

Parathyroid MIBI Scan

Consumer Information

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What is a Parathyroid MIBI Scan?

A parathyroid scan is used in nuclear medicine to look at possible problems involving the parathyroid gland(s). The parathyroids are four small glands lying close to or embedded in the back surface of the thyroid gland, which is situated in the front of your neck.

The parathyroid scan uses sestamibi (or MIBI for short), which is a very safe liquid radioactive compound that is injected into the body and absorbed by the overactive parathyroid but not by the healthy ones. A hyperactive gland is picked up by the scan on the images taken by a gamma camera (a type of machine or scanner used in nuclear medicine).

How do I prepare for a Parathyroid MIBI Scan?

There is no special preparation necessary prior to the scan. You may eat and drink as normal.

However, 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.

If you are taking thyroid medications you may need to stop taking these before you have the scan. Your doctor will advise you about this.

A gamma camera is used to detect the radioactive sestamibi compound your parathyroids will have absorbed. The camera will move around your head. It will come quite close to your head but will not touch it. You will need to lie very still for a period of

time underneath the gamma camera, as it takes the images or pictures of your neck and chest.

Please tell your doctor or the staff performing the scan if you think you may not be able to stay still for a prolonged period of time or if you are claustrophobic.

What happens during a Parathyroid MIBI Scan?

When you arrive at the hospital nuclear medicine department or private radiology practice, a nuclear medicine technologist will ask you questions about your condition to obtain a medical history.

The technologist will insert a small needle into the back of your hand or in your arm. You will then lie on a special scanning bed under a large gamma camera which will take pictures of your parathyroids. The technologist will inject the sestamibi solution and then take images of your neck and chest.

In some institutions an additional radioactive tracer is administered prior to the MIBI to be able to visualize the thyroid gland. This gives an indication of the position of the parathyroid glands in relation to the thyroid gland.

These pictures can take up to 40 minutes.

Once the pictures are completed you will be asked to return in 2-3 hours for further pictures of your neck and chest. No further injections are given for the second session. A series of images which include SPECT (single photon emission computed tomography) three dimensional images will be taken. This session will take about 30 minutes.

SPECT images are obtained following injection of the radioactive compound. The radiation binds to specific sites in the body and can be detected by the nuclear medicine gamma camera. The camera rotates over a 360 degree arc around you, allowing for reconstruction of an image in three dimensions.

Are there any after effects of a Parathyroid MIBI Scan?

There are no after effects from a Parathyroid MIBI scan. You will feel fine and be able to drive yourself home.

You may experience a metallic taste in your mouth (but only for a few minutes) when the radioactive compound is injected.

Rarely, you may have feelings of tingling, flushing (redness), nausea (sickness), erythema (redness of the skin), a diffuse (spread) rash or headache.

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 Parathyroid MIBI Scan take?

There are two sessions, with a 2-3 hour break in between. The first session will take about 40 minutes and the second session about 30 minutes.

What are the risks of a Parathyroid MIBI Scan?

There are no associated risks with having a Parathyroid MIBI Scan.

What are the benefits of a Parathyroid MIBI Scan?

The Parathyroid MIBI Scan will determine if you have hyperactive parathyroid gland(s) or adenomas (or tumours).

Who does the Parathyroid MIBI Scan?

A nuclear medicine technologist will perform your scan.

A nuclear medicine consultant (a specialist doctor) will look at your pictures and may ask questions about your condition. If you have any other X-rays or ultrasounds of your parathyroid gland/neck at home please bring them when you have the scan so the doctor can compare them with your Parathyroid MIBI Scan.

Where is a Parathyroid MIBI Scan done?

A Parathyroid MIBI Scan is only performed in a nuclear medicine department of a hospital or a private radiology clinic with facilities to provide this service.

When can I expect the results of my Parathyroid MIBI Scan?

After the procedure is complete, a nuclear medicine specialist will study the pictures along with your medical history to interpret and make an assessment of the images.

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
- 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 private practice, clinic, or hospital where you are having your test or procedure when your doctor is likely to have the written 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

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