

MIBG Scan

Consumer Information

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What is an MIBG Scan?

An MIBG Scan is a nuclear medicine scan which involves an injection of a liquid radioactive material called iodine-123-meta-iodobenzylguanidine – MIBG for short. The radioactive material is injected into a vein on the front of your arm at the level of your elbow or in the back of your hand.

A special gamma camera (a type of scanner), finds or confirms the presence of tumours (a lump or growth) called neuroendocrine tumours. These tumours involve specific types of nerve tissues and most commonly include [pheochromocytomas](#) (a rare cancer of the adrenal gland, – which is located on the surface of the kidneys) and neuroblastomas (cancers which affect nerve tissue). Neuroblastoma tumours usually begin in the adrenal gland but may also be found elsewhere in the body.

How do I prepare for an MIBG Scan?

You should consult your doctor or the staff where you are having your MIBG Scan before your appointment as some medicines you may be taking will need to be stopped for around 3 days before you have the test.

These medications include:

- tricyclic antidepressants
- antihypertensives
- cocaine
- sympathomimetics
- decongestants containing pseudoephedrine, phenylpropranolamine and phenylephrine

You should raise any concerns about medicines you are taking with your doctor or clinic staff.

You will also have to take potassium iodide tablets or Lugol's iodine solution before the test to prevent the thyroid gland from absorbing too much radioactivity. The thyroid gland is more susceptible than other parts of the body to attracting the radioactivity and it can lead to malfunction of the thyroid gland. The nuclear medicine department at the hospital or private radiology practice will advise you about when you need to take this medication and the dose.

It is important that you let staff at the hospital or radiology practice where you are having the scan 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.

What happens during an MIBG Scan?

An MIBG Scan is carried out over two days.

On the first day: You will be given an injection of a radioactive liquid into a vein in your arm or back of your hand. Four hours later, after the radioactivity has spread around your body, you will be given the scan. A special gamma camera (a type of scanner) will take images while you are lying on a bed. The camera will move over your body but not touch it.

On the second day: You will return to have the images taken again. You will not have another injection.

Are there any after effects of an MIBG Scan?

The initial injection may cause an increase in your blood pressure. You will be observed in the department and your blood pressure measured for the initial 30 minutes after the injection. The chance of this happening is less than 10%.

No other side effects are expected.

How long does an MIBG Scan take?

The scanned images will be taken over two days. On the first day there will be two visits. The first visit involves receiving an injection of a small dose of radioactivity in your vein and monitoring of blood pressure for 15-30 minutes. You will then be able to leave and return 4 hours later for your first set of images, which will take around an hour.

The following day you will need to return to for the second set of images, which will take from 60-90 minutes. You will not have another injection on the second day.

What are the risks of an MIBG Scan?

Apart from the chance of an increase in blood pressure, which is a relatively rare side effect, there are no significant risks.

The dose of radioactivity is relatively small, approximately twice the normal annual background

radiation from the environment. See *Radiation Risk of Medical Imaging for Adults and Children* for more information.

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.

What are the benefits of an MIBG Scan?

It will help your doctor to find or confirm the presence of a tumour (a lump or growth) found on a specific type of nerve tissue. This could be a rare cancer of the adrenal gland (which is located on the surface of the kidneys) or a cancer which affects nerve tissue. An MIBG Scan examines the whole body so it will also help determine if the tumour has spread anywhere else within the body.

Who does the MIBG Scan?

A nuclear medicine technologist will give you the injection of radioactivity and take the images. A nuclear medicine physician (a specialist doctor) will assess and interpret the images and provide a report of the MIBG Scan to your referring doctor.

Where is an MIBG Scan done?

MIBG Scans are done in the nuclear medicine department of a public or private hospital or in a private radiology practice.

When can I expect the results of my MIBG 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
- 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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