



What is an X-Ray?

An x-ray (radiograph) is a non-invasive medical study that help Radiologists diagnose medical conditions. Imaging with x-rays involves exposing a part of the body to a small controlled dose of ionizing radiation to produce pictures of the inside of the body. X-rays are the oldest and most frequently used form of general medical imaging.

X-rays are a form of radiation like light or radio waves. X-rays pass through most objects, including the body. Once it is carefully aimed at the part of the body being examined, an x-ray unit produces a small burst of radiation that passes through the body, recording an image on a phosphorous plate or a special detector.

Different parts of the body absorb the x-rays in varying degrees. Dense bone absorbs much of the radiation while soft tissue, such as muscle, fat and organs, allow more of the x-rays to pass through them. As a result, bones appear white on the x-ray, soft tissue shows up in shades of grey and air appears black.

Until recently, x-ray images were maintained as hard film copy (much like a photographic negative). Today, most images are digital files that are stored electronically.

These stored images are easily accessible and are frequently compared to current x-ray images for diagnosis and disease management.

What does an X-Ray scanner look like?

The equipment typically used for procedures such as chest x-rays and weight bearing x-rays, consists of a wall-mounted, box-like apparatus containing the x-ray cassette and a special plate that records the image and an x-ray producing tube, that is usually positioned about six feet away. For other procedures the x-ray tube is suspended over a flat table on which the patient lies. A drawer under the table holds the x-ray cassette.

At Allied Medical Center the table weight limitation is 120kg.



How long will the scan take?

An X-ray study will only take a few minutes to complete, with the exception to an X-ray IVP that will take approximately 1 hour to complete.

How do I prepare for my scan?

No special preparation is required.

However, if you are having an **IVP (Intravenous Pyelogram)** study, IV contrast materials will be administered and you will be required to fast for 4-6 hours without food or drinks except for water prior to your appointment.

In accordance with international Guidelines, Allied Medical Center requires all patients referred for contrast studies, to have a serum **creatinine blood test** in order to establish your renal function. We require having a recent creatinine result of not more than 6 weeks old.

Diabetic Patients who are taking Metformin and Metformin based derivatives (such as Glucophage) are advised to consult with the referring Clinician with regards to withholding the medication for the day of the examination and two days after the scan.

Insulin and other medications can be taken as usual as prescribed by the Clinician, unless otherwise instructed.

Premedication may be required if you are asthmatic or have any allergies to food or medication.

It is very important to bring the request form from your Clinician as well as all previous related imaging reports and images on CD or film with you on the day of your x-ray study for the Radiologist to review and compare for a comprehensive impression of your health.

Please inform your Clinician and our Technologist if there is a possibility that you may be pregnant or if you are breast feeding as radiation is involved.

What can I expect during my scan?

X-ray is generally painless, fast and easy.

You will be collected by a specially qualified Technologist and will be asked to change into a comfortable gown.



The attending Technologist will position you either on the examination table in a comfortable position or in front of the wall apparatus depending on the part of your body being scanned. The Technologist will explain the procedure to you.

A lead apron may be placed over your pelvic area, thyroid or breasts as protection from radiation exposure.

You may be asked to hold your breath during the x-ray, depending on the body part being imaged. Any motion, whether breathing or body movements, can lead to artefacts (loss of image quality) on the images. This can resemble blurring as seen on a photograph taken of a moving object.

You may be repositioned for another view and the process is repeated. Two or three images (from different angles) will typically be taken, depending on the body part being scanned.

An x-ray may also be taken of the unaffected limb, or of a child's growth plate (where new bone is forming), for comparison purposes.

For children, a parent may be permitted to stay with the child during an X-ray. The parent will have to consent to radiation exposure which will be documented on the child's request form. The attending Technologist will provide lead shielding to the parent.

When the examination is complete, you will be asked to wait until the Radiologist determines that all the necessary images have been obtained.

How is an IVP (Intravenous Pyleogram) performed?

Prior to the IVP exam, you will be asked to complete a safety questionnaire of your general health and medical history. This will be archived as part of your medical records.

A control image will be taken to assess if your bowel is not full of gas or faeces as this may obscure the kidneys and ureters. Contrast material will then be injected through a vein in the arm. You will feel a minor pinprick as the needle is inserted into your vein. You may experience a flush of warmth and a metallic taste in your mouth as the contrast begins to circulate throughout your body. This feeling will subside after a few seconds and is harmless.

The contrast material then collects in the kidneys, ureters and bladder, sharply defining their appearance in bright white on the x-ray images. A series of images will be taken in different positions to determine the actual size of the kidneys and to image the urinary tract in action as it begins to empty. The Technologist may apply a compression band around the body to better visualise the urinary structures.

During the imaging process, you may be asked to turn from side to side and to hold several different positions to enable the Radiologist to capture views from several angles. Near the end of the exam, you may be asked to empty your bladder so that an additional x-ray can be taken of your urinary bladder after it empties.

The contrast material used for IVP studies will not discolour your urine or cause any discomfort when you urinate.

When the examination is complete, you will be asked to wait until the Radiologist determines that all the necessary images have been obtained.

An IVP study is usually completed within an hour. However, some kidneys function at a slower rate.

What happens after my scan?

You may eat and drink as usual and return to your normal daily routine straightaway.

After an IVP study, you can return to your normal activities. It is advisable to drink plenty of water to flush out the contrast through your kidneys.

When will I get my results?

We strive to complete reports within 24-48 hours and a written report will be sent to your referring Clinician upon completion.

You will be asked to wait a few minutes while we burn your images on a CD which will be given to you to take back to your Clinician at your follow-up appointment. Your Clinician will discuss the findings with you.

Any other questions?

If you have any other questions, worries or doubts do not hesitate to ask one of our staff.

We want you to feel as comfortable as possible.