

Nuclear Medicine Thyroid Scan

Consumer Information

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What is a Thyroid Scan?

A Thyroid Scan is a [nuclear medicine](#) test that provides information about the function and structure of the thyroid gland. The scan involves injection of a radiopharmaceutical into a vein in your arm and imaging with a gamma camera

The thyroid gland consists of two lobes (rounded parts or divisions) and is located in the lower part of the front of the neck. The thyroid gland takes up iodine from the bloodstream. Iodine is found in foods we eat such as sea fish, milk, eggs and iodised salt. It stores the iodine and makes thyroid hormones. Thyroid hormones are responsible for controlling the body's metabolism (where food is converted into energy) and growth.

How do I prepare for a Thyroid Scan?

Sometimes you may need to stop taking certain medications before you have a Thyroid Scan. When you need to stop taking it will depend on the type of medication. You should consult with your doctor about the need to stop any medication.

It is also very important that you have not had any other radiology procedures that require the injection of a [contrast medium containing iodine](#) (such as a computed tomography (CT) scan with contrast injection) at least 8 weeks prior to a Thyroid Scan. If you have had a test using iodine contrast medium, your Thyroid Scan may need to be rebooked for a later time.

It is important that you let staff at the hospital or radiology practice where you are having the scan done know if you are (or think you could be) **pregnant** or are **breast feeding**.

This study may not be suitable for pregnant women because of the radiation dose to the growing foetus. Please discuss this with your doctor.

Women who are breastfeeding and people who are the primary or sole carer for small children may need to make special preparations for after the test, to stop breastfeeding for a short time, and to avoid close contact with young children. This is due to the small amount of radioactivity your body may release for a while after the test. Talk to your referring doctor or the nuclear medicine practice where you will have the test for details. The Australian Radiation Protection and Nuclear Safety Agency has

[recommendations](#) about breastfeeding and close contact with children after nuclear medicine tests.

Certain foods, vitamin supplements and medicines containing iodine can also affect the scan. Examples are kelp, cough mixtures, Betadine and fish oil tablets.

It is important that you check with your doctor or the facility where you are having the Thyroid Scan regarding specific instructions about the type of medication which needs to be stopped as well as the duration for which it needs to be stopped.

What happens during a Thyroid Scan?

You will be given an injection of radiopharmaceutical called sodium pertechnetate. This goes through the blood stream and is concentrated in the thyroid gland. This will not make you feel any different. You will have a 15-20 minute wait before having the scan, to allow the radioactive substance to be taken up by the thyroid gland.

For the Thyroid Scan, you will be lying down on a scanning bed. A gamma camera will be positioned very close over your head but will not touch you. You will be asked to keep your head and jaw very still. Several images are taken, lasting about 5 minutes each and the camera may be placed at several different angles when taking the images. A [nuclear medicine](#) specialist may wish to examine your neck, to feel for any thyroid nodules or gland enlargement.

Are there any after effects of a Thyroid Scan?

There are no after effects of a Thyroid Scan and you will not feel any different.

However, if you are breastfeeding or caring for young children, see the "how do I prepare" section for more information about special precautions you may need to take.

How long does a Thyroid Scan take?

The scan will take about 40 minutes in total. You will need to wait 15-20 minutes after the injection of radiopharmaceutical and then there will be 15 minutes of scanning time. The scans will be checked to make sure the images provide the required information, and then you will be free to leave the hospital or the radiology practice. A report of the scan will be sent to your referring doctor.

What are the risks of a Thyroid Scan?

There are no known associated risks. The dose of radiation you will be receiving is relatively small (see [Radiation Risk of Medical Imaging for Adults and Children](#)).

What are the benefits of a Thyroid Scan?

The thyroid helps maintain many different functions of the body by processing and adjusting the levels of certain hormones. A Thyroid Scan is performed so doctors can determine which parts of the thyroid gland are working properly and whether the thyroid gland is over-active (hyperthyroidism) or under-active (hypothyroidism). It can also help in distinguishing between benign (non-cancerous) and malignant (cancerous) thyroid nodules or lumps. A thyroid scan also gives some information about the size and shape of the thyroid gland.

Who does the Thyroid Scan?

A nuclear medicine technologist will give the injection of the radiopharmaceutical, perform the scan and process the pictures or images. A nuclear medicine specialist will review and interpret the images together with your medical history, and provide a written report for your referring doctor. See *Nuclear Medicine* for more details about these health professionals.

Where is a Thyroid Scan done?

A Thyroid Scan is done in the nuclear medicine department of a hospital or at a private radiology or nuclear medicine practice where diagnostic imaging procedures are performed.

When can I expect the results of my Thyroid Scan?

The time that it takes your doctor to receive a written report on the test or procedure you have had will vary, depending on:

- the urgency with which the result is needed
- the complexity of the examination
- whether more information is needed from your doctor before the examination can be interpreted by the radiologist or nuclear medicine physician

- Whether you have had previous X-rays or other medical imaging that needs to be compared with this new test or procedure (this is commonly the case if you have a disease or condition that is being followed to assess your progress)
- How the report is conveyed from the practice or hospital to your doctor (in other words, email, fax or mail)

Please feel free to ask the practice, where you are having your test about the expected time for the report.

It is important that you discuss the results with the doctor who referred you, either in person or on the telephone, so that they can explain what the results mean for you.

Please note:

This information is of a general nature only and is not intended as a substitute for medical advice. It is designed to support, not replace, the relationship that exists between a patient and his/her doctor. It is recommended that any specific questions regarding your procedure be discussed with your family doctor or medical specialist

The QUDI Program is managed by the Royal Australian and New Zealand College of Radiologists and funded by the Australian Commonwealth Department of Health and Ageing.

Publication Date: July 16 2009

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