

Radioiodine Treatment

The information below is given to help you understand the radioiodine treatment you and your doctor have chosen. This section explains some of the aspects of the treatment and gives you some guidelines to follow for a short time after the treatment (usually no more than a week to ten days, depending on your treatment and your doctor's instructions). You may decide, or your personal situation may require, that you will follow all or only some of the suggested guidelines. Remember, these are only suggestions to help you make more informed decisions about your treatment. The best source of additional information on your treatment is your doctor.

About iodine and radioiodine treatment

Iodine is an important naturally occurring substance that is accumulated and used by your thyroid gland to help regulate your metabolism. It is found in many natural sources such as fish. It is also added to salt to make "iodized salt", which is the most common form of table salt. Radioiodine, also known as I-131, is a form of iodine that is accumulated by the thyroid gland identically to regular iodine. In the thyroid, it emits a strong burst of radiation energy over a short distance for a short period of time. The radiation given off by this form of iodine permanently decreases the function of the thyroid cells and inhibits their ability to grow. For this reason, it is used to treat enlarged thyroids, overactive thyroids, and thyroid cancer. Radioiodine treatment is a common, well accepted form of treatment that has been used all over the world for more than 40 years.

The radioiodine treatment will usually cause your thyroid to become underactive after the completion of the treatment. In some cases of treatment for overactive thyroid, you may have normal thyroid hormone level for a while after the treatment, but it usually becomes underactive with time. In rare cases, the thyroid may be persistently overactive. For that condition, you have to be retreated. After the thyroid becomes underactive, you will take a thyroid hormone replacement pill once a day to maintain your normal metabolism level. In the case of treatment for thyroid cancer, the pill also helps prevent recurrence of the cancer. The pill is small and easily swallowed. Your doctor will monitor your thyroid hormone levels to make sure they are in the normal range. For this reason, it will be important to have your doctor monitor your thyroid hormone level on a regular basis.

Most of the radiation from the radioiodine will be confined to your thyroid gland. No other tissues in the body actively accumulate iodine. It will stay there in the thyroid while it causes the desired effect on the thyroid cells. In the process of causing its effect, it is rendered harmless and is eliminated from the body. At the end of the treatment, the radioiodine is gone and has no further effect. A small amount of the radioiodine is not trapped in the thyroid initially, and it will circulate in the blood stream. Most of it will be passed out of your body through urine during the first two days after your treatment. A small amount will be secreted into your saliva and sweat.

Preparation for the treatment

You will need to be off thyroid medications such as Synthroid for at least 4 weeks, and antithyroid medications such as Propylthiouracil (PTU) for at least 5 days prior to treatment. The treatment cannot be given if you have had a radiology exam using x-ray dye within 4 weeks prior to the treatment. Women of childbearing age who have not had tubal ligation or hysterectomy need to be checked for pregnancy.

What to expect in the treatment

If you are being treated for overactive thyroid or enlarged thyroid, you will be able to receive the treatment at our outpatient facility. You will swallow a small pill with the radioiodine in it. After swallowing the pill, you return to your daily activities. You may follow some or all of the guidelines listed below for reducing exposure. If you are being treated for thyroid cancer, you will receive a larger dose, so you will have to stay in the hospital for 1 to 2 days until the radioiodine has decreased a bit.

What to expect after the treatment

The potency of the radioiodine decreases rapidly in a short period of time. This means that the possibility of radiation exposure to you and others is reduced rapidly over the first few days after the treatment. In the decades since this treatment has been used, there has never been any evidence that such exposure has ever caused any harm. Nevertheless, efforts should always be made to avoid unnecessary exposure to you and others.

In order to reduce your own exposure, you should drink plenty of fluids in the first few days following your treatment. Most of the radioiodine that is not trapped in your thyroid will pass into the urine. Drinking more fluids will cause you to urinate more, and this will remove the radioiodine more rapidly from your bladder. In addition, if you are receiving treatment for thyroid cancer, the radiation from the radioiodine can cause temporary inflammation and pain in the salivary glands. For this reason, it is a good idea to stimulate the salivary glands to keep washing the radioiodine out with your saliva. Sucking on hard candies for the first day or two after treatment will accomplish this. The radioiodine dose that is given for other thyroid treatment is not considered strong enough to affect the salivary glands, so this step is not necessary unless you are being treated for thyroid cancer.

In order to reduce exposure to others, you should keep in mind the following principles:

1. **Time:** the radiation exposure will depend on how long a person is near you. You should try to minimize the time others are in close contact with you.
2. **Distance:** the radiation exposure will depend on how close a person is to you. The radiation from radioiodine cannot travel very far. Most of the radiation never makes it out of your thyroid. The small amount that does get out is rapidly reduced in the space of a few feet. Therefore you should try to make sure others are a few feet away from you if they will be spending any significant time around you.

3. Hygiene: remember that most of the radioiodine that leaves your body is passed in your urine, saliva, and sweat. You should try to practice good toilet hygiene and wash your hands carefully. Do not share utensils or clothing with others for a few days after treatment.

Listed below are some guidelines that may help you to apply the principles in your daily activities. If you are receiving the treatment for thyroid cancer, these guidelines would apply to the period while you are in the hospital, and for a few days after you have been sent home. These are only suggestions, and may not apply to your particular situation. If you have any questions, you can ask your doctor or us.

- Sleep alone for the first few days after your treatment. During this period avoid kissing or sexual intercourse. Also avoid prolonged physical contact, particularly with children and pregnant women: the thyroid glands of children and fetuses are more sensitive to the effects of radioiodine than those of adults.
- If you have a baby, or you are taking care of one, your doctor can best instruct you on how to follow the guidelines. You probably can do all the things necessary to care for your baby. However, it is preferable not to have the baby too close, such as sitting in your lap, for more than a short time during the first 2 days after treatment.
- If you have been breast feeding your baby, you must stop because radioiodine is secreted in breast milk. Discuss with your doctor when you can resume breast feeding.
- If you are pregnant, or think you could be, tell your doctor because radioiodine treatment should not be given during pregnancy. Also, if you are planning to become pregnant, ask your doctor how long you should wait after treatment.
- Wash your hands with soap and plenty of water each time after you go to the toilet.
- Keep the toilet especially clean. Flush it 2 or 3 times after each use.
- Rinse the bathroom sink and tub thoroughly after you use them.
- Drink plenty of liquids such as water or juices. This will make you urinate more frequently and help the radioiodine to leave your body more rapidly, thus lowering the amount in your body.
- Use separate (or disposable) eating utensils for the first few days and wash them separately.
- Use separate towels and washcloths. Launder your bath towels, bed linens, and underclothing separately for the few days after your treatment.

Important - Note that these guidelines are only carried out for the first few days after treatment. Your doctor will give you specific details as to how long you should follow these precautions.