Brain Perfusion Scan

What is a Brain Perfusion Scan?

A brain perfusion scan is a nuclear medicine test that measures blood flow in the brain to assess conditions such as strokes, dementia, or brain trauma. It involves injecting a small amount of radioactive tracer into a vein, which is detected by a gamma camera to create images showing areas of normal or reduced blood flow.

What will happen during the examination?

To begin the study a small cannula will be placed into a vein in either your arm or hand. The cannula will remain in your arm for the duration of the test. This will be used later to give you a small injection of a radioisotope for the purpose of the study.

When the injection is given, it is important that your brain is not "over-active". To ensure this, you will be asked to lie on a bed in a quiet darkened room following the insertion of the cannula. After around 5 minutes the technologist will enter the room and inject a radioisotope through the cannula in your arm. This injection has no side effects and will not interfere with any medications you may be taking. The injection is painless.

30 to 45 minutes following the injection you will be positioned under a gamma camera for imaging. The length of the scan is approximately half an hour and it is very important that you keep your head still for this time.

Pregnant and/or breastfeeding

This examination is not suitable for pregnant women.

Breastfeeding mothers should contact our department before their appointment to discuss any specific preparation. You will need to express and discard milk but can resume feeding after your appointment.

After the examination

Our radiologist will review and report on your images and we will deliver them electronically to your doctor.



