

Iodine-131 Therapy

Consumer Information

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What is Iodine-131 Therapy?

The thyroid gland is one of the body's regulators, controlling and regulating the metabolism (the process of converting food and oxygen into energy). Sometimes the thyroid is overactive and sometimes it is affected by cancer.

In both cases treatment with radioactive iodine (Iodine-131 Therapy) may be required. Iodine-131 is given as a capsule that looks much like any other capsule. Thyroid cells are the only cells in the body that can absorb iodine.

Overactive Thyroid (or Hyperthyroidism)

In the case of an overactive thyroid, the radioactive iodine dose destroys part of the thyroid gland so that the remaining part of the thyroid functions at a normal level. Iodine-131 Therapy is usually given in a hospital outpatients department or private radiology practice that offers nuclear medicine services.

Cancer

In the case of cancer, following removal of the thyroid, a large dose of radioactive iodine may be prescribed to completely ablate (destroy) any remaining thyroid tissue in the thyroid area. It will also destroy any cancerous thyroid tissue that may have moved elsewhere in the body. It usually involves admission into hospital for a period of 3-5 days. This is to prevent close contact between the person receiving the radioactive iodine therapy and other people, who would be exposed to the radioactivity within the patient's thyroid gland if they were in close contact. Once the radiation levels within the body have fallen to acceptable limits, patients are allowed to go home. While there may still be some radioactivity within the body, patients can leave the hospital providing they follow some important precautions (see below).

How do I prepare for Iodine-131 Therapy?

Overactive Thyroid (or Hyperthyroidism)

Before you attend the hospital or radiology practice for your Iodine-131 Therapy, your doctor will organise a blood test to check your thyroid levels. If you are currently taking thyroid medication you will be required to stop taking this for a period of time before you have the treatment. Your doctor will tell you when to stop taking the medication and it is

vital that you do stop taking it when your doctor tells you to.

Women who are pregnant must not receive Iodine-131 Therapy because the radioactive iodine can affect the unborn baby. If you are of childbearing age and still menstruating (that is you still have monthly periods) you may be required to have another blood test to make sure you are not pregnant.

On the day of the Therapy you will be asked to fast (not eat or drink) for 2 hours before being given the Iodine-131 capsule.

Depending on the size of your dose of Iodine-131, you may be required to alter your living and work arrangements for a period of time after taking the capsule (usually 2-4 days) so that you have minimal contact with other people. This is because your thyroid gland will contain concentrated levels of radioactivity from the capsule and other people who are near you can be exposed to this radiation.

Cancer

Your doctor will organise most tests before you have the treatment. In most cases you will need to have a blood test to make sure your thyroid hormone levels are high enough for the treatment to be effective. You may also need to have a blood test to make sure you are not pregnant.

You will be asked to fast (not eat or drink) for 2 hours prior to the treatment.

You should make contact with the hospital nuclear medicine department or private practice where you are having the therapy to find out what you can take into the iodine treatment room with you. For example, you may not be able to wear your own clothing and if you do, you may not be able to take this home with you due to the potential radiation in the clothing.

What happens during Iodine-131 Therapy?

Once all the required blood tests have been taken and the results obtained, the nuclear medicine team will explain to you the important precautions you need to take for 2-4 days after you have had the therapy. This includes contact with other people, including your family, to minimise their exposure to radiation.

If there is anything you are not sure about you should take the opportunity to ask any questions and raise any concerns you may have.

Once you have fasted (gone without food or fluids) for 2 hours the technologist will give you the capsule to swallow with water. You will need to fast for a further 2 hours after having the therapy.

If you are an outpatient you will be able to go home after having the therapy. You can drive yourself home if you are otherwise medically fit to do so.

If you are a hospital inpatient you will be required to stay in your room for the duration of the treatment so that other hospital patients, staff and visitors will not be unnecessarily exposed to the radiation.

Are there any after effects of Iodine-131 Therapy?

Generally if you are undergoing the therapy for an overactive thyroid gland you will not experience any side effects from the treatment as the dose is quite low.

If you are undergoing therapy following removal of the thyroid as a result of cancer you may experience some side effects including a dry mouth and pain in your salivary glands (a group of cells that produces and secretes saliva into the mouth). Sucking on lemon lollies to stimulate saliva can help to improve the dryness and relieve pain.

Feeling sick, or nauseous, is less common and can be controlled with anti nausea medication which the nuclear medicine staff can give you.

The effect of the treatment is not instant. It will take weeks to months before the full effect of the treatment is known.

How long does Iodine-131 Therapy take?

Overactive Thyroid:

Iodine-131 Therapy will usually be given to you as an outpatient. Once the relevant blood tests have been taken and results obtained, the technologist will spend a few minutes with you going through the precautions you need to take once you leave to go home. You will then be given a capsule to swallow with water. You will need to allow 2 hours for all the necessary tests and paperwork to be completed. The actual administration of the capsule is very quick.

Cancer:

While this only involves swallowing a capsule, the radiation dose within the capsule is much larger than for an overactive thyroid. You may be admitted to hospital for 3-5 days so that you do not expose other people to radiation unnecessarily.

What are the risks of Iodine-131 Therapy?

Iodine-131 Therapy is a radioactive medication. It produces a higher radiation dose than many diagnostic imaging scans or tests. However, your doctor has weighed up the benefits and risks and has decided that the benefits of the treatment outweigh any risks. It should be noted that this is a relatively common procedure and the radiation dose varies from patient to patient depending on their condition.

If you are being treated for an overactive thyroid the dose is calculated carefully, based on your body weight and degree of thyroid overactivity. However, the exact dose is still an estimate and it is possible that the dose you receive may be too high, and therefore your thyroid will under-function after you have the treatment. If this should happen, you will be given medication to keep the thyroid in working order. Alternatively, the estimated dose may not be

enough and subsequent Iodine-131 Therapy treatments may be needed.

If you are having Iodine-131 Therapy as an ablative treatment for cancer (that is to destroy the cancer), it is possible that at a later stage malignant (cancerous) thyroid tissue could appear somewhere else in the body and another dose of Iodine-131 Therapy will be required.

What are the benefits of Iodine-131 Therapy?

Overactive Thyroid:

Iodine-131 Therapy should make your thyroid start to function normally. As the thyroid controls the body's metabolism, this gives most patients a better quality of life.

Cancer:

Iodine-131 Therapy should completely destroy any harmful cancerous thyroid tissue following removal of the thyroid, both in the thyroid area and in any other parts of the body.

Who does the Iodine-131 Therapy?

Your Iodine-131 Therapy will be given by a nuclear medicine technologist and the treatment overseen by a nuclear medicine physician (a specialist doctor) in consultation with your referring doctor.

Where is Iodine-131 Therapy done?

Iodine-131 Therapy is given in the nuclear medicine department at most public and some private hospitals. Private radiology practices with nuclear medicine facilities may also provide an outpatient service.

When can I expect the results of my Iodine-131 therapy?

Once you have had your Iodine-131 Therapy the nuclear medicine physician will write a report to the doctor who referred you, detailing the treatment you have had. You will need to see your referring doctor for this information.

Further information about Iodine-131 Therapy:

Precautions you will need to follow after returning home from your Iodine-131 Therapy generally include the following:

1. DO NOT kiss people, especially children or pregnant women. This is to prevent transfer of iodine via your saliva.
2. DO NOT allow your children to sleep with you for the next 2 nights following therapy. You may give your children brief cuddles but try to avoid long periods of close contact.
3. DO NOT share eating utensils, cups, drinks, ice-creams etc.
4. ALWAYS flush the toilet twice to clear away iodine that has been eliminated in your urine. Wash your hands well after using the toilet. Other people must wear gloves and wash

thoroughly if handling your urine or urine contaminated items.

5. Casual contact with adults is acceptable. Try to keep contact to a minimum (short times and maximum separation) and avoid prolonged close contact with people e.g. movies, travel.
6. Contraception is advised for at least 3 months. Please discuss this with your doctor.
7. You will need to drink plenty of fluids to assist in washing excess radioactive iodine from your body.

How long you will need to follow these precautions will depend on your dose, your living conditions and the nuclear medicine facility where the Iodine-131 Therapy is given, as instructions can vary slightly. A good guide is 2 days from when you go home.

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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