



# Stereotactic Radiation Therapy, or Radiosurgery

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Your radiation oncologist has recommended you have stereotactic radiation therapy to the brain. This is also called radiosurgery.

Stereotactic radiation therapy gives a large dose of radiation to a small area of the brain. This provides very accurate treatment. The radiation may be given just one time or you may need to have a few treatments.

This type of radiation treatment needs complex treatment planning. A special mask is needed to make sure you stay in the same position for the treatment(s). This handout provides information about the mask, treatment planning, and side effects related to radiation.

The steps include:

- appointment in the Mould Room to make the mask
- CT simulation
- making the treatment plan
- radiation therapy treatments

## After treatment is finished

On your last day of treatment, you will be given a follow-up appointment with your radiation oncologist. If you have any questions or concerns in the time between, please call your primary team:

Other information: \_\_\_\_\_

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## Making the mask

The mask is made up of many layers and fits comfortably. It is attached to a frame to keep your head from moving.

You will need to lie still while the mask is being fitted. The radiation therapist will be with you to explain what needs to be done and help you relax.

It can take up to an hour to make.



## CT Simulation

Your next appointment will be in CT Simulation. Here, you will be repositioned in your mask. There may be other staff present to make sure everything is in place. You will need to sit up with the mask and frame on. A special CT localizer frame is placed around your mask. You will then lie back down for the CT planning scan. Our CT staff will help you in sitting up and lying back down. It is very important to lie still and breathe regularly for the scan.

An MRI is also needed for treatment planning. Sometimes an MRI is already available, or you may have to have an MRI. In some cases an angiogram may also be needed. For questions about whether these scans are needed, ask your primary care team.

## Treatment plan

The next step takes all of the information from the CT and MRI scans and puts it together in our planning computers. A treatment plan is designed just for you and is checked many times. This step can take up to 3 days.

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## Radiation therapy treatment

Please arrive for treatment at least 15 minutes before your appointment. Your appointment lasts about 1 to 2 hours. Most of that time is used for setting up and taking the scan to check your position. The actual time of receiving the radiation is relatively short.

Once you check in with reception, a radiation therapist will come and find you from the main waiting area and show you to the treatment area.

In the treatment area you will be set-up on the treatment couch just as you were in CT Simulation. Once you are in your mask a box is attached to the frame, around you and your mask. You may feel movement of your mask as the radiation therapists fix your position. A scan is done with the treatment machine to make sure that you are in the correct position.

When treatment begins, the therapists will be in and out of the room to move the treatment couch to different positions. You may feel the couch moving. You can be seen by a radiation therapist at all times on a TV monitor.

## Side effects

The side effects you experience will depend on any other treatments you may have had, your general health, and the location of your tumour or lesion, as well as the current treatment plan.

### Headaches

Headaches are a very common side effect. They happen because of swelling of the brain. Please tell your radiation treatment team if you start having headaches, or if your existing headache becomes worse or more frequent.

### Seizures

Seizures may occur if you have a history of seizures. This can happen due to swelling of the brain. Please tell your radiation treatment team if you experience seizures or blackouts.

## **Nausea and vomiting**

Nausea and vomiting are less common side effects. They are more common if the treatment is directed at an area close to the back of the head that controls nausea and vomiting. If you experience nausea and/or vomiting speak to a member of your radiation treatment team. There may be medication that can be helpful, there are also many tips they can suggest to limit discomfort.

## **Hair loss and scalp irritation**

Radiation treatment can cause hair loss, especially if the area being treated is close to the surface. Most patients will notice hair loss a few weeks after treatment begins. Hair loss can be temporary or permanent depending on the dose of radiation. Hair will re-grow within 3 to 6 months if the loss is temporary.

## **Side effects that occur after treatment has finished**

Within weeks and up to a few months after treatment you may notice new or worsening side effects such as:

- increased or worsening headache
- seizures
- changes in vision
- difficulty speaking
- weakness
- increased tiredness

These side effects can all be caused by swelling of the brain. If you have any of these side effects, call your radiation oncologist or radiation oncology nurse.

This handout has been adapted with permission from the The Ottawa Hospital Cancer Centre.



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