



# Radiation to the Spine

*What you should know when you are receiving radiation to the spinal column*

**Radiation therapy is a treatment that focuses on tumors, killing cancer cells, and reducing tumor masses.**

**Radiation is given daily, Monday through Friday, until a desired dosage is reached. It is important to come in for all of the treatments.**

## Your First Visit to Radiation Oncology

On your first visit, you will meet with the radiation oncologist and a Radiation Oncology resident doctor. A physical exam and medical history will be taken during your visit. The doctors will talk with you about the goals of radiation, possible side effects, and the number of treatments planned.

You will then have a simulation appointment, or have one scheduled. The simulation appointment generally includes a CT scan to identify the exact treatment area. A stabilizing device such as a mask or cradle may be used to help position you on the treatment table in a consistent manner each day. Tiny marks will be made on the skin to show the treatment area.

When the treatment plan is done, you will be asked to come in for “filming” or a “dry run.” The radiation therapists, who give the daily treatment, will place the simulation information in the treatment machine computers and take X-rays of you while you are in your treatment position. Once these X-rays have been reviewed by your doctor, treatment may begin – usually on the next day.

## Side Effects

Both normal and tumor cells within the area that is treated can be irritated or damaged during radiation. Normal cells, like skin and mucous membranes, are able to repair themselves when treatment is completed. Damaged tumor cells cannot repair themselves.

Side effects vary from patient to patient and depend on which area of the spine is being treated. Most side effects will go away 1 to 2 weeks after your treatment is done. We have medicines and strategies to prevent and minimize most radiation side effects.

**There are four distinct areas in the spine:**

- **The *cervical* spine is in the neck area and is between the shoulders and the base of the head.**
- **The *thoracic* spine is next and is in the chest area.**
- **The *lumbar* spine is in the low back area.**
- **The *sacrum* or *sacral* spine is at the base of the spine and is mostly solid bone, but has some nerve roots that connect with the spinal cord.**

Skin reactions and fatigue are common side effects from radiation to the spine. Other side effects are listed here by treatment area:

***Neck (cervical) area:***

- Dry or sore throat
- Hoarse voice

***Chest (thoracic) area:***

- Sore throat, swallowing difficulties, or heartburn
- Nausea and/or vomiting

***Low back (lumbar) area:***

- Nausea and/or vomiting
- Diarrhea

***Sacrum area:***

- Diarrhea

## **Skin Reactions**

The skin reactions vary in severity, based on the amount of radiation given. They include:

- Increased redness
- Dryness
- Itching
- Flaking
- Blistering or skin breakdown

Use soaps without additives, and lotions without oils or fragrances, on the treatment area. Talk with your nurse about products you can use during treatment.

## **Fatigue**

During radiation treatment, the body uses a lot of energy. Stress related to your illness, daily trips for treatment, and the effects of radiation on normal cells all add to fatigue. The level of fatigue varies with each person and may take 1 to 2 months to resolve after radiation is done.

Pace your activities and make note of the times you are most tired. Add rest periods to your daily schedule to avoid becoming over-tired.

Studies show that mild exercise and maintenance of your normal activity help decrease overall fatigue.

## Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help at any time.

Radiation Oncology:  
206-598-4100

After hours, call the UWMC paging operator at 206-598-6190 and ask for the Radiation Oncology doctor on call.

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## Sore Throat, Swallowing Difficulties, or Heartburn

The mucous membranes in your throat may become dry and sore, making swallowing uncomfortable and/or difficult. Drink plenty of liquids each day to help soothe these irritated tissues. There are mouthwashes and medicines that can also help.

Chest or thoracic spinal radiation may irritate esophageal (tube to the stomach) mucous membranes. You may feel heartburn, fullness in the stomach, or more often, you may feel like there is a lump in your throat when or after you swallow. We have a numbing medicine that helps this discomfort.

Eating only foods that are soft, smooth, and moist may help. Eating smaller amounts more often can maximize good nutrition.

## Nausea, Vomiting, or Diarrhea

We have medicines to decrease nausea, vomiting, or diarrhea. These reactions are temporary and should resolve quickly.

## Neurological Reactions

You may already have neurological symptoms because of the disease in your spine. Your radiation oncologist will talk with you about what to expect during and after your radiation treatment. We expect your symptoms to stabilize and possibly improve during treatment. Tell your doctor or nurse if your neurological symptoms change or get worse in any way.

## Bone Marrow Suppression (Low Counts)

Bone marrow (the inside of the bones) produces red blood cells that carry oxygen, white blood cells that fight infection, and platelets that help clot the blood. Bone marrow is produced in the large bones in an adult (pelvis, thigh bones, breastbone, and spine) and in all bones in a child. Bone marrow is very sensitive to radiation. When large areas of these bones are radiated, your blood counts may be affected. If we believe this will happen, we will ask you to have blood drawn on a routine basis to follow your counts. Your results will be available the day after the blood is drawn. Your nurse can give you the results.

## Other Side Effects

It is possible that less common side effects may also occur. Talk with your nurse, doctor, or therapist if you have any other symptoms or concerns.

UNIVERSITY OF WASHINGTON  
**MEDICAL CENTER**  
UW Medicine

### Radiation Oncology

Box 356043

1959 N.E. Pacific St. Seattle, WA 98195  
206-598-4100