



# Radioiodine Therapy for Graves Disease

What to expect when your child gets radioiodine therapy

## What is radioiodine therapy?

Radioiodine therapy is used to treat an overactive thyroid gland (called hyperthyroidism) due to Graves disease.

## What is hyperthyroidism?

When the thyroid gland makes too much thyroid hormone it is called hyperthyroidism. “Hyper” means “too much” or “above normal.” The thyroid is a small gland in your child’s neck. The thyroid makes thyroid hormone that the body uses to control metabolism and growth. There are many causes of hyperthyroidism, one of which is Graves disease.

## How does radioiodine work?

We will give your child radioiodine in a capsule. The radioiodine is absorbed by your child’s thyroid from the bloodstream. It destroys the thyroid-producing cells in the thyroid gland. This causes the thyroid to shrink and reduce the amount of hormone it makes. It can take many weeks to many months for hormone production and release to stop entirely.

## How long will the radioiodine stay in my child’s body?

Most of the radioactive iodine goes to the thyroid gland and stays there. It slowly decays away over a few months. The remainder is eliminated during the first few days, mostly in the urine and a little bit in sweat and saliva.

## What do we need to do to prepare?

### 1. Meet with your child’s treatment team

Our treatment team will talk with you about safety precautions and how to prepare.

### 2. Stop anti-thyroid medications and make diet changes

- **At least one week before** the treatment, your child will need to stop taking all anti-thyroid medication (Methimazole).
- For one week before the treatment, your child must avoid seafood, shellfish, seaweed, iodine supplements (like multivitamins) and iodinated salt.

### 3. Collect supplies

Get these items before your child's treatment:

- Wipes that can be flushed down the toilet
- Disposable gloves
- Heavy duty, leakproof plastic trash bags. You will double the bags to make a specified trash bag.

### 4. Plan travel to the hospital and home

- Review your travel plans with the radiation treatment team.
- Plan on traveling directly home after your child's treatment. Hotel stays are not allowed.

### 5. Make arrangements at home

- Your child must be able to stay more than 6 feet away from all household members. This is especially important with pregnant women and other children younger than 16. Caregivers can be within 3 feet of your child for up to 6 hours a day.
- Your child will need to sleep 6 feet away from others. This includes bunk beds, beds that are close, sharing a bed and beds in different rooms that share a common wall (radiation will go through walls).
- Talk with your child's radiation team if your child is incontinent or uses special medical equipment.
- If your child throws up or feels sick to their stomach easily, talk with your endocrinologist who may prescribe medicine to help.

## What happens after radioiodine therapy?

The therapy capsules usually have no side effects, but call your child's doctor if you have any concerns or questions after treatment.

Your child's thyroid function will decline and then stop after a few months. We will schedule follow-up thyroid function tests for your child at 2 to 4 weeks after radioiodine therapy. We will also schedule a follow-up endocrinology appointment at 8 to 10 weeks after the therapy. The endocrinologist will prescribe thyroid hormone replacement pills for your child when they are needed.

## What kind of safety measures do we need to follow after treatment?

It is **very important** to follow these guidelines after your child's treatment. This is to protect family members from being exposed to radiation. As a general rule, during the day have your child avoid close personal contact for **7 days** after treatment. Night time restrictions are for longer (**3 weeks**).

### For the first 2 days:

Have your child or teen:

- Stay more than 3 feet away from away from adult family members and caregivers for at least 18 hours a day and at least 6 feet away as much as possible.
- Drink plenty of liquids (6 to 8 cups of fluids).
- Urinate every hour during waking hours the first day and often during the second day.
- Have a bowel movement every day. They can use a laxative if needed and if recommend by their healthcare provider. Check with your healthcare provider first before giving any type of medicine to your child.
- Shower every day.

### For the first 5 days:

- Have your child or teen stay away from school and work.

### For the first 7 days:

Have your child or teen:

- Sleep alone in bed with a 6-foot separation from adults, pets and others.
- Stay more than 6 feet away from babies, children under 16 and pregnant women.
- Avoid unnecessary and long trips on buses and trains. Avoid public places where your child may sit next to another child or a pregnant woman.
- Stay away from child care.
- Do not kiss others or have sexual activity.
- Use a separate bathroom if possible.

### Bathroom use and personal hygiene:

Have your child or teen:

- Use flushable wipes to clean the toilet seat after each use. Boys should sit down to urinate and use flushable wipes to remove urine splatter.
- Flush the toilet twice after each use.
- Wash hands for at least 20 seconds after using the toilet.
- Rinse the sink and wash hands after brushing their teeth.
- Do not share their toothbrush, razor, wash cloth or towels. Throw away their toothbrush after 7 days.
- Shower each day for at least the first 2 days after treatment.
- Flush used tissues and flushable wipes down the toilet.
- Put items that can't be flushed, such as menstrual pads and band aids, in a specified trash bag.

### To Learn More

- Nuclear Medicine  
206-987-2137 from  
7:30 a.m. to 4:30 p.m.
- Ask your child's  
healthcare provider
- [www.seattlechildrens.org](http://www.seattlechildrens.org)

### Free Interpreter Services

- In the hospital, ask  
your child's nurse.
- From outside the  
hospital, call the  
toll-free Family  
Interpreting Line  
1-866-583-1527. Tell  
the interpreter the  
name or extension  
you need.

- Caregivers should wear disposable plastic gloves for cleaning up vomit, blood, urine or stool with flushable wipes. Flush wipes down the toilet. Put disposable gloves in the specified trash bag after use.

### Household precautions

Follow these restrictions for **7 days**:

- Wrap any shared phone in plastic wrap each time to use it. When done, throw the plastic wrap in the specified trash bag.
- Don't let your child or teen share food, drinks, dishes or silverware. Clean their dishes separately. Do not use disposable dishes or utensils.
- Your child should not cook for others. If they have to, they should wear disposable plastic gloves and throw them in the specified trash bag when done.
- Keep your child or teen's dirty clothes and bedding away from other household members' clothes in a plastic bag and wash them separately. At the end of 3 weeks, dispose of the plastic bag in the specified trash bag.
- Keep the specified trash bag closed and away from children, animals and other trash. These trash bags can be thrown away after 80 days.

### Night time precaution for first 3 weeks:

Have your child or teen:

- Sleep alone in bed with a 6-foot separation from adults, pets and others.
- Wash bedclothes every week for the first 3 weeks.

### Pregnancy and radioiodine therapy

If your teen is pregnant or think they could be, **tell your healthcare provider**. This treatment should not be given during pregnancy. Male and female patients should avoid pregnancy for at least 9 months after treatment.

### Traveling with your child after treatment

Airports, border crossings and ferries have very sensitive radiation detectors. Your child may set off an alarm for weeks or months after treatment. We will give you a letter to use that explains that your child received the treatment and poses no danger.

### Who do I call with questions or if we have an emergency?

Call the treating endocrinologist at 206-987- 2640 from 8 a.m. to 5 p.m. After hours, call the hospital at 206-987-2000 and ask for the endocrinologist on call.