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Chest x-ray

A chest x-ray is an x-ray of the chest, lungs, heart, large arteries, ribs, and diaphragm.

How the Test is Performed

You stand in front of the x-ray machine. You will be told to take a breath in and hold it when the x-ray is taken.

Two images are usually taken. You will first need to stand facing the machine, and then sideways.

How to Prepare for the Test

Tell your health care provider if you are pregnant. Chest x-rays are generally avoided during pregnancy, and special precautions are taken if they are needed.

How the Test will Feel

There is no discomfort. The imaging plate may feel cold.

Why the Test is Performed

Your provider may order a chest x-ray if you have any of the following symptoms:

- A persistent cough
- Chest pain from a chest injury (with a possible rib fracture or lung complication) or from heart problems
- Coughing up blood
- Difficulty breathing
- Fever

It may also be done if you have signs of tuberculosis, lung cancer, or other chest or lung diseases.

A serial chest x-ray is one that is repeated. It may be done to monitor changes found on a past chest x-ray.

What Abnormal Results Mean

Abnormal results may be due to many things, including:

In the lungs:

- Collapsed lung
- Collection of fluid around the lung
- Lung tumor (noncancerous or cancerous)
- Malformation of the blood vessels
- Pneumonia
- Scarring of lung tissue
- Tuberculosis
- Atelectasis

In the heart:

- Problems with the size, position or shape of the heart
- Problems with the position, size and shape of the large arteries
- Evidence of heart failure

In the bones:

- Fractures or other problems of the ribs and spine
- Osteoporosis

In the mediastinum (middle part of the chest):

- Enlargement, which might be related to infection or tumor

Risks

There is low radiation exposure. X-rays are monitored and regulated to provide the minimum amount of radiation exposure needed to produce the image. Most experts feel that the benefits outweigh the risks. Pregnant women and children are more sensitive to the risks of x-rays.

Alternative Names

Chest radiography; Serial chest x-ray; X-ray - chest

References

Felker GM, Teerlink JR. Diagnosis and management of acute heart failure. In: Libby P, Bonow RO, Mann DL, Tomaselli GF, Bhatt DL, Solomon SD, eds. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*. 12th ed. Philadelphia, PA: Elsevier; 2022:chap 49.

Jokerst CE, Gotway MB. Thoracic radiology: noninvasive diagnostic imaging. In: Broaddus VC, Ernst JD, King TE, et al, eds. *Murray and Nadel's Textbook of Respiratory Medicine*. 7th ed. Philadelphia, PA: Elsevier; 2022:chap 20.

Nair A, Barnett JL, Semple TR. Current status of thoracic imaging. In: Adam A, Dixon AK, Gillard JH, Schaefer-Prokop CM, eds. *Grainger & Allison's Diagnostic Radiology*. 7th ed. Philadelphia, PA: Elsevier; 2021:chap 1.

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