

Perfexion[®] Stereotactic Radiosurgery

at Toronto Western Hospital



Information for patients and families

Read this resource to learn about:

- What Perfexion Stereotactic Radiosurgery is
- How to prepare
- What to expect during and after
- Where to get more information



Your MRI is scheduled on:

Date: _____

Time: _____

Important: If you are taking a sedative (medicine to calm you) for the MRI you MUST have someone take you home.

Your Stereotactic Radiosurgery treatment is scheduled on:

Date: _____

Time: _____

For the MRI and the treatment: Please take the East elevators to the 3rd floor.

Medical Imaging Reception

Toronto Western Hospital, 399 Bathurst St.
3rd Floor – East Wing (Waiting Room)

If there is no one there, please have a seat and the nurse will come to get you.

DO NOT wait outside the Gamma Knife Clinic because no one is there at that time.

Important: If you are having an angiogram, you will need bloodwork within 1 month of your procedure date.

What is Stereotactic Radiosurgery?

Stereotactic radiosurgery is a treatment for some diseases in the brain. It uses very precise beams of radiation to treat the affected area of the brain.

Because the beams only focus on the tumour, there is a lower chance of nearby brain tissue being affected.

How should I prepare for my treatment?

Do this 1 week before your treatment:

- Plan to spend the whole day in the hospital. The planning and treatment times vary for each patient.
- Arrange for someone to drive you home after your treatment.
- You may have 1 visitor sit with you during the day and to take you home. If you are having an angiogram you **MUST** have someone available to take you home.

Do this the day before your treatment:

- Be sure to read all the information given to you.

Do this on the day of your treatment:

- Do **NOT** eat or drink anything after midnight **IF** you are having an angiogram (for AVMs).
- If you are not having an angiogram, you may have a very light breakfast.
- Do not wear any make up.
- Take your regular morning medicines with sips of water. If you have diabetes and normally take medicine in the morning, do **NOT** take them on the morning of treatment. Instead, bring your diabetes medicine with you and ask the nurse when to take them.

If you need a wheelchair and use a lift at home:

- Come in pajamas.
- Leave the lift sling underneath you for easy transfers.

Bring these items with you to the hospital:

- Ontario Health Card
- Medicines you need to take during the day in their original containers and a list of all the medications you are taking.
- Something to read or do to help pass the time. Remember: You can't wear eye glasses while the frame is on.
- Music to listen to during your treatment. You can bring your mobile phone, iPod or a CD.
- A family or friend who can stay with you at the hospital if you want.

What can I expect before the treatment?

There are 3 steps before your radiosurgery:

1. Putting the head frame on
2. Imaging – CT, MRI and/or angiogram
3. Treatment planning

1. Putting your head frame on

The stereotactic head frame is an important part of your treatment. It will be put on the morning of your treatment. The head frame keeps your head very still during imaging and treatment.

This helps make sure that the treatment only affects the target area in your brain. This frame stays on your head for the entire procedure.



A neurosurgeon will attach the lightweight titanium frame to your head. Before they put it on, you will get a local anesthetic injection to numb the areas on your head where the pins will be attached. The injection stings and burns for about 30 seconds.

When the medicine is working, the doctor will place the pins. They will use adjustable posts and pins. You will feel some pressure when the pins are put in place. This feeling goes away in about 5 to 10 minutes.

You will be moving around by wheelchair for the rest of the day. This is because it is not safe for you to walk with the head frame on. Someone will take you to the room for imaging.

2. Imaging

In this step, we will take images of your head and brain. It will show the exact size, shape and position of the target in your brain.

Your doctors may use Magnetic Resonance Imaging (MRI), Computerized Tomography (CT) or an angiogram to do this.

If you are getting a CT or an MRI

For these procedures, a contrast (dye) may be injected into your veins. This will be done during the scan. It will help the doctors see your tumor(s) more clearly.

If you are getting an MRI, tell your doctor if you have:

- any implanted devices in your body (for example, a pacemaker)
- ever worked with metal products
- any metal objects in your body
- any allergic reaction to the contrast

The MRI technologist will fill out a questionnaire with you before your MRI.

If you are having an angiogram:

This is the test used if you have an Arteriovenous Malformation (AVM). For this scan, a contrast (dye) will be injected into your veins. If you are allergic to the dye you must tell the doctor in the clinic before you are booked for treatment. You will be given a prescription for some special allergy medicine.

A transparent box will be placed on your head over the frame during the scan. When the scan is done, the radiation therapist will take the box off.

When your scans are done, you will go back to the Medical Imaging Day Unit. You will need to lay flat for 4 hours after the angiogram.

3. Planning your treatment

We will use the results from the imaging to develop the treatment plan. Your treatment planning team includes a:

- Neurosurgeon
- Radiation Oncologist
- Radiologist
- Medical Physicist

We will transfer your images to a specially designed computer. From here, your health care team will decide:

1. Which area to treat
2. How much radiation to give
3. How they will aim the radiation to treat the target

During the planning process:

- you will stay in the Medical Imaging Day Unit
- the nurse will look after you.
- you will be given something to drink if you are having an angiogram
- all other patients may have something to eat and drink.

You will have to stay in bed during this time. If you are having an angiogram you will need to lie flat for 4 hours.

When your treatment plan is complete, the team will take you to the Perfexion (Gamma Knife) Unit. This is where you will get your treatment.

What happens during the treatment?

The radiation therapists will help you lie down on your back on the treatment bed. They will also help attach your frame to the treatment couch.

The radiation therapists will leave the treatment room during your treatment. They can see you on the video cameras. They can also talk to you if they need to. Before your treatment starts, the couch will move so that your head will be inside the treatment unit.

During treatment, you will not feel the radiation. There is also no noise from the treatment unit. The treatment can take several hours to finish.

You may move in and out of the treatment unit several times during your treatment. The radiation therapists may also have to adjust the position of your head frame.

You will need to stay still during your treatment.

You can listen to music in the room or you can bring your own iPod or CD.

What can I expect after my treatment?

- The Neurosurgeon or Radiation Oncologist will remove your head frame.
- The pin sites on your forehead will be covered with small bandages. Do not get the pin areas wet for the next 24 hours.
- You may have some bleeding or discharge of fluid in the areas where the pins were placed.
- We will monitor you for 1 hour after we remove your head frame. Then you may go home.
- You may get a headache or minor swelling where the frame was attached. The nurse will give you some pain medicine if needed.

What do I need to do when I go home?

The nurse will give you a detailed list to follow when you get home.

You can go back to your normal activities when you get home. Listen to your body. Rest if you need to. Start activities when you are ready.

What are the possible side effects?

Side effects you may have	What you can do
<p>Fatigue: Feeling tired is common after radiation therapy.</p> <p>The day of your treatment will be a long day and can be very tiring.</p>	<p>Try not to do too many activities and rest when you need to.</p> <p>Eat healthy foods and drink plenty of fluids.</p> <p>Read the pamphlet "How to manage your fatigue".</p>
<p>Headaches: Some patients get headaches from wearing the frame.</p>	<p>You can take Tylenol, Advil or a prescription for pain medicine from your doctor if you need to.</p>
<p>Swelling: You may notice swelling around your eyes. The local anesthetic can cause this.</p>	<p>Apply an ice pack to your eyes to help with the swelling.</p>
<p>Bleeding or fluid leaking from the pin sites: Some blood or fluid may leak from the pin sites for 2 or 3 days after treatment.</p>	<p>Leaking from the pins is normal. If there's bleeding, press down on the site with gauze for 5 minutes. It should stop.</p> <p>If there's leaking at the pin sites, clean the area with alcohol and cover with a Band-Aid.</p>

Side effects you may have	What you can do
<p>Nausea and vomiting: You may have nausea (feeling like you need to throw up) and vomiting (throwing up), but this is not common.</p>	<p>Tell your health care provider if you have an upset stomach. You can take medicine to help with nausea and vomiting.</p>
<p>Hair Loss: Some patients lose hair in a small area of the scalp, but this is not common.</p>	<p>You can expect your hair to grow back within the next few months.</p>

Will I have a follow up appointment?

Before you leave the hospital, you will be given the time and date for your follow up appointment.

You will see your doctor at this appointment. You may also get an MRI. Use the space at the end of this booklet to write down your questions.

Bring your questions to your follow-up appointment or call the clinic.

Who can I call if I have questions or concerns?

Perfexion Unit at Toronto Western Hospital:

416-603-5445
Monday to Friday – 8:30 am to 4:30 pm

On evenings, weekends and holidays:

Neurosurgeon on-call
416 340 3155
Ask for the neurosurgeon on-call.

Radiation Oncologist on-call
416 946 2000
Ask for the radiation oncologist on-call.

