



Outpatient Thyroid Ablation Treatment

Information for patients and their family members

The Ottawa | L'Hôpital Hospital | d'Ottawa

Disclaimer

This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified health-care provider. Please consult your health-care provider who will be able to determine the appropriateness of the information for your specific situation.

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Introduction: Thyroid ablation outpatient treatment

After thyroid surgery you will be treated with radioiodine to destroy any remaining thyroid tissue in order to decrease the chances of thyroid carcinoma reoccurring. You will be administered radioactive sodium iodide (radioiodine) by the nuclear medicine department in capsule or liquid form. This type of treatment has been performed for many years with a very high rate of success.

This pamphlet along with documents provided by nuclear medicine will help you understand how radiation is used safely and puts radiation risk in perspective.

What you should know about radiation

Radiation: What is it?

Radiation is simply energy. It travels in the form of waves or particles. Radiation can be divided into two categories: ionizing (high energy) and non-ionizing (low energy) radiation. We use low-energy radiation in our homes every day, when turning on the lights, in microwaves, radios, and wireless internet routers. *Non-ionizing* radiation does not have enough energy to cause changes in your cells.

Higher energy, *ionizing radiation* is also common. This type of radiation is used to take x-rays or CT scans, or for cancer treatment. Ionizing radiation also occurs in nature. We are exposed to it from space, and from minerals in the earth. Even some of the foods we consume are radioactive! Natural radiation such as this is called background radiation. It is unavoidable and not harmful.



Some of the potassium in the food we eat is radioactive. So, foods that are high in potassium tend to be slightly radioactive. Bananas, potatoes, beer, and red meat are all examples of radioactive foods.

Radiation for your treatment

The radiation used in your thyroid ablation treatment is *ionizing radiation*. This type of radiation has sufficient energy to cause chemical changes in your cells. In the case of your thyroid ablation treatment, we let the radiation cause chemical changes in your thyroid cells, which will destroy them.

The amount of radiation used in your treatment is optimized; your radiation dose is kept high enough that it will destroy all the remaining thyroid tissue, but low enough that it will not cause damage to the rest of your body.

How does the radiation leave my body?

The radioiodine leaves your body in two ways: physical decay and biological elimination. Radioactive iodine disintegrates (or, breaks down) naturally. Every eight days, the amount of radioiodine is reduced by half. Your body also works hard to eliminate the iodine that doesn't go to your thyroid. Your body eliminates iodine in urine, sweat and saliva. These two processes (the disintegration and the body elimination) combine to remove the radioactive iodine in your body quite quickly. Six days after your treatment, there is no need for any precautions.

What is the radiation dose to my family?

The exposure that your family will receive during your treatment is very low.

We measure the amount of radiation a human receives in milli-Sieverts (pronounced *mill-ee-see-verts*; short form: mSv) A mSv is basically a measure of how much damage is done to cells due to the radiation.

Radiation doses in perspective

- The exposure to your family during the treatment will be less than 1 mSv.
- Average background radiation: 2.7 mSv/year while living in Ontario
- Average background radiation in parts of India: 10 mSv/yr. The background radiation is higher there due to the types of rocks and soil in that area.
- The radiation that you receive during 10 New York to Los Angeles round trip flights: 1 mSv. This is due to being at high altitudes, where the atmosphere is less able to shield us.
- Doses from CT scans (to adults) Head CT: 2.0 mSv Chest CT: 8.0 mSv Abdominal CT: 10.0 mSv

Caregiver status

If you require assistance after the treatment, a designated person will be given "caregiver status". Radiation exposure to these individuals will not exceed 5 mSv. This represents **a very low dose** of radiation. Caregivers receive a higher dose than other family members because they need to be close to the patient. Caregiver status will be determined by your doctor during your consultation.

Minimizing risk

What you and your family can do

For a short time after your treatment you will be radioactive due to the radioactive iodine in your body.

There are a few precautions you and your loved ones can take to keep doses to your family members as low as possible.

Patients MUST:

- Remain in your residence for 2 days and avoid ALL contact with others
- Be willing to stop breast feeding (if applicable)
- · Not take public transit
- · Maintain a minimum of 2 meters (6 feet) distance from others
- Sleep alone for 5 days
- Avoid contact with infants, children (< 12 years) and pregnant (or possibly pregnant) women for 5 days
- Keep laundry and dishes separate from others for 5 days
- Use a separate bathroom or follow specific cleaning precautions

Patients SHOULD:

- Drink large amounts of fluids to aid your body in eliminating the radioiodine more quickly
- Sit down to urinate, flush toilet twice
- · Wash hands thoroughly
- · Not share facecloths, towels, or cutlery
- On days 3, 4 and 5 after treatment avoid close contact with others for long periods of time (use the same precautions as when you have a bad cold: minimize time, distance, and wash hands frequently)
- On days 3, 4, and 5 after treatment avoid prolonged travel with others (less then 3 hours)
- For women of childbearing age, it is strongly recommended that you do not become pregnant until after 6 months from the date of your treatment

From the 6th day onwards, there are no restrictions (with the exception of pregnancy and breastfeeding restrictions as listed above).

Children

Children may not understand the nature of your treatment and why they cannot be close to you. They are also more sensitive to health effects of radiation. It is your responsibility to avoid contact with children under 12 for Days 1, 2, 3, 4 and 5.

Pets

Pets should also be avoided for the first five days, as they will want to remain close to you. Take the same precautionary actions as you would with children under 12.

Treatment side effects

Common side effects

Most patients do not experience any side effects from this treatment. The most common side-effects are nausea and discomfort in the neck region. Anti-nauseants and pain medication can help to minimize these discomforts, and will be discussed during your medical consultation.

Other and more rare side effects include

Temporary and early pain/tenderness in your salivary glands, loss of saliva or taste, alterations in taste, and decreased white blood cell count. Not all side effects will occur in patients and are dependent on the dose of radioactive iodine administered. These can be further discussed with the physician during consult.

For more information

To learn more about radiation in general: www.radiationanswers.org

More information on thyroid ablation treatments: http://hps.org/publicinformation/ate/faqs/ nuclearmedicinetherapy.html

Questions/Concerns

Call the Radiation Safety and Health Physics Department: 613-798-5555 extension 17704 or Nuclear Medicine: extension 78396.

Health information for patients and their family

Patient and Family Libraries at The Ottawa Hospital

http://www.ottawahospital.on.ca/patient/visit/chlib/index-e.asp

The Ottawa Hospital's two patient and family libraries provide onsite access to:

- Reliable information on a variety of health, wellness and medical topics;
- Information about local associations and support groups
- Books, videos and DVDs for loan;
- · Computers with Internet connections.

Our Collection: The collection has over 2000 books, videotapes, audiotapes and DVDs. The collection includes medical dictionaries, home medical encyclopedias, reference texts, as well as books on a variety of health topics, such as medical tests, specific diseases and conditions, and caregiving.

Loaning materials: Patients and family can borrow items from the library for three weeks (21 days) and renew for a further three weeks if the material has not been reserved.

Come Visit Us!

Patient and Family Library

Civic Campus Main Building, Room D100A (take the "C" elevators to the 1st floor) 1053 Carling Ave., Ottawa ON K1Y 4E9 Hours: Mon. to Fri.: 8:30 a.m. to 12:30 p.m. and 1 p.m. to 3:30 p.m. Tel.: 613-798-5555 ext. 13315 Fax: 613-761-5292 Email: patientlibrary@ottawahospital.on.ca

Ninon Bourque Patient Resource Library

General Campus

Specializing in cancer-related information Cancer Centre Expansion, Main Floor (C1239) 503 Smyth Rd., Ottawa ON K1H 1C4 Hours: Mon. to Fri.: 8:30 a.m. to 12:30 p.m. and 1 p.m. to 3:30 p.m. Tel.: 613-737-8899 ext. 70107 Fax: 613-761-5292 Email: patientlibrary@ottawahospital.on.ca

The Patient and Family Library service at TOH provides information only, not medical advice. Your healthcare professional is the only person qualified to give you a medical opinion.

Title:	Thyroid cancer: a guide for patients
Author:	Van Nostrand, Douglas
	Bloom, Gary
	Wartofsky, Leonard
Call Number:	WK 270.1 T5 2004 c.2

Title:The Thyroid sourcebookAuthor:Rosenthal, M. SaraCall Number:RC 655 R67 2009

Title:The thyroid cancer bookAuthor:Rosenthal, M. SaraCall Number:WK 270.1 R69 2003

Title:Could it be my thyroid?Author:Rubenfeld, SheldonCall Number:RC 655 R83 2004