

Nuclear Medicine Outpatient Radioactive Iodine Therapy

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(Patients Name)

Please go to **ACT Pathology**

Level 1, Building 10, at the Canberra Hospital

At on **Friday** the
(Date)

Then go to Nuclear Medicine, in Medical Imaging
Level 2, Building 12, at the Canberra Hospital by **10am**

Your endocrinologist has referred you for Radioactive Iodine therapy, sometimes called RAI, or even radioiodine ablation. RAI is a very targeted form of radiation therapy. The most common condition treated with RAI is thyrotoxicosis (Graves' Disease). Thyroid tissue is the only part of your body which absorbs and stores iodine. By giving you a radioactive form of iodine (called Iodine-131), we are able to actively target and eliminate thyroid tissue in your body, even if it is not located within your thyroid gland. Your doctor will have prescribed a dose to eliminate some or all of the thyroid tissue in your body, depending on your own medical condition.

What will the therapy involve?

1. All **women** between the ages of 12 and 60 will be provided with a 'β HCG pregnancy test' pathology request form before the day of therapy, unless you have had a hysterectomy. Please go to ACT Pathology (level 1, building 10, Canberra Hospital) by 7:30am. Results take one (1) to two (2) hours.
2. Please come to Nuclear Medicine by 10am. One of the Nuclear Medicine doctors will come to see you, with a Nuclear Medicine Scientist, to answer any last minute questions you may have. Once all your questions have been answered, we will ask you to sign a 'consent for treatment' form.
3. The final step will be for you to swallow the radioactive iodine capsule (with some water). It is about the same size and shape as a paracetamol or ibuprofen capsule. After this time you will be emitting radiation, so we will ask you to go straight home.
4. Some restrictions will apply – these are outlined further on in this letter.

What preparation is required?

Medications: your endocrinologist will have provided you with information about Thyrogen or Thyroxine withdrawal, please follow their advice, as this is important for ensuring sufficient absorption of the radioactive iodine.

Fasting: Please have a light breakfast (for example, toast, or cereal) before 6am. You will need to fast from 6am until one (1) hour after you swallow the therapy capsule. Small sips of water are allowed during this time. If you are diabetic, you will need to discuss this with your endocrinologist – you may be advised to take half your normal medication in the morning.

Pregnancy Test: It is very important to be sure you are not pregnant when you have radioactive iodine therapy. All women between the ages of 12 and 60 will be provided with a 'β HCG pregnancy test' pathology request form before the day of therapy, unless you have had a hysterectomy. Please go to ACT Pathology (level 1, building 10, Canberra Hospital) at **7:30am** on the day of therapy to have this blood test done. Results take at least two (2) hours, and we cannot proceed with your therapy until we have a negative blood test result. Please let us know if you do not have a pathology form with 'β HCG pregnancy test' written on it.

Breastfeeding: You must have stopped breastfeeding at least three (3) months before radioactive iodine therapy. This is because metabolic changes in the tissue will result in an increased radiation dose to the breast during this time. Please discuss this with your endocrinologist.

CT scans with contrast: It is important to wait at least 8 weeks after having iodinated contrast, as this may interfere with iodine absorption in your thyroid tissue, and reduce the effectiveness of the therapy. Please let us know straight away if you think you may have had a contrast dye within two months of your planned therapy.

What happens next?

After you have swallowed the capsule, your body will begin to absorb the radioactive iodine. Some will be absorbed by your thyroid tissue, however some of the iodine will also be excreted by your body, in all your bodily fluids. This includes sweat, saliva, urine, faeces, tears, blood and vomit. Because of this, we have outlined some precautions for you to observe following your therapy, which are outlined further on in this letter.

Please use a separate toilet to other people if at all possible. Please try to be very neat and hygienic when you use the toilet, to avoid contamination which may be transferred to other people. Please flush the toilet twice (don't use the half-flush option) to move the radioactive iodine in the plumbing away from the room. Most of the excretion happens in the first two days after you swallow the capsule.

Where possible, please use separate personal electronic devices, such as a mobile phone, laptop, etc. You can help to avoid contamination on these items by limiting physical contact with them – place your laptop on the table rather than your lap, and wear disposable gloves when handling them. Using the 'speaker-phone' option is also a good idea.

Avoid spending long periods of time close to other people. Examples of activities to avoid include going to see a movie, or attending church services or other events where you will be close to other people for a period of time. Activities like shopping are fine, as you will only be close to individuals for a short period of time. We suggest you discourage visitors from staying for more than two (2) hours, especially pregnant women and children.

What are the risks of the therapy?

It is possible that the radiation dose we give will not be sufficient to eliminate all your thyroid tissue, and sometimes a return visit with repeated therapy is required.

Exposure to radiation comes with a potential risk of developing cancer in the future. This risk is low, and needs to be balanced against the benefits of having the therapy.

Because the radioactive iodine is excreted in your saliva and tears, there is a risk of developing complications after treatment in your salivary glands and tear ducts.

Please speak to your endocrinologist about this if you have any concerns prior to your therapy, or if you experience any symptoms after the therapy.

We recommend keeping well hydrated by drinking water. This will help to reduce your exposure to radiation by allowing your body to 'flush out' excess iodine in your urine. We also suggest chewing gum or sucking on sour lollies for the first few days after therapy, to help move the iodine through your salivary glands.

INFORMATION

Are there any side effects?

You may feel dryness or tenderness of the mouth, neck and throat, which can be helped by drinking water and sucking on sour lollies or chewing gum. You may also feel that food tastes or smells different. Some people experience a loss of hair, which is usually only for a few weeks. More common side effects occur as a result of stopping medications prior to therapy. Thyroid hormone withdrawal may make you feel thirsty, tired, nauseated or breathless.

You may experience some discomfort or pain in your neck, which can be relieved with over the counter pain medication.

What about my pets?

Your pets will not receive enough radiation exposure to cause harm, however we do recommend that you observe the 'separate bed' precautions with your pets as well, as they can potentially spread contamination from your sweat or saliva. If you are concerned, you may wish to observe the same precautions as outlined for small children, however there is no requirement to do so.

Where can I get more information?

Your endocrinologist, or the Nuclear Medicine staff making your appointment are both good sources of information before your appointment, and can direct you to other people if needed. You will also have a chance to speak to the Nuclear Medicine Specialist and the Medical Physicist on the day of your treatment; please feel free to bring a list of questions you want to ask.

Some useful information is available at:

www.thyroidfoundation.org.au/



Radiation Protection Information & Precautions

When you leave hospital, you will still be emitting radiation. It is important to reduce the amount of radiation exposure to other people, including family, friends, work colleagues and other members of the public.

Please follow the precautions below for the specified time after your therapy:

Dose	Children 0-5yrs & Pregnant women	Anyone more than 5 years old	Carer / Partner
555MBq (15mCi)	20 days	14 days	5 days (minimum)
370MBq (10mCi)	16 days	11 days	1 day (minimum)

Avoid spending more than two (2) hours within 2 metres of other people.

This includes travelling (for example in a plane or car) and activities in public places like going to the movies or to church services

Maintain a distance of at least one (1) metre between yourself and other adults, and two (2) metres between yourself and children or pregnant women

You should avoid spending **more than 15 minutes per day within 1 metre** of another person

Sleep in a separate bed, at least two (2) metres from other people (including pets)

Be very careful to **avoid contamination when using the toilet**. If possible, use a separate toilet. For men as well as women, please sit down to use the toilet, wipe carefully with toilet paper, discard the paper into the toilet, and flush the toilet twice (do not use the half-flush option). Wash your hands with handwash immediately afterwards.

Do not share crockery, cutlery, toothbrushes, face cloths, hairbrush, clothes, towels, sheets and any other linen with other people. They are safe for other people to use after washing (extra rinse cycles, hot washes etc are not necessary). **Do not prepare meals for other people**, as your sweat may transfer to their food.

Do not participate in any intimate activities. Kissing should be avoided

If you have children under 5 years old, you will need to minimise close contact. This means try to avoid spending long periods of time close to children (within 2 metres).

Children less than 3 years old should be cared for by someone else during this time (at least for the first day), preferably in separate accommodation

If you work closely with other people, you may need to take some time off work

- If you work **within 1 metre** of another person each day – 1 day off work after discharge
- If you work **closely with young children** (for example in day care) – 2 days off work after discharge

Conception Restrictions

It is also very important for both men and women NOT to conceive children for a few months after radioactive iodine therapy – At least 6 months for women, and at least 4 months for men. This is for several reasons – to avoid radiation exposure to a developing baby, to ensure additional radiation therapy is not needed, and to allow thyroid hormone levels to normalise, which is necessary for conception and healthy baby development. Please discuss this further with your endocrinologist if you have any more questions or concerns.



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| ① Central Outpatient Dept. (OPD)/Tower Block | ⑫ Diagnostics and Treatment | ⊕ Emergency Department |
| ② Main Reception/Foyer | ⑬ National Capital Private Hospital | Ⓡ Radiation Oncology |
| ③ Building 3 (various departments) | ⑮ Psychiatric Services Unit | Ⓦ Walk-in Centre |
| ④ ANU Medical School | ⑯ Community Dialysis | ⒸⒸ Woden Valley Child Care Centre |
| ⑤ Residences (Public and Staff) | ⑰ Rehabilitation Independent Living Unit | ⓇⒸ Red Cross House |
| ⑥ Administration (various departments) | ⑲ Capital Region Cancer Centre | Ⓡ Brindabella Specialist Centre |
| ⑦ Alcohol and Drug Unit | ⑳ Building 22 (Information Services Branch) | Ⓜ Helipad |
| ⑧ Pain Management | ㉑ Building 23 (various departments) | Ⓟ Parking |
| ⑨ Residences (Doctors) | ㉒ Building 24 (various departments) | ♿ Disability Parking |
| ⑩ Pathology | ㉓ Adult Acute Mental Health Inpatient Unit | 🏍️ Motorcycle Parking |
| ⑪ Maternity/Women's and Children's Hospital | ⓁⓁ Loading Dock | 🚌 ACTION Bus stop |
| | | 🚲 Public bicycle parking |
| | | --- Pedestrian route around construction site |

INFORMATION