

Nuclear Medicine

Your doctor has recommended that you have a nuclear medicine examination. This document explains the procedure and aims to answer the main questions you're likely to have. If you have any additional questions then please feel free to talk about them with your doctor or nuclear medicine staff before the procedure.

What is nuclear medicine?

Nuclear medicine uses very small amounts of radioactive materials (isotopes) to produce images of the inside of your body. It shows the structure and function of the area(s) of interest. Depending on your scan the isotope may be injected, inhaled, swallowed or given as eye drops.

Nuclear medicine examinations help diagnose and monitor many medical conditions such as thyroid abnormalities, parathyroid adenomas and the drainage of the eyes. It can also be used to check your bones for fractures, arthritis, tumours and infection; monitor your heart and kidney function; and check your gallbladder.

A nuclear medicine scan can be done before surgery, for example to look at your lymph nodes if you are having breast cancer surgery (sentinel node imaging). Your doctor may also use it to assess the effect of a treatment, such as radioactive iodine ablation therapy for thyroid cancers.

What are the alternatives?

Alternative imaging procedures may include ultrasound, a computed tomography (CT) scan, X-ray or a magnetic resonance imaging (MRI) scan. Other ways of looking inside the body include endoscopy or surgery. Your doctor will explain the benefits and risks of having a nuclear medicine scan and talk to you about your options.

Preparing for the procedure

Your doctor will discuss with you what will happen before, during and after your procedure, and any pain you might have. This is your opportunity to ask any questions to help ensure you are informed so you can give your consent for the procedure to go ahead, which you may be asked to do by signing a consent form. You may also be required to fast or stop certain medication, please check with your doctor or the nuclear medicine staff before the appointment.

At the time of the scan you will be asked to remove any outer items of clothing and you may need to change into a gown. You may also need to take off jewellery and make sure you have an empty bladder. You must tell us if you are, or could be, pregnant or if you are breast feeding. Pregnant women are advised not to have nuclear medicine scans as there is a risk the radiation may affect the development of the unborn baby. You should also tell us about any medicines you are taking.

About the procedure

The procedure will be carried out by a nuclear medicine technologist (a healthcare professional trained to handle isotopes). They will explain the type of scan you are having and give you precise instructions. Depending on the type of scan you're having, it may start straight away or you may

need to wait for a few hours. You will be given an estimated time scale for the procedure when you make your appointment. A scan can take anything from 30 minutes to five hours.

The gamma camera picks up the radiation coming from your body, and creates an image. It is important to keep completely still while the images are being taken. The technologist will be in the room with you at all times explaining what is happening and how long it will take.

What to expect afterwards

The technologist will tell you if there are any special instructions you need to follow after your test. In most cases you will be able to leave the hospital straight away. The isotope loses its radioactivity over time and passes naturally out of your body usually within a day of the test. You should drink plenty of liquid and go to the toilet often, as this helps pass the isotope out of your body. The amount of radiation in your body after the scan will be very small and there is little or no risk of you contaminating another person. If you have any concerns about exposure to radiation please discuss this with one of our team.

Getting the results

A report will be sent to the doctor requesting your scan. This can take a couple of days. Your doctor will be able to discuss the results with you at your next appointment.

What are the risks?

Nuclear medicine scans are commonly performed and very safe. However, in order to make an informed decision and give your consent, it is helpful to be aware of the possible side-effects of this procedure.

The examinations use small amounts of radiation. Doses are similar to a variety of X-rays ranging from chest X-rays to CT scans. Nuclear Medicine staff will be able to explain this to you in more detail if required.

Contact

If you have any questions or need further information, please contact the Nuclear Medicine department on +44 (0)20 7460 5745 or fax +44 (0)20 7835 2495. The department is open Monday to Friday between 9.00am and 5.30pm. Alternatively, you can contact the radiology reception on +44 (0)20 7460 5746/7.

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