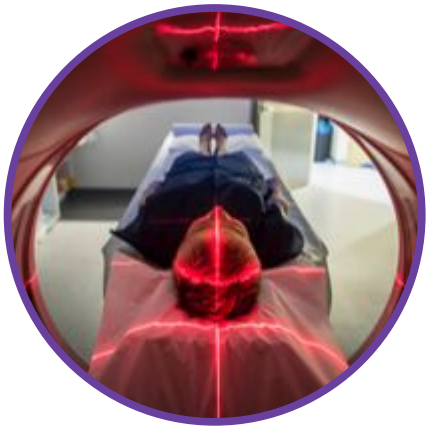
Medical Imagery Devices

There are many different kinds of machines that are used by radiologists to take medical images. Here are some examples:

MRI Machine:

- MRI machines have a gigantic tube with a table in the middle. The patient lays on the table inside of the machine. The tube is a gigantic magnet that creates a magnetic field that can see inside our bodies.
- A giant magnet is used to make the person's body send radio waves to a computer. The computer converts the radio wave energy into light waves. By turning the radio wave energy to light waves, the computer can make a picture of the inside of the patient's body!



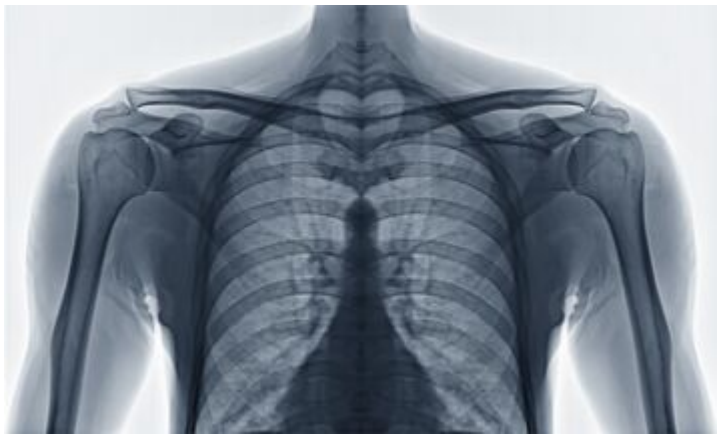
X-Ray Machine:

- X-ray machines are a large device that uses stored energy from tiny particles called electrons. This energy creates x-ray beams, which have a lot of energy and can penetrate inside the body. These x-rays travel through the squishy parts, like muscles and other tissues, but are stopped by bones. This is why bones show up on x-ray pictures!

CT Scanner:

- CT Scanners use x-ray images to create special 3-dimensional images. They work by using several different X-ray images and combining them into a 3-dimensional image that radiologists can use to determine if something is wrong inside of the body.

X-Ray Images



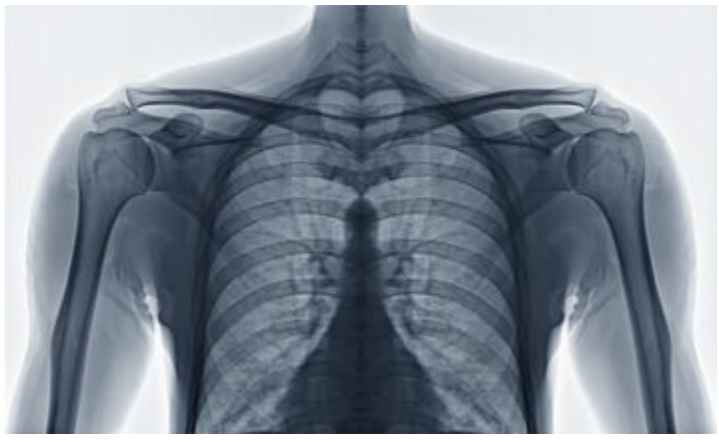
X-Ray Images Key

Dog

Porcupine

Cardinal

Iguana



Human

Building a Portable X-Ray Machine

Follow the steps below to build a portable x-ray machine that wildlife specialists and veterinarians can use to check animals for broken bones.

Step One: Choose an Animal

Your x-ray machine will have to be created with the same shape as the animal that you choose. That way, the x-ray machines will be easier for field veterinarians and wildlife specialists to use. Choose one of the animals below by circling your choice.

Cow

Lion

Penguin

Grizzly Bear

Chimpanzee

Step Two: Build an X-ray Machine

Use art supplies and building materials to create a portable x-ray machine.

Your device must meet the following requirements:

- Must have a strap to make the machine easier to carry.
- Must be able to fold into a smaller size.
- Must have a way to communicate with radiologists, in case the machine is broken!
- Must have a USB port to plug into a computer (so that the images can be transferred to the computer!)