Weight-bearing computed tomography (CT)

Patient Information

What is weight-bearing computed tomography?
Computed tomography is commonly called ‘CT’. CT is a way of using X-rays to take pictures or images in very fine slices through the part of the body that the doctor has asked to be investigated. One way to think of it is of taking slices through a loaf of bread, with more slices providing increasingly detailed images.

Weight-bearing CT provides extra information for you and your doctor as it allows for visualisation of your foot and/or ankle as you are putting weight on it, which is otherwise impossible with a conventional CT scan.

Once the technologist has taken the scan, these very thin slices can be put all together to reconstruct the loaf (or in this case your body). Once they are put back together the technologist can cut it into the slices that will help the radiologist (a doctor who has specialised in diagnostic imaging) to see the areas of interest. Measurements can also be obtained in the weight bearing position to assess for Syndesmosis or LisFranc instability.

With all of these difference slices and reconstructions, the radiologist will have a very detailed picture of the anatomy being imaged. This should help them to make a diagnosis so that the right treatment can be planned as soon as possible.

How do I prepare for a weight-bearing CT?
No preparation is required.

How long does a weight-bearing CT scan take?
A weight bearing CT scan usually takes about 20 minutes to perform. The technologist will scan you in a couple of different positions and they will explain all this to you at the greater length during your scan. While the scan time of the scan is relatively short, the technologist can take up to an hour to get the pictures your referring doctor and then the radiologist needs to make a diagnosis. You do not need to be present in the department while this work is being done.

What happens during weight-bearing CT?
CT scans are designed to look at specific parts of the body and are tailored for each person, to investigate their particular condition. This means that all CT scans are slightly different. The technologist performing the scan will give you detailed instructions on the positions required to perform the scan. Some of the scans will be done with you in a standing position and some with you seated. The technologist will be close to you at all times should you require assistance. When the examination is ready to begin the technologist will remind you to keep still.

Once the technologist has reviewed the images briefly to check that the appropriate areas have been shown, they will assist you out of the scanner. The technologist will not be able to give you any results after the scan; this is the responsibility of your doctor and the radiologist who interprets the images from the scan and provides a report to your doctor.

What are the risks of computed technology?
Radiation exposure:
As is the case with most tests and medications prescribed by your doctor, CT does have risks that cannot be avoided.

Our staff are highly trained to minimise these risks by using the lowest possible radiation dose to achieve quality images that allow the radiologist to make an accurate diagnosis.

A CT scanner uses x-rays to obtain the pictures required for the radiologist to make a diagnosis. As is commonly known, x-rays are a form of radiation and must be used carefully by trained professionals to decrease the risks involved.

These risks are:

- A very small increase in the risk of developing cancer later in life. This low risk is considered to be outweighed by the benefits provided by the scan.
- Risk to an unborn child if you are pregnant. This risk could take the form of a very small increase in the risk of cancer or malformation if you are exposed to radiation during the first months of your pregnancy.

Minimising risks from radiation include making sure that every CT scanner in use is regularly maintained and calibrated (tested and set to ensure accuracy) by specialised technicians. This is required by state and federal laws.

As the ankle and feet are not very sensitive to radiation, the total radiation dose from one weight-bearing CT scan is very low and is equal to 16% of the radiation dose of one chest X-ray.
**Privacy and dignity**

We will try to make your visit to our department as comfortable as we can. We hope that the information in this leaflet will answer any questions you may have, but please feel free to contact us if you have any particular worries, questions or concerns.

It is very important that you discuss the results with the doctor whom referred you so that they can explain what the results mean for you.

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