



[Home](#) → [Medical Encyclopedia](#) → Extremity x-ray

URL of this page: //medlineplus.gov/ency/article/003461.htm

Extremity x-ray

An extremity x-ray is an image of the hands, wrist, feet, ankle, leg, thigh, forearm humerus or upper arm, hip, shoulder or all of these areas. The term "extremity" often refers to a human limb.

X-rays are a form of radiation that passes through the body to form an image on film or a digital image recorder. Structures that are dense (such as bone) will appear white. Air will be black, and other structures will be shades of gray.

How the Test is Performed

The test is done in a hospital radiology department or in the health care provider's office. The x-ray is done by an x-ray technologist.

You will need to hold still as the x-ray is taken. You may be asked to change position, so more x-rays can be taken.

How to Prepare for the Test

Tell your provider if you are pregnant. Remove all jewelry from the area being imaged.

In general, there is no discomfort. You may be slightly uncomfortable while the leg or arm is put in place for the x-ray.

Why the Test is Performed

Your provider may order this test if you have signs of:

- A fracture
- Tumor
- Arthritis (inflammation of the joints)
- A foreign body (such as a piece of metal)
- An infection of the bone (osteomyelitis)
- Delayed growth in a child

Normal Results

The x-ray shows normal structures for the age of the person.

What Abnormal Results Mean

Abnormal results may be due to:

- Bone conditions that get worse over time (degenerative)
- Bone tumor
- Broken bone (fracture)
- Dislocated bone
- Osteomyelitis (infection)
- Arthritis

Other conditions for which the test may be performed:

- Clubfoot
- To detect foreign objects in the body

Risks

There is low-level radiation exposure. X-rays are monitored and regulated to provide the smallest amount of radiation exposure needed to make the image. Most experts feel that the risk is low compared with the benefits for an appropriate x-ray exam.

Pregnant women and children are more sensitive to the risks of an x-ray.

References

Geiderman JM, Torbati S. General principles of orthopedic injuries. In: Walls RM, ed. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Philadelphia, PA: Elsevier; 2023:chap 41.

Kelly DM. Congenital anomalies of the lower extremity. In: Azar FM, Beaty JH, eds. *Campbell's Operative Orthopaedics*. 14th ed. Philadelphia, PA: Elsevier; 2021:chap 29.

Laoteppitaks C. Compartment syndrome evaluation. In: Roberts JR, Custalow CB, Thomsen TW, eds. *Roberts and Hedges' Clinical Procedures in Emergency Medicine and Acute Care*. 7th ed. Philadelphia, PA: Elsevier; 2019:chap 54.

Review Date 7/15/2024

Updated by: Jason Levy, MD, FSIR, Northside Radiology Associates, Atlanta, GA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

Learn how to cite this page



A.D.A.M., Inc. is accredited by URAC, for Health Content Provider (www.urac.org). URAC's [accreditation program](#) is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s [editorial policy](#), [editorial process](#), and [privacy policy](#).

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed medical professional should be consulted for diagnosis and treatment of any and all medical conditions. Links to other sites are provided for information only – they do not constitute endorsements of those other sites. No warranty of any kind, either expressed or implied, is made as to the accuracy, reliability, timeliness, or correctness of any translations made by a third-party service of the information provided herein into any other language. © 1997-2025 A.D.A.M., a business unit of Ebix, Inc. Any duplication or distribution of the information contained herein is strictly prohibited.



National Library of Medicine 8600 Rockville Pike, Bethesda, MD 20894 U.S. Department of Health and Human Services

National Institutes of Health