an X-ray is too small to cause you any harm. Radiation in large doses can cause cancer and birth defects. Inform the doctor if you are or may be pregnant.

How do I get the results?

The radiologist will promptly review your images and communicate directly with your referring doctor, who in turn will discuss the results with you. In some locations, test results and imaging studies can be securely transmitted digitally to the referring doctor or hospital.

Sources & Links

If you have more questions, please contact the Mayfield Imaging Center at 513-569-5200.

Glossary

X-ray: electromagnetic radiation used in diagnostic imaging to view shadows of tissue density in the body, also called roentgenogram.

radiologist: a doctor who specializes in reading X-rays and other diagnostic scans.

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