

## Stereotactic Radiosurgery

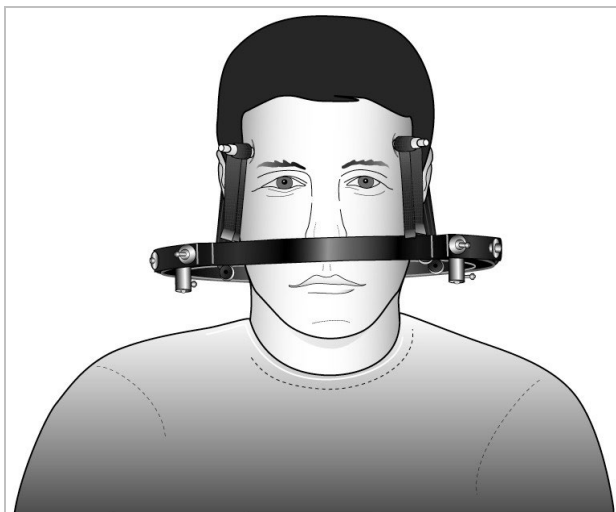
This handout tells you what to expect before, during and after stereotactic radiosurgery. While reading it, highlight any parts that do not make sense to you. Make a list of any questions you may have. Bring this handout with you when you come for your clinic visit or your treatment. Your doctor or nurse will go over it with you.

### Stereotactic Radiosurgery

Stereotactic radiosurgery is used to treat many types of lesions or tumors in the brain, such as:

- Brain tumors
- Meningiomas
- Vestibular schwannomas
- Trigeminal neuralgia
- Arteriovenous malformations (AVM)

High doses of radiation are given to a small area in your brain. In most cases, it is done in one treatment. The radiation can be given to the targeted area while the normal brain tissue around it gets only a small dose of radiation. Because this treatment is so precise, a special frame is used to keep your head perfectly still.



### Before Treatment

#### Transportation

Arrange to have someone drive you home after the treatment. Family members or a friend may come and be with you during the day. Expect to be at the hospital for 10-14 hours the day of your treatment.

#### Planning MRI

You will first have a special MRI scan. This is called a “stealth MRI.” This MRI will be used to plan your radiation treatment. It will feel the same as any other MRIs you may have had. If you’ve never had an MRI, please let your nurse know. You will be given a handout that describes it in detail.

Before your MRI, let the doctor or nurse know if you have:

- Brain aneurysm clips
- Implanted pumps
- Chemotherapy ports
- Neurostimulators
- A pacemaker
- An artificial heart valve
- A defibrillator
- Eye or ear implants
- Stents, coils or filters
- Allergies to IV contrast dye, shellfish or iodine
- Claustrophobia (fear of being in enclosed spaces)

#### Medicines

If you have diabetes and are taking oral medicines or insulin, please let your nurse or doctor know. These medicines may need to be stopped or adjusted for the treatment. If you are taking aspirin, ibuprofen (Motrin®) or warfarin (Coumadin®), please let your nurse or doctor know. These medicines may

need to be adjusted before your treatment. Bring all medicines with you on the day of the procedure.

### **Night Before Treatment**

**Do not** eat or drink anything after midnight the night before treatment. If you have prescribed oral medicines, take them with a small sip of water only, or as directed.

## **The Day of the Treatment**

### **Getting Ready**

After you arrive, you will change into a hospital gown. A nurse will place a small needle (IV) in your hand or arm to give medicines, if needed, and IV contrast dye.

### **Head Frame**

A head frame is applied to your head by a neurosurgeon. The frame placement can cause some pain. A local anesthetic is used to numb 4 sites on your scalp (2 on the forehead and 2 in the back of your head) before the frame placement. This takes about 15-20 minutes.

### **CT Scan**

After the frame is placed, you will have a CT scan. This will help pinpoint the exact place and size of the treatment area. It is also used for treatment planning. After the CT, you will wait in a comfortable area for the treatment. A television is available for your use. If you have never had a CT scan, please let the nurse know. You will be given a handout that describes it in detail.

### **Diet**

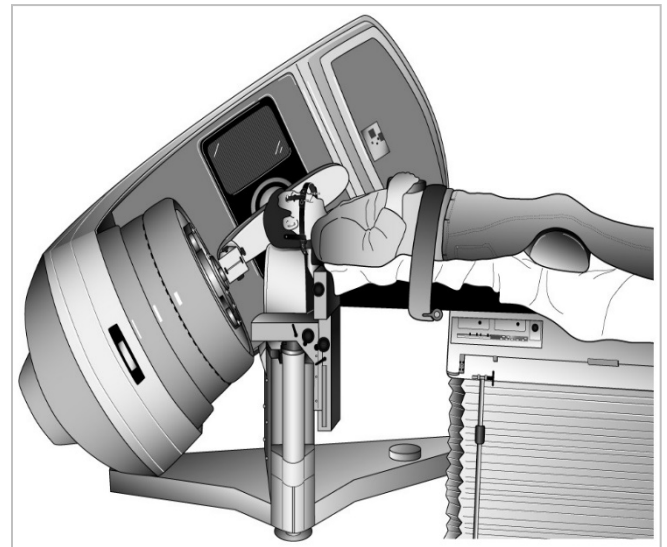
You will be able to eat and drink **after** the CT scan. Please drink **extra fluids** the day of the treatment (try to drink an extra 1-2 quarts of fluid). This will flush the dye from your system. You will be given a meal after the CT scan is done.

### **Treatment Planning**

Your doctors (a neurosurgeon, radiation oncologist and physicists) do treatment planning. This takes about 3 to 4 hours. Late in the afternoon, after the planning is done, you will be brought into the treatment room.

### **Treatment**

You lie on the treatment table with the frame locked into a special holder. The treatment machine rotates around your head as the radiation is given. This is called an arc. The length of the treatment will vary. It depends on the number of arcs you receive.



Radiation treatments are a lot like having x-rays. You will not be able to see, feel, or hear the radiation. There is no pain or discomfort with the treatment. If you are in pain for other reasons, such as back pain or discomfort from the head frame, please let the doctor or nurse know.

Your doctors, nurse, therapist who operates the treatment machine, and the physicist(s) who did the treatment planning, will be present during your treatment.

Once you are in place on the treatment table, all staff must leave the room while the machine is on. You will be watched on a television screen. You will be able to talk with the staff through a speaker. You can also wave your hand as a signal that you need help right away. If this happens, the treatment will be stopped, and the staff will come into the room to help you.

After the treatment you will be taken to an exam room to have the head frame removed. Then, we will clean the pin sites and apply antibiotic ointment to these sites. You will be sent home shortly after that with written instructions. You will need to have someone to drive you home after the treatment. You will not be allowed to drive yourself home.

### **Risks**

Your doctor will talk with you about the short and long-term risks of this treatment. The risks vary from patient to patient. They depend on your diagnosis, the size and location of the lesion, underlying health problems, the dose of radiation used, and the amount of normal tissue treated. Most of the time, there are few immediate side effects.

### **Short-Term Risks**

- Brain swelling, which is treated with steroids (most common)
- Nausea, which is controlled with medicine (rare)
- Seizures, which can also be controlled with medicines (very rare)
- Very little hair loss for most people

### **Long-Term Risks**

There is some concern that, in a very few patients, long-term side effects could occur. Although serious, these side effects are quite rare.

At worst, these side effects could include:

- Damage of normal brain tissue leading to the loss of some brain function, causing:
  - Vision changes
  - Speech changes
  - Paralysis
- Severe brain swelling which may require long-term steroid use

## **After the Treatment**

### **Fluids**

The day of the procedure and the next day, please drink extra fluids to flush the IV contrast from your system.

### **Swelling**

You may have some short-term swelling around both eyes. This is caused by the numbing medicine placed at the pin sites. This begins about 2-3 days after the treatment. It may last from days to weeks. This is normal and should go away by itself.

Starting the day after treatment, you can place cold cloths on your eyes to help reduce the swelling. Put the cloths on for about 20 minutes at a time, 3-4 times a day. Keep using the cold cloths for about 4 days after treatment.

### **Pain and Fatigue**

You may have some pain, tenderness or numbness around the pin site areas for a few weeks. This is normal and should go away by itself.

You may feel a little tired for a day or two. You can be as active as you wish.

### **Pin Site Care**

Keep the pin sites clean. You will be given antibiotic ointment. Put it on the pin sites for the first 2-3 days.

**Do not** wash your hair for at least 2-3 days after treatment or until the pin sites have healed.

If you are taking anti-platelet medicines, you may have bleeding from a pin site. If this occurs, place clean gauze on the pin site and hold pressure. If you can't get the bleeding to stop after 5-10 minutes of pressure, call the doctor on call, or go to urgent care or an emergency room.

### **Medicines**

If you are taking diabetes and/or anti-platelet medicines, you will be given special instructions about restarting them.

### **When to Call**

- Increasing or severe headaches that are not relieved by Tylenol®
- Headaches that occur daily or several times a day, even if relieved by Tylenol®
- Headaches with nausea and vomiting
- Nausea or vomiting
- Numbness or tingling
- Clumsiness or trouble moving a hand or leg
- Vision, hearing or speech changes or problems
- Trouble with balance, walking or dizziness
- New onset of confusion
- New seizures or worsening seizures

### **Who to Call**

Radiotherapy Clinic

**608-263-8500** or **1-800-323-8942**

After hours, your call will transfer to the operator. **Ask for the radiotherapy doctor on call.** Give your name and phone number with area code. The doctor will call you back.

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 6/2021. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#5218