



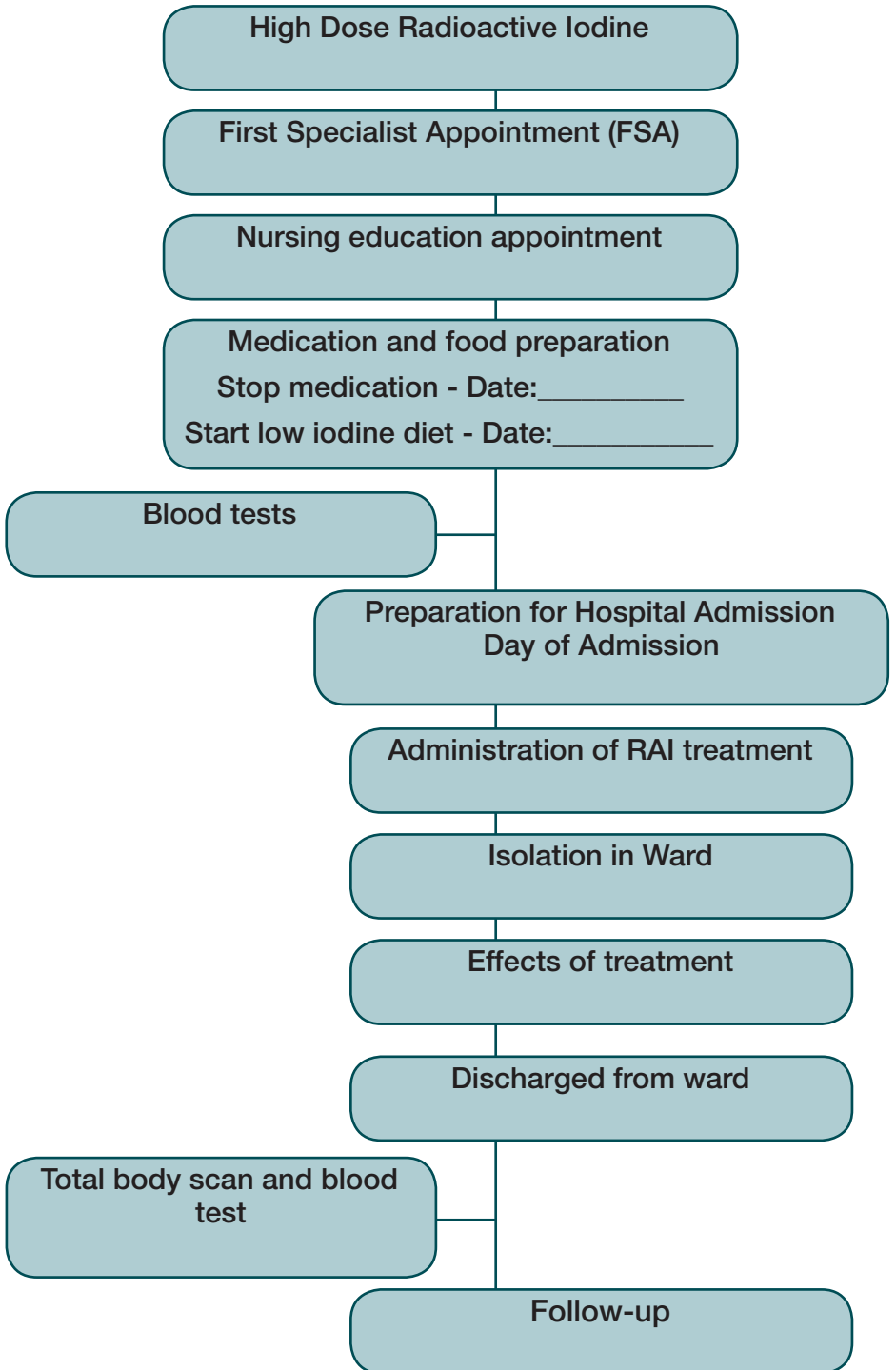
Information for patients receiving High Dose Radioactive Iodine (RAI) treatment



Waikato Regional Cancer Centre



Welcome to Waikato Regional Cancer Centre. The aim of this booklet is to provide information on the high dose radioactive iodine procedure and to explain the journey from your first meeting with the Radiation Oncologist to the completion of your treatment.



What is High Dose Radioactive Iodine (RAI) treatment for the thyroid gland?

The thyroid is a gland located in the neck that produces hormones that regulate how hard the cells of the body are working.

Radioactive Iodine treatment uses a form of iodine that is radioactive; it is either taken as a capsule or swallowed as a liquid. The RAI is absorbed by the thyroid tissue and its radioactivity damages the DNA (genetic code) of the thyroid cells to a stage where they no longer function.

If this is after surgery it may be used to eliminate any residual thyroid tissue that was not surgically removed. It can also be used to treat metastatic thyroid cancer. This is where the cancer cells have spread to other parts of the body.

First Specialist Appointment (FSA)

Your consultant (Radiation Oncologist or Registrar) will explain the RAI treatment procedure to you. Your diagnosis, treatment options and potential side effects of treatment will be discussed. If you consent to having RAI treatment, a signature will be obtained at this stage. For the potential side effects please refer to section 'Effects of treatment' on page 8 in this brochure.

Nursing education appointment

Before coming for your RAI treatment you will be seen in the Radiation Oncology Clinic. During this clinic visit you will be given all the necessary information needed for your treatment, including a date to be admitted to the ward for treatment.

It is important during this visit that you discuss with the doctor/ nurse if you have any allergies or have had any reactions after having a CT scan.

During this visit a Radiation Oncology nurse will discuss the following points with you:

- Medication and food preparation
- Blood tests
- Preparation for hospital admission
- Effects of treatment
- Contraception and pregnancy
- Precautions after discharge

Medication and food preparation (prior to RAI treatment)

In preparation for the RAI treatment, certain foods and medication (including thyroxine) will need to be stopped as they can interfere with this treatment, your doctor will discuss stopping these medications with you.

A low iodine diet is needed to reduce the amount of iodine in your body before you have the RAI treatment. This diet will improve treatment outcomes and you will be advised to start two to three weeks before your RAI treatment.

Foods to avoid	Foods allowed
<ul style="list-style-type: none">• Iodised salt• All seafood• Sushi• Kelp• Eggs (small amount in baking / bakery products are ok)• No more than one cup of dairy products each day. This includes: milk, cheese, yoghurt, ice-cream etc.• Restaurants or take out• Foods and medicines containing red food dyes (erythrosine), i.e. pink icing• Vitamin and mineral supplements containing iodine or red food dye	<ul style="list-style-type: none">• Fresh or frozen fruit and vegetables• Breads and cereals• Fresh meat and poultry <p>These foods can help your body to absorb less iodine so eat more of these:</p> <ul style="list-style-type: none">• Cabbage• Cauliflower• Broccoli• Brussel sprouts• Kumara

Blood tests (prior to RAI treatment)

You will be asked to have a blood test approximately three days prior to the RAI treatment. This will test for specific thyroid hormone levels. Female patients will also have their pregnancy status checked at this stage.

Preparation for hospital admission

It will be necessary for you to be isolated during your admission as you will be receiving a radioactive substance which could be a health hazard to others. The room is designed to ensure as little radiation as possible is passed on to the other people nearby. During your stay you will be required to remain in your room with the door closed, by yourself, for one week.



Room 25, Ward M5, Level 5 Menzies Building at Waikato Hospital

The room you will be staying in is equipped with:

- radio, television, kitchenette
- toilet and shower
- the NZ Herald can be delivered daily if you wish
- telephone. Friends and family will be able to contact you on 07 839 8988, ask for extension 98180. **It is important to note that visitors are not permitted in the room during your stay.**

You are recommended to wear old clothing while you are in hospital. It is advisable to bring in clothes that you don't mind being disposed of when you are discharged or clothing that you are happy for the hospital to retain, if needed, until radiation levels have decreased to an acceptable limit. Please be aware that this may take several months.

Alternatively you can wear hospital clothing during your stay.

Personal equipment such as laptops, cell phones, mp3 players, letter writing stationary and reading material may be brought in to the ward, but everything will need to be checked by the medical physics team for radioactivity before you are discharged and may be returned at a later date.

All items in the room will be checked for radioactivity before they may be removed. If some items are still radioactive these will need to be retained by the hospital until radiation levels have decreased to an acceptable level. While all care will be taken the hospital cannot accept responsibility for any damage or loss.

Day of admission

Before 10am:

Have a light breakfast (e.g. toast or cereal). **Nothing to eat or drink from 10am.** This is to ensure that your stomach is completely empty and nothing remains that may prevent the absorption of the iodine.

11am:

Arrive at Ward M5. You will be seen by the House Officer who will ask you some questions about your medical history.

If your Radiation Oncologist has not already done so, you will be asked to sign a consent form confirming that you agree to the procedure, and that you understand the process. There will be time for any questions that you may have.

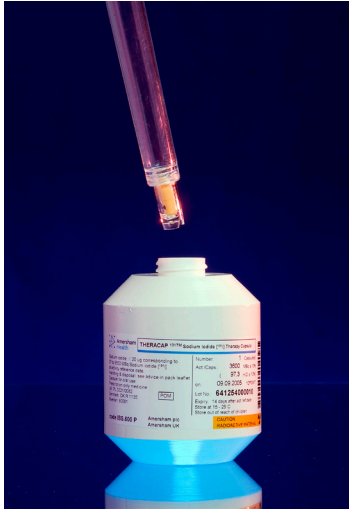
30mins prior to RAI treatment:

You will be given an **anti-sickness tablet** before you have your treatment. The treatment is not likely to make you sick, but the anti-sickness tablet is given as a precaution.

Administration of RAI treatment

Once all the necessary admission procedures have been completed, a Radiation Therapist and Medical Physicist will come to the ward with the radioactive iodine.

The radioactive iodine comes in two forms, either a colourless liquid or a capsule.



If you require a capsule you will be asked to take this through a plastic cylinder without touching it. This will be taken with a large glass of water.

The liquid form will be required to be drunk through a straw without holding on to it. If you wear dentures, it will be necessary to remove them so that they are not coated with the radioactive iodine. They can be replaced after you have had the drink.

After the administration of the RAI you should not eat or drink for another two hours.

Isolation in the ward

You will stay in your ward room for approximately five days and during this time your radioactivity levels will decrease through radioactive decay. Over a few days the iodine will be excreted through your urine, bowel motions, sweat and tears.

Bathroom:

It is recommended that you empty your bladder regularly to avoid unnecessary exposure to radiation in the bladder. Males need to pass urine in the sitting position to avoid any spillage. Please flush the toilet twice after use.

Nurse communication:

There will be a nurse allocated to your care every shift. If you have any questions or concerns you are able to contact the nurse via telephone or by using the call bell. The nurse will talk with you from the entrance of the room as they must maintain a distance of two metres from you to minimise their exposure to radiation. Any one nurse can only stay within the room for 30 minutes in a 24 hour period.

Meals:

You will be able to choose your meals from a weekly menu that someone will go through with you. Snacks and refreshments will not be supplied between meals. You are able to bring in snacks and cold drinks if you wish as the room has kitchenette facilities.

Your meal will be delivered with disposable cutlery/plates but there are cutlery and plates for you to use if you wish. All meal trays will need to stay in your room until you have been cleared for discharge. Please notify the nurse if you do not receive a meal. You will be provided with rubbish and laundry bags at the beginning of your stay. These are not cleared away until after you have been discharged.

Thyroid hormone replacement:

Following RAI treatment of your thyroid, the gland will stop functioning. Therefore it will be necessary for you to take a thyroid hormone replacement medication for the rest of your life. Those who have had their thyroid gland removed at surgery prior to RAI, will need to resume thyroxine. This medication will normally be recommenced on day three of your treatment.

Effects of treatment

Most people tolerate the radioiodine therapy well and experience no significant side effects from the treatment. However, there are a small number of patients that experience some early and late side effects.

Potential side effects include but are not limited to:

Early side effects (can occur days to weeks starting radioactive iodine treatment)	Late side effects (may occur months or years after radioactive iodine treatment)
<ul style="list-style-type: none">• Fatigue (tiredness)• Mild nausea• Vomiting• Loss of appetite.• Tenderness/swelling in the thyroid area• Taste change/dry mouth• Bone marrow suppression <p><i>If you experience any of these side effects please discuss this with your nurse.</i></p>	<ul style="list-style-type: none">• Pulmonary fibrosis• Permanent bone marrow suppression• Genetic effects

There is an extremely small risk of developing a second cancer many years after radiation therapy treatment.

It is perfectly normal to feel emotional about the journey you are going through. Everyone deals with the situation differently. You may find it helpful to talk to family and friends about how you are feeling or if you would like outside professional and psychosocial support please mention this to a member of your healthcare team.

Contraception and pregnancy:

Female patients must not:

- become pregnant within six months of RAI (low thyroxine levels during pregnancy may cause complications)
- breast feed within six months of RAI

Discuss with the doctor if there is any chance that you may be pregnant or if you are breast feeding.

Male patients must not:

- father a child within six months of RAI; we advise to use contraception during this time

Discharge from ward

Before you are discharged a Medical Physicist will use a radiation detector (a Geiger counter) to measure the levels of radioactivity on yourself and in your room. Once these are acceptably low, you will be able to return to your home. Generally the stay in hospital is five days. They will also discuss the followings discharge precautions.

Precautions after discharge

Even though you have been discharged, there are still precautions you will need to take for a period of time after discharge. The length of time that you should follow these precautions will be discussed (the maximum timeframe is listed below) with you at discharge by the Medical Physicist, and you will be given a RAI treatment card outlining this.

Refrain from close contact with children under five and pregnant women	18 days
Avoid sleeping in the same bedroom as another person	7 days
Use your own set of crockery and cutlery and wash separately. Alternatively use disposable cutlery	7 days
Refrain from food preparation and dishwashing	7 days
Double wash clothes. Wash separately from clothes of others	7 days
Continue to double flush the toilet	7 days
Keep pets at arms length	3 days
Avoid visiting places of entertainment or going to work	3 days
Restrict the use of public transport and only use when necessary	1 day
In private transport aim to sit away from other passengers	

Total body scan and blood tests

You will receive an appointment for a **total body scan** approximately **one week after** discharge.

You will need a form to have a **blood test** done to check hormone levels approximately **six weeks after** discharge. You will get this before leaving the ward.

Follow up

You will receive an appointment to be seen in the Radiation Oncology Clinic approximately two to three months after finishing treatment. If you have any questions or concerns between the end of your RAI treatment and this follow up appointment, you can contact oncology nurses or one of the numbers below.

Useful numbers

- Waikato Hospital switchboard 07 839 8899
- Oncology Outpatients department 07 839 8604
Level B1 Lomas Building
- Radiation Therapy Booking Clerk 07 839 8806
Level 1 Lomas Building
- Ward M5 07 839 6525
Level 5 Menzies Building
- Cancer Society 07 838 2027
or 0800 22 77 44
- Wilson Parking 07 839 8901

For further information go to Waikato DHB website:

<https://www.waikatodhb.health.nz/radiationoncology>

<https://www.healthnavigator.org.nz>

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