

## Will I gain weight?

RAI treatment cures hyperthyroidism, lowers thyroid hormone and thus causes symptoms to disappear. Weight gain is not inevitable. It is important to remember that hyperthyroidism causes an increased rate of metabolism which in turn causes the body to burn up food more rapidly than normal. Although most people with hyperthyroidism have an increased appetite, they continue to lose weight. When they are cured by any method, the metabolism does slow down and food is burned more slowly. Appetite usually decreases as well and most people return to their pre-hyperthyroid weight. If you continue to consume the same amounts of food as before the RAI, you will gain weight as your metabolism has returned to normal.

## What if I am pregnant?

Pregnancy is one situation where RAI cannot be used. The radioiodine crosses the placenta and will interfere with the normal development of the unborn child's thyroid gland.

Pregnancy is not advised for at least 4-6 months after RAI treatment.

Males should also not try for a family for at least 6-12 months after treatment.

## Can I breastfeed?

The radiodine could go from your breast milk to the baby. This can alter your baby's thyroid function and can also cause thyroid nodules. If you have to have the RAI while you are breastfeeding, your doctor will ask you to stop breastfeeding until tests show that there is no longer any radioiodine in your milk.

## Where will I have this treatment?

You will have this treatment at the Lyell McEwin Hospital at the Nuclear Medicine Department. You will meet the Nuclear Physician beforehand to discuss the treatment and safety precautions in detail. You will also receive a brochure from the Nuclear Medicine Department.

**Lyell McEwin Hospital  
Nuclear Medicine Department  
Tel: 08 8282 9992**



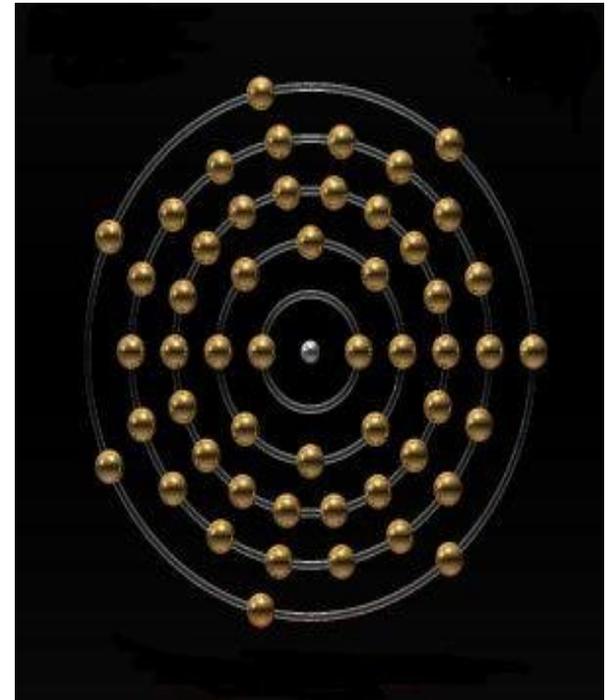
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**Nunyara House  
Specialist Medical Centre**

## Information Brochure: Radioactive Iodine



## My doctor says I have to have Radioactive Iodine Treatment

### What is Radioactive Iodine?

Radioactive iodine, also called radioiodine (RAI) is a form of iodine chemically identical to nonradioactive iodine. Therefore, the thyroid gland, which takes up iodine to make thyroid hormone, cannot distinguish between the two. However, the nucleus of a radioactive iodine molecule has excess energy and gives off radiation that can have effects on the cells in which it is concentrated.

### How is Treatment given?

Radioactive iodine is given either in a capsule or in a tasteless solution in water.

### How does the treatment work?

RAI treatment of hyperthyroidism makes use of the thyroid's gland natural need for iodine to make thyroid hormone. The thyroid is the only part of the body that collects and retains iodine. In hyperthyroidism, the thyroid cells are over-stimulated and make larger amounts of thyroid hormone. The excess amount of hormones are secreted into the blood, and produce the symptoms of hyperthyroidism. When radioiodine is given, the thyroid gland cannot tell if the iodine is radioactive or not, and collects it in the normal way in proportion to the activity of the thyroid. Radioiodine thus accumulates in the cells that make the thyroid hormone and remains there long enough to radiate the gland and to slow thyroid production. Radioiodine that is not retained by the thyroid is cleared by the urine within two to three days.

### Is the treatment safe?

This form of treatment of hyperthyroidism by RAI has been used routinely for more than 35 years on well over one million people in the United States alone. Many studies of people treated and examined at a later time show no harmful side effects or complications to the patients or their offspring. Because the RAI concentrates mainly in the thyroid gland, the radiation exposure to the rest of the body is small. There is no evidence that treatment with RAI causes cancer.

### How effective is the treatment and how long does it take to cure Hyperthyroidism?

For most types of hyperthyroidism the success rate is 90-95%. If the thyroid gland is irregular and a small dose is given, the success rate is less— around 75-85%. If necessary, a repeat treatment can be given and this is effective in almost all cases.

There is considerable variation in the timing and extent of response to RAI. Most patients are no longer hyperthyroid by three months after it is given, but most physicians wait 6-12 months before whether it has been effective or not.



Scan of thyroid 24 hours after intake of radioactive iodine

### Are there side effects to RAI treatment?

Most people will notice no symptoms at all. Occasionally the thyroid gland will be slightly tender several days after the treatment. This usually settles with Panadol. The RAI may cause a mild flare-up of the hyperthyroidism symptoms such as anxiety, palpitations and tremor. This begins several days after the therapy, especially in people who had a very over active thyroid gland or had never received any anti-thyroid medications. Usually you are asked to continue the antithyroid medication until two or three days before the RAI and to continue it after. This should prevent a flare-up. Your doctor will continue to check the dose of antithyroid medication.

### Will I develop an Underactive Thyroid?

It is difficult to determine the exact dose to return the thyroid gland to normal function. In most cases the thyroid will become underactive (hypothyroidism). This can occur as early as two months after treatment or as late as twenty or thirty years. If it does occur, it can be controlled by the daily administration of thyroid hormone tablets. It is very important that you follow up regularly after RAI treatment so that it can be diagnosed early and treatment begun.



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