HEALTH BASICS

Tibia

The tibia is the large, weight-bearing bone between your knee and ankle.

WHAT IT IS
The main weight-bearing bone of the lower leg

WHERE IT COMES UP
Injury reports, imaging results, surgery, and anatomy discussions

WHY IT MATTERS
Supports walking and forms part of the knee and ankle

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Primary care, emergency, orthopedic, or sports medicine clinician

HOW IT IS CHECKED
Examination and X-ray, with CT or MRI when needed

Overview

The tibia is one of the two long bones in your lower leg. It runs from your knee to your ankle and is often called the shinbone.

The tibia carries most of the weight that passes through the lower leg. It also forms part of two major joints: the knee and ankle. Its upper end meets the thigh bone, or femur, at the knee. Its lower end meets a foot bone called the talus at the ankle.

The other lower-leg bone is the fibula. The fibula is thinner, sits on the outer side of the leg, and carries much less body weight. It provides attachment points for muscles and helps stabilize the ankle. The tibia and fibula are separate bones connected by joints and strong connective tissue.

"Tibia" is an anatomical term, not a disease or diagnosis. You may see it in an X-ray report, injury diagnosis, surgical note, or description of leg pain.

How it works

The upper end of the tibia is wide and relatively flat. This area is called the tibial plateau. It

supports the lower part of the knee joint and is covered by smooth joint cartilage. Cartilage reduces friction as the knee moves.

Two pads of tough cartilage, called the menisci, sit between the tibial plateau and the thigh bone. They help spread forces across the knee. Several major knee ligaments also attach to or near the tibia. Ligaments are strong bands of tissue that connect bones.

The long middle part is the tibial shaft. Its front edge lies close to the skin, which is why the shin can feel hard and why a direct blow there can be painful. Muscles that move the knee, ankle, and toes attach around the tibia.

At the ankle, the lower tibia forms the roof and inner side of the joint. The bony bump on the inner ankle is the medial malleolus, which is part of the tibia. Together, the tibia and fibula create a stable space around the talus.

Like other living bones, the tibia is not a solid, unchanging structure. Its outer layer is dense and strong. Inside are lighter, spongy bone and bone marrow. Bone marrow helps produce blood cells.

Bone tissue is continually renewed. Older tissue is removed, and new tissue is built in its place. This process helps maintain bone strength and repair small areas of stress.

In children and teenagers, the tibia has growth plates near the knee and ankle. Growth plates are areas of developing cartilage where the bone lengthens. They gradually close when growth is complete.

Why it matters for your health

The tibia transfers body weight from the knee to the ankle. It handles forces from standing, walking, running, and jumping. Its alignment also helps the knee and ankle move efficiently.

Because much of the tibia lies just under the skin, injuries may affect both the bone and the tissue covering it. A break can sometimes communicate with a skin wound. This is called an open fracture and requires prompt medical treatment because infection risk is higher.

The exact part of the tibia named in a report matters. For example, a tibial plateau injury involves the knee surface, while a tibial shaft injury affects the middle of the bone. A distal tibial injury is near the ankle. These locations may affect treatment, weight-bearing instructions, and recovery planning.

The tibia can also be used as a source of bone graft material during some operations. A bone graft is a small amount of bone used to support healing elsewhere. This is a specialist surgical decision, not something most people need to consider.

What can go wrong

Several conditions and injuries can involve the tibia:

Pain over the shin does not always mean the tibia is broken. Muscles, tendons, nerves, blood vessels, and skin around the bone can also be injured. An examination and, when appropriate, imaging help identify the structure involved.

A suspected broken leg needs prompt assessment, especially if you cannot bear weight or the leg looks out of position. Seek emergency care after an injury if bone is visible, a wound is heavily bleeding, or the foot becomes pale, blue, cold, numb, or difficult to move.

Severe or rapidly increasing pain and tight swelling after a leg injury can be signs of acute compartment syndrome. This is an emergency because pressure can reduce blood flow and damage nerves and muscles.

Pain that develops gradually with activity is usually less urgent, but persistent, focused shin pain should be assessed. A stress fracture may not appear on an early X-ray.

- Tibial fracture: A break caused by a fall, collision, twisting injury, or strong direct force
- Stress fracture: A small crack linked to repeated loading, often during running or other high-impact activity
- Tibial plateau fracture: A break at the upper joint surface near the knee
- Growth plate fracture: An injury to developing bone in a child or teenager
- Medial tibial stress syndrome: Exercise-related pain along the inner shin, often called shin splints
- Osteomyelitis: An infection within bone, including the tibia
- Compartment syndrome: Dangerous pressure buildup in lower-leg muscle compartments, sometimes following a fracture or crush injury
- Knee or ankle arthritis: Joint cartilage damage that may involve the surfaces formed by the tibia

What you can do

If you have no leg injury, pain, or medical condition involving the tibia, there is usually nothing specific you need to check or record.

If a report mentions the tibia, ask which part is involved and whether the finding affects your knee, ankle, or ability to put weight on the leg. Useful questions include:

An X-ray is commonly used to look for a fracture or changes in bone position. A CT scan provides more detailed pictures of complex fractures, especially near a joint. MRI can show stress injuries, bone marrow changes, cartilage, ligaments, and nearby soft tissues.

Keep any instructions about weight-bearing and follow-up appointments. "Non-weight-bearing," "partial weight-bearing," and "weight-bearing as tolerated" have different meanings. Ask the treating service to explain which applies and whether you need crutches, a boot, or another support.

Arrange routine medical assessment for persistent localized shin pain, repeated pain during activity, an unexplained lump, or pain that is not improving. Seek more urgent care for fever with a hot, red, swollen area over the bone, particularly after surgery, an open wound, or a recent fracture.

- Is the finding in the upper end, shaft, or lower end of the tibia?
- Is there a fracture, stress injury, infection, or joint problem?
- Do I need to limit weight-bearing, and for how long?
- Is follow-up imaging needed to check healing?
- Which changes should lead me to seek urgent care?

Common questions

Are the tibia and shin the same thing?

The tibia is the shinbone, but "shin" can also mean the whole front area of the lower leg. Pain in the shin area may come from the tibia or nearby muscles and tissues.

Is the tibia stronger than the fibula?

The tibia is larger and carries most of the lower leg's weight. The fibula is thinner and has a greater role in muscle attachment and ankle stability. Both can be injured.

Can you walk with a fractured tibia?

Some people can still take steps with certain stable or stress fractures. Being able to walk does not rule out a break. Follow the weight-bearing instructions given after assessment rather than testing the leg yourself.

Does every tibial injury show on an X-ray?

No. Many fractures are visible on X-ray, but early stress injuries and some subtle fractures may not be. Repeat X-rays, CT, or MRI may be considered when symptoms and examination findings remain concerning.

What does "tibial" mean in a medical report?

"Tibial" simply means related to the tibia. For example, "tibial plateau" refers to the upper surface of the tibia, while "tibial shaft" means its long middle section.

Sources

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- American Academy of Orthopaedic Surgeons, OrthoInfo: Compartment Syndrome
- Radiological Society of North America and American College of Radiology, RadiologyInfo: Bone X-ray
- NHS: Broken Leg