

“Nuclear medicine imaging uses small amounts of radioactive materials called radiotracers that are typically injected into the bloodstream, inhaled or swallowed. The radiotracer travels through the area being examined and gives off energy in the form of gamma rays which are detected by a special camera and a computer to create images of the inside of your body. Nuclear medicine imaging provides unique information that often cannot be obtained using other imaging procedures and offers the potential to identify disease in its earliest stages.

Tell your doctor if there’s a possibility you are pregnant or if you are breastfeeding and discuss any recent illnesses, medical conditions, allergies and medications you’re taking. Depending on the type of exam, your doctor will instruct you on what you may eat or drink beforehand, especially if sedation (anesthesia) is to be used. Leave jewelry at home and wear loose, comfortable clothing. You may be asked to wear a gown.”

Source: radiologyinfo.org

What is nuclear medicine used for?

Nuclear medicine lets us look at your internal organs and how they are working. We use it to diagnose and treat disease. It is especially helpful in assessing:

- Heart disease
- Brain, kidney, lung, and thyroid function
- Tumor location and progression before and after treatment

We also use nuclear medicine to destroy diseased cells, such as cancer.

How does nuclear medicine work?

First, we give you a radiotracer through a pill, injection, or gas. Radiotracers give off gamma rays that can be detected by special cameras. These cameras do not give off any radiation. Our nuclear medicine experts analyze the images and send a report to the doctor who ordered the test.

Will I be radioactive after a nuclear medicine scan?

Yes, you will be radioactive after a nuclear medicine scan. But we use such small amounts of radiotracers that you will not be radioactive within a day.

Are there side effects to nuclear medicine exams?

Very few people experience side effects from a nuclear medicine exam. Allergic reactions are extremely rare. Any adverse reactions are usually mild, pass quickly, and need little or no medical

treatment. Even so, let our nuclear medicine personnel know about any allergies or other problems you may have experienced during a previous procedure. Radiotracers administered are not dyes and do not cause reactions the way X-ray contrast can. You should not feel any different after the radioactive material is given.

Are nuclear medicine tests safe?

Yes, nuclear medicine procedures are very safe. We carefully select the radiotracer and radiation dose to ensure the minimum radiation exposure and maximum accuracy. You are exposed to about as much radiation in a nuclear medicine test as with a diagnostic X-ray.

How much radiation will I be exposed to?

A nuclear medicine test will expose you to very low levels of radiation for a short period of time. The amount of radiation we use in these tests is similar to that given by other diagnostic X-ray tests. Try to urinate frequently for 24 hours after any tests that used radiopharmaceuticals to lessen the radiation exposure. It shouldn’t be a problem to be around other people and to use a bathroom normally.

Do nuclear medicine scans hurt?

Nuclear medicine procedures are usually painless. If we inject radioactive material, generally into a vein in your arm, it is similar to giving blood. Injections under the skin performed for lymphoscintigraphy scans cause local pain for about five seconds.

Though nuclear imaging itself causes no pain and is rarely associated with significant discomfort or side effects, you may have some discomfort from having to remain still or to stay in one position, especially if you are in pain. (You must remain still while we take the imaging so the pictures come out clear.) If you don't like enclosed spaces (claustrophobic), tell your technologist before the exam begins.

Children may find it difficult to be motionless still during the test. We encourage parents to stay with their children and help them remain calm. Familiar comfort items such as pacifiers, blankets, music and books can help. The scanning room usually has a television where your child can watch DVDs. We rarely use sedation.

What if I am claustrophobic?

If you are claustrophobic, ask your doctor about prescribing an anti-anxiety medication to take on the day of the study. If you take this type of medication, you will need a designated escort to ensure that you return home safely after the scan.

Can anyone have a nuclear medicine scan?

Anyone can have a nuclear medicine scan if indicated. However, if you are breastfeeding, you may need to stop for a short time after the test. This is due to the small amount of radioactivity in your body that may pass to the breast milk. The nuclear

medicine physician will provide you with guidelines. If you are pregnant, we will discuss the benefits and risks of nuclear medicine with you. We use techniques to reduce radiation exposure to the fetus. For instance, we can use smaller amounts of radioactive material for a longer imaging time. In addition, increased hydration and frequent urination can reduce the radiation dose. We will decide whether it is safe before we do the procedure.

Can I travel after my scan?

You can travel after diagnostic scans. Depending on which scan we perform, there may be a small amount of radiation in your body. This may set off the very sensitive detectors at airports, ferry ports, and train stations. If you have any travel plans, let the imaging department know so we can give you a card identifying the procedure done and how long sensitive detectors will be able to detect it.

Can I be around pregnant women or children?

Yes, you can be around pregnant women and children after most nuclear medicine scans. Almost all of the radiation will be gone from your body by the morning after your scan. We recommend you avoid spending extended hours in close proximity with pregnant women and small children, such as sleeping overnight next to them. Otherwise, you may carry out your normal day-to-day activities.

How long does the procedure take?

Procedure length varies. Your scheduler can give you more specific information when you call to make your appointment.

