

Information for patients receiving Radioactive Iodine Therapy for Thyroid Cancer after Thyroxine[®] withdrawal

Introduction

Radioiodine has been prescribed for your thyroid cancer, and we hope that this leaflet will help to explain the treatment, and answer most of your questions. Please ask one of the team caring for you if you have questions or don't understand what has been said. The team consists of your Consultant, nursing staff, a physicist and a radiographer from the nuclear medicine department.

What is Radioiodine Therapy?

Radioiodine is a radioactive form of iodine. It is used to treat thyroid diseases and some forms of thyroid cancer. Iodine is needed for the normal working of the thyroid gland. The thyroid controls the body's metabolism – the speed at which the body works: for example, the rate of breathing or heartbeat.

While surgery alone is adequate treatment for some people with small thyroid cancers, radioactive iodine is used after surgery in many patients with thyroid cancer. At the time of your operation, most of the thyroid gland and as much tumour as possible was removed. Additional treatments with radioactive iodine are used for tumours that have recurred in the neck or spread more widely in the body. Like ordinary iodine, radioiodine is taken up by the thyroid cells and the radioactivity destroys these cells. The principle of this treatment is that the thyroid tissue takes up radioactive iodine very selectively; the cells are destroyed by radiation and eliminate any remaining thyroid tissue in the body. The treatment is painless and very rarely causes nausea.

The timing of the treatment

There is no specific timing for radioactive iodine and it is given at least four weeks after the operation to remove your thyroid gland. This ensures that any remaining thyroid tissue is eager to absorb iodine and your body has had time to heal following surgery.

How is it done?

The radioactive iodine is given in the form of a small capsule, which you drink with water. It causes few side effects. Slight swelling of the neck or salivary glands is the most common symptom experienced. This can be relieved by chewing gum or sucking hard lollies which will stimulate the saliva glands. It will not make you sick or cause your hair to fall out. The Consultant will explain the procedure to you before giving you the radioiodine capsule.

Do I have to come into hospital?

Yes, you will need to stay in hospital for two to six days. How soon you can go home depends on how quickly the radioactivity leaves your body. Ward 5C, in the Joyce Tweddell Building at the Royal Brisbane and Women's Hospital, will provide a private room with ensuite facilities, television, small refrigerator, electric jug, tea, coffee, biscuits and toaster. Meals may be selected from the daily menu or special diets arranged if necessary. There are no locks on the doors, and the call button is one press away from calling a nurse day or night. A telephone is provided for incoming calls and you may use your mobile phone for outgoing calls. You may bring reading, writing, handicrafts, portable DVD player, laptop computer, mobile phone with charger, self-selected food stuffs, drinks, toiletries, hair dryer, personal photos and we recommend a jumper/cardigan or tracksuit. The suites have individual adjustable temperature controls.

Low iodine diet

2 weeks before radioactive iodine you will be asked to start eating a low iodine diet, as too much iodine can make the treatment less effective. Avoid the following;

- Fish and Seafood including sushi
- Seaweed (kelp is often added to multivitamin tablets).
- Table salt that has iodine added

Stopping your Thyroxine tablets

You will be asked to stop your Thyroxine for 4 weeks before starting treatment, mark this date and your admission date in your diary or calendar. You will be able to restart your Thyroxine on discharge. Many find stopping their Thyroxine makes them tired but it is important that you do or the radioiodine treatment may not be as effective. (Your doctor may also discuss the use of short acting thyroid hormone tablets (Tertroxin) for the first two weeks after stopping Thyroxine to minimise tiredness). Continue to take any other medication you have been prescribed and bring these and a list of their names into hospital with you. It is preferable that you administer your own medications, but alert the nursing staff if you are concerned and wish any assistance with your medication.

What do I need to bring into hospital with me?

The following list may also be helpful:

- Comfortable clothes and night wear
- Toiletries such as toothbrush, toothpaste, soap, wash cloth, shampoo, conditioner, shaving kit, hairbrush and comb etc
- Lemon drops or other mouth-watering lollies or chewing gum
- Self-selected foods
- Books, magazines, knitting, games, laptops, Portable DVD players etc
- Mobile phone with charger
- Preferred tea and or coffee brand
- Preferred drinking fluids, if you dislike water.
- Alcohol is permitted in responsible moderation. Alcohol intoxication is inappropriate and will not be tolerated.

Your family and friends can contact you by going through the hospital's main switch operator on **(07) 3646 8111**. A phone call is the next best thing to a visit – remember NO VISITORS. If you have small children, dependent family members, pets etc then it is important to make sure that all the arrangements have been made for their care while you are absent. Check travel or flight times if you do not live in Brisbane. Our Welfare Worker can assist with your travel plans to return home, if this is necessary. Wireless internet connection is available at the Royal Brisbane & Women's Hospital.

Day of admission

On the morning of your admission, firstly go to specimen collection to get a blood and urine test at 9.30am. This is located on level 1 of the James Mayne Building (left of the top of escalator/opposite side to the pharmacy). You do not need to fast and your pathology request slip will already be there. Then come to the Reception Area, 4th Floor Joyce Tweddell Building, Royal Brisbane and Women's Hospital. Family and friends may stay with you until lunchtime. Children under 8 will not be able to accompany you to the ward. Your Radiation Oncology Consultant and The Thyroid Clinical Nurse Consultant will be informed of your arrival. The Clinical Nurse Consultant will conduct an interview with you and your significant others, to provide education and discuss specific details of your treatment, and of course to clarify any questions you may have.

X-rays may be ordered at this time. Female patients of child bearing age will need to have a pregnancy test to confirm that they are not pregnant before receiving radioiodine treatment.

A Nurse will accompany you to Ward 5C. On admission to the ward, you will be greeted by the radiation Clinical Nurse who will orientate you to your surroundings. A doctor will take a medical history, do a routine examination of your present state of health and ensure all the present medications you are currently taking are continued. On admission to the radio-isolation suites, you may be seen by an occupational therapist (OT). An OT is a health professional working towards enabling people to participate in their everyday activities as safely and independently as possible. Your OT will assess your ability to look after yourself safely whilst staying in the radio-isolation suite. They will then recommend ways to manage any potential risks or concerns whilst you are in isolation in hospital. After lunch, we suggest you change into your old comfortable clothing.

What precautions are taken about the radioactivity?

Whilst in hospital you will be cared for in an isolation room. You will not be allowed visitors during your stay (friends and family can bring items to you that the nurse can then deliver to you).

Nursing staff will not be able to stay with you for any longer than is necessary to attend to your needs. We request that you maintain a distance of no less than 2 metres during these encounters (i.e. when the nurse comes to your door if you could please move to the far corner of your room). The radioiodine leaves your body in your urine, saliva and perspiration. Some of this radioactivity may get onto clothing, bedding and anything you put into your mouth. You will be supplied with bedding and towels, (these will not be changed during your stay, unless excessively soiled, but you may request any extra linen you might need). Your meals will be served on disposable plates, with disposable cutlery and cups.

Note: We recommend that you bring only those things which will make your isolation pleasant. Should articles become contaminated with radioactive iodine through bodily secretions, it will be necessary for us to keep them for a period of time, until the radioactivity fades away. This is very unusual. A wardrobe is provided for your street clothes, suitcase, etc to ensure that they are not contaminated during your stay. We do not need to destroy any articles.

Treatment procedure for radioiodine

There are some measures you can take to prevent the spread of radiation which leaves your body. When washing and particularly when brushing your teeth, please take care not to splash water outside the washbasin. Rinse your washcloth and toothbrush well after use. Take care not to splash urine outside the pan when using the toilet and flush it twice after use (with the lid down). Men may find this easier if they sit down when passing urine. Use more toilet paper than you normally would. Wash your hands with hot soapy water after using the toilet. If you have an accident with splashing or spillage, please let the nurse know immediately. You will be asked to take a daily shower or more often if you wish. We advise that you wash your hair and use ample hot soapy water. Do not use handkerchiefs. Paper tissues will be provided and these should be flushed down the toilet.

The iodine that is not retained in your thyroid is usually eliminated by the urine within 48 hours. You will be asked to drink more than usual during your treatment (2-3 litres/day) to help flush any remaining radioactive iodine which has not been trapped in the thyroid tissue. A small quantity will be present in your saliva, sweat and bowel movements. It is important that your bowels open daily. If you do not open your bowels daily, please ask the nurse for some medication to assist you with this.

Eat tart candy, chew gum or drink lemon juice to produce more saliva and in this way prevent iodine build up in the salivary glands. Wash your hands before knitting or reading; do not lick threads. Do not chew the ends of pencils or knitting needles. Do not lick postage stamps or envelopes. Traces of radioiodine in your saliva may be transferred to those items.

You should not leave your isolation room for any reason. Call for the nurse if you have any problems during your stay by using either the call button or phoning the nurse station on 68802. If you are concerned about anything or have questions, please ask the staff caring for you.

Discharge planning

On your planned day of discharge (approx. 7.30am), a physicist with a radiation detector will measure your radioactivity levels. Once this is acceptably low (less than 22), you may leave your room, but we like you to stay within

an adjacent interview room. Then you will have a total body scan at the Nuclear Medicine Department, which takes about one hour.

A Radiation Oncology Consultant will visit, inform you of the results of the scan, prescribe, or if necessary adjust your current Thyroxine dosage, and arrange a follow-up outpatient's appointment. At this time, if needed the Radiation Oncology Consultant can complete any travel forms or medical certificates. You can expect your discharge time to be approximately 11-3 pm, perhaps earlier depending on the duration of the body scan.

If your journey home requires more than a 3-hour drive or a plane flight, you may be asked to stay overnight in Brisbane and travel the following day. Sleep alone during the first 7 days after discharge. During this period avoid kissing and sexual intercourse. Avoid close and prolonged contacts with other people, especially children and pregnant women, because they are more sensitive to radiation than the rest of the population.

Continue with the same hygiene precautions that you followed whilst in hospital.

Keep your toothbrush separate from those belonging to the rest of the family.

Separate a towel for your exclusive use. Put aside for your use a set of cutlery (spoon, knife and fork) and a cup and glass, and wash them separately with abundant water for the next seven days following discharge. Do not bite your nails or put objects into your mouth like pencils, necklaces, etc. Continue to drink approximately 8 glasses of fluid per day and eat tart candy or lemon juice to produce more saliva.

There is a lot you can do to prevent the spread of radioactivity. The three basic principles to avoid unnecessary radiation exposure to others are:

- **Distance:** do not get too close to any person. Radiation decreases significantly with increasing distance. Two meters is a safe distance.
- **Time:** Radiation exposure to other people depends on how long they remain with you. Therefore, avoid prolonged (>2 hours) close contact with other people.
- **Hygiene:** Good hygiene, especially in the form of regular hand washing with soap and water, minimises the possibilities of direct contamination with radioactive iodine. (FLUSHING THE TOILET TWICE WITH THE LID DOWN)

Continue these principles for 7 days on discharge.

Precautions to be observed at home

To assess the precautions required for your return home, your Radiation Oncology Consultant will discuss your home circumstances with you at the very first consultation. This will help to plan ahead any arrangements you may need to make prior to your admission. Although you are safe to leave the hospital, depending upon the age of your family members at home, special precautions should be taken with regard to infants, small children and pregnant women. Close contact is undesirable; however, it is acceptable to be at a reasonable distance from adult friends or family members in the same room. We recommend that you wash your cup and tableware separately for one week. Clothing can be laundered in the normal cycle. Depending on your place of employment, and with whom you work, your Specialist will advise you when it will be reasonable to resume normal duties. This is normally 1-3 days post discharge.

Remember to ask your Consultant or the Clinical Nurse Consultant about any worries or concerns you may have about discharge advice. Your Clinical Nurse Consultant is a designated point of contact for you at the hospital and will help to answer any questions you may have.

Additional information and support

There are many websites on the Internet which provide information regarding Thyroid Cancer and other Thyroid diseases. They are not all equally evidence based or reliable. You can also talk to someone about your feelings and concerns by getting in contact with a support group.

Cancer Council Queensland (Phone: 1311200 www.cancerqld.org.au)

Butterfly Thyroid Cancer Trust www.butterfly.org.uk

MacMillan Cancer Support www.macmillian.org.au

British Thyroid Foundation www.btf-thyroid.org

Thyroid Foundation of America www.tsh.org

Cancernet www.thyroid-cancer.net

MedlinePlus (information for patients) www.nlm.nih.gov/medlineplus/ency/article/001213.htm

Thyroid Cancer Survivors Association www.thyca.org

References

Schlumberger, F, Pacini, F 2006, **Thyroid Tumors**, 3rd edn, Editions Nucleon, Paris

Cancer Council New South Wales 2010, **Understanding Thyroid Cancer: A guide for people with cancer, their families and friends**, Kings Cross, viewed 5 May 2010, http://www.cancerCouncil.com.au/html/patientsfamiliesfriends/typesofcancer/thyroid/downloads/thyroid_cancer.pdf

Contact Details

RBWH Cancer Care Services

Clinical Nurse Consultant

Phone: (07) 3646 6979 (Mon-Fri)

Mobile: 0458 820 755

Ward 5C

Phone: (07) 3646 8802 (24 hours)

Appointments

Phone: (07) 3646 7751