

## ***Information for the Public***

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*The Canadian Society of Nuclear Medicine thanks the Société française de médecine nucléaire for the use of the Public Information*

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So you have some questions about the nuclear medicine exam:

- [Your doctor has prescribed a “scintigraphy” or nuclear medicine test.](#)
- [You have to have a radioactive iodine treatment for an over-active thyroid](#)
- On the following pages you will find the most frequent questions and their responses.

## Information on Nuclear Medicine scans (scintigraphy)

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- What is a nuclear medicine scan ([scintigraphy](#))?
  - [What happens](#) during the exam?
  - Is the exam [dangerous](#)?
  - Who might [benefit](#) from a nuclear medicine scan?
  - Is there any [special preparation](#) for the nuclear test?
  - Do I have to [stop taking the medication](#) that I'm on right now?
  - [How long](#) will I have to wait between the injection and lying under the camera?
  - Will the examination [hurt](#)?
  - What will happen [after](#) the exam is over?
  - What happens to the [images](#) and the report?
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### **What is a Nuclear Medicine exam?**

It is an exam in which a tiny quantity of a radioactive substance is used to produce images; hence the name "nuclear medicine". The scintigraphic images help your doctor visualize the functioning of your organs, producing a diagnosis and helping to provide you with better care.

### **What happens during the exam?**

A tiny quantity of radioactivity is most often injected into a vein in one of your arms. After the injection it is usually necessary to wait a little while before taking the pictures. During the scan itself you will be asked to keep still, either lying down or seated. The apparatus that takes the pictures is called a gamma camera. It needs to move quite close to you for the best results. You will not have to go into a tunnel. You won't generally have to undress, but you will have to remove any metallic objects such as keys and medallions that could cause a shadow on your pictures. You can go home, (or back to your hospital room) after the exam, as soon as the images have been checked.

### **Is the exam dangerous?**

NO, because you receive such a very small quantity of radioactivity. The dose you receive is similar to a standard X-ray test. In nuclear medicine, the number of images that are taken does not increase it. The substance that is injected is not toxic, will not provoke an allergic response and will not hurt you.

### **Who might benefit from a Nuclear Medicine exam?**

Everyone, from nursing babies to senior citizens. If you are pregnant or if your period is late you should mention it to the technologist before they carry on with your injection. In certain cases precautions should be taken. Scintigraphy causes no threats at all to

pregnancies that begin some time after the exam was done. If you are breast-feeding, inform someone too. They will tell you if it is necessary to stop feeding and for how long.

**Is there any special preparation for the exam?**

Generally, “no”, except if you are specifically informed at the time of taking your appointment. Most often you can eat and drink normally before coming for your nuclear medicine exam.

**Do I have to stop taking my medication?**

For most nuclear medicine studies, it is not necessary to modify your treatment. In all cases, do not hesitate to mention any drugs you are taking or treatment you are on at the time you make your appointment with the nuclear medicine department. If there is something specific to your case someone will inform you. If you have the results of other tests (X-rays, ultrasound, previous nuclear medicine exams) related to the reason for the current scan, please bring them with you on the day of your study.

**How long do I have to wait between the time of the injection and the scan?**

That would depend on which organ is being studied. The wait can be anything from a few minutes to several hours. Because different exams have different waiting periods, it is possible that a patient arriving after you might actually be scanned first.

**Is the exam painful?**

You will only feel the small prick of a needle, like having blood taken. You will not feel any discomfort after the injection. The product injected will not make you sleepy and you will be able to drive safely.

**What happens after the exam?**

You can go back to your normal activities, including your work. You can eat and drink normally. We might recommend that you drink lots of water. The small amount of radioactivity that remains in your body will be eliminated naturally. You are advised to avoid prolonged close contact with young children for the rest of the day.

**Where will the images and the report go?**

The results of the exam, including the images, will be sent directly to the doctor who requested the test.

## Treatment for an Overactive Thyroid

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- [Why](#) do I need to be treated?
  - What is a radioactive iodine [treatment](#)?
  - Where does the [radioactive iodine](#) go?
  - [How](#) is radioactive iodine administered?
  - Is there a risk of a [reaction](#)?
  - What do I do about my [current medication](#)?
  - Can radioactive iodine [cause cancer](#)?
  - Will I be able to have [children](#) after the treatment?
  - Is there a danger for [my family](#)?
  - Do I have to go back to see my [own doctor](#) after the treatment?
  - [How many](#) treatments with radioactive iodine are necessary?
  - Are there [long-term effects](#) (in the years after treatment)?
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### **Why do I need to be treated?**

You are suffering from hyperthyroidism, which indicates that your thyroid gland is overactive. If that illness is not treated, it could result in serious consequences.

### **What is a radioactive iodine treatment?**

To reduce the excessive activity of your thyroid gland a small quantity of radioactive iodine will be given to you. The iodine is taken up by the thyroid gland. Your doctor has decided that this will be the best treatment in your case.

### **Where does the radioactive iodine go?**

Most of it is taken up in treating the thyroid gland itself. The rest does not stay in the body and is eliminated naturally in the urine.

### **How is radioactive iodine administered?**

Radioactive iodine has no colour or taste. All you have to do is drink a small amount of liquid or take a capsule containing the iodine.

### **Is there a risk of a reaction?**

It is very rare.

### **What do I do about my current medication?**

Your doctor will advise you on the subject. Certain medicines have to be discontinued several days before the iodine treatment. If you have any questions, do not hesitate to contact the nuclear medicine department where you have your appointment.

**Can radioactive iodine cause cancer?**

**NO.** Radioactive iodine has been used for more than 60 years to control hyperthyroidism. The patients who have been treated have been studied extensively. There is no increased risk of thyroid cancer following treatment.

**Will I be able to have children after the treatment?**

**Yes.** 40 years of experience has shown us that there is no effect on the health of children born of parents who have been treated with radioactive iodine. In any case, it is advisable to allow six months to pass after treatment before planning for a pregnancy. You should also avoid breast-feeding for six months after your treatment.

**Is there a danger for my family?**

**NO,** if you observe some simple precautions, which will be given to you. They are designed to avoid all unnecessary irradiation to your family.

**Do I have to go back to see my own doctor after the treatment?**

**YES.** You have to go back to see the doctor who examined you and prescribed the dosages to verify that your gland has responded well to the treatment.

**How many treatments with radioactive iodine are necessary?**

In most cases a single treatment will suffice to heal the hyperactive thyroid. Sometimes a second or even a third dose is necessary. The activity levels measured after the treatment will tell your doctor whether the treatment was a complete success.

**Are there long-term effects (in the years after treatment)?**

Radioactive iodine is a safe and effective treatment. Nevertheless, your thyroid could become insufficiently active, sometimes for several months, even years. This is why the thyroid blood measurements are important and must be taken regularly for the rest of your life. If your thyroid should become insufficiently active, you would just have to take thyroxine. That treatment has no side effects and only needs one treatment per day.