

# Radiation therapy



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# Radiation therapy

This is one of the methods used to treat cancer and to treat symptoms and complaints. Rays are directed precisely at the part of the body that needs radiation. The rest of the body receives virtually no radiation.

The rays can be compared to a light beam which can be turned on and off with a switch. The rays are powerful X-rays or other rays and are invisible.

Treatment with radiotherapy usually consists of several radiation sessions. The number of radiation sessions depends on the nature and size of the tumour and your general condition/health. The number of radiation sessions can vary from 1 to 39.

## Treatment centres

You can only be given radiation treatment in hospitals with a Radiation Therapy department or in a specialised radiation centre. If your hospital does not have a Radiation Therapy department then you will be given radiation treatment in another hospital.

## Why radiation therapy

Radiation therapy can stop the growth of a tumour because the cells of a tumour are often sensitive to radiation. These cells are killed by radiation. The tumour may eventually disappear completely. Radiation therapy is also often used after a tumour has been surgically removed. The goal then is to destroy any remaining cells in that area. When a cure is no longer possible, radiation therapy is frequently used to reduce pain and other complaints (palliative treatment).



## External and internal radiation

You can be treated with radiation therapy in two ways:

- externally: radiation will be delivered through the skin from the outside
- internally: radiation is delivered internally

External radiation is the most common. Sometimes you will receive a combination of internal and external radiation.

## External radiation

For external radiation, the radiation comes from a radiation device. You will be radiated externally through the skin.

The radiation therapist and radiation therapy technician direct the beam precisely. So that the healthy tissue surrounding the tumour receives as little radiation as possible. All kinds of preparations are required for radiation therapy treatment.

The doctor or lab technician will explain to you:

- how the treatment will be carried out
- what side effects you can expect
- how many radiation sessions are needed

No radiation remains in the body after radiation so you will not be radioactive. There is also no radiation in your sweat, urine, faeces or semen for example. You can interact with others without problems.

You do not need to be admitted to hospital for external radiation.

## Internal radiation

For internal radiation, radiation is delivered internally.

The doctor inserts radioactive material into your body: near or in the tumour. This material emits radiation. Internal radiation is only possible if the tumour is in a place that is fairly easy to reach. For example in the case of:

- cervical cancer
- uterine cancer
- bladder cancer
- prostate cancer
- oesophageal cancer
- certain head or neck tumours

Sometimes you will be given internal radiation in combination with external radiation. Internal radiation is given less often than external radiation.

That is why internal radiation is given in a limited number of hospitals and radiation centres where doctors with a lot of experience with this treatment work. Sometimes you have to stay in hospital for internal radiation.

## Side effects

### General reactions to radiation

The body's reactions depend on the area that is given radiation. However, there are some common reactions that usually occur during the course of treatment, such as fatigue, increased need for sleep and reduced appetite. Although these symptoms disappear on their own after treatment, it is best to discuss them with your doctor. Your doctor will advise you on how to deal with these complaints, refer you to a dietician

or possibly give you medication. These reactions do not say anything about the effect of the treatment, but are the body's response to the radiation.

### **Skin reactions**

Usually skin reddens in the second to third week of the radiation therapy, you will notice this because of:

- Redness
- Flaky skin, dry skin
- Itching
- Irritation and pain on the irradiated skin
- The skin is sensitive and may feel warm
- An open wound



## Caring for irradiated skin

Below is some advice on how to care for irradiated skin:

- Inspect the irradiated skin daily.
- Only wash with lukewarm water, use mild shower oil or soap. Do not use products that contain perfume.
- Take a shower rather than a bath. Skin can soften more easily in the bath.
- Pat dry with a soft towel.
- If the skin is intact, it is okay to apply a cream to the skin that you are already using (do not use one hour before radiation).
- Do not wear abrasive clothing, wear loose-fitting clothing (preferably cotton)
- Do not expose to direct sunlight or extreme cold.
- Do not swim in chlorinated water.
- Do not apply plasters to the irradiated skin.
- For men: shave gently with an electric razor and do not use aftershave.
- Do not scratch if itching.
- If you do want to use some perfume, apply it carefully to your clothes.



The aim is to keep the irradiated skin dry and firm. If it nevertheless opens and becomes moist, the radiotherapist can prescribe an ointment or cream. Sometimes dressing material is needed. If you have trouble bandaging, tell the lab technicians. If you care for your skin yourself, only use the material from the prescription. Only apply plasters to areas where you have not been radiated.

Once the radiation therapy has been completed, the treatment still has effects for a few more weeks. Skin usually heals in two to four weeks after radiation. If you sit in the sun during the treatment and the first weeks after the radiation, you should protect the irradiated area as much as possible with a scarf or other clothing. After the treatment, when the skin has recovered, we recommend that you always apply a sunscreen/cream with a high protection factor (factor 30 or more) to the irradiated area. If the skin does break, contact your doctor and make an appointment with him/her.

## Specific reactions to radiation

You will only suffer from (often temporary) hair loss if your hair is in the irradiated area. The degree of hair loss depends on the dose you receive and the size of the irradiated area. Hair loss can occur for head, beard, pubic, armpit and chest hair.

Depending on the part of the body being irradiated, specific side effects may occur. These are for radiation on:

- Head/brain: hair loss, skin/eye/ear canal irritation, nausea, headaches.
- Oral cavity, throat and neck: mucus formation, sensitive mucous membranes, bad taste, loss of taste, dry mouth, later also swallowing problems, sometimes hoarseness.
- Oesophagus: swallowing complaints, such as pain during swallowing, sometimes difficulty swallowing.
- Chest: swallowing problems, difficulty coughing up phlegm, sometimes tickling cough.
- Stomach and area: nausea, vomiting.
- Abdomen: feeling sick, intestinal cramps, loose stools.
- Lower abdomen: symptoms similar to cystitis, such as painful urination and increased urination. Sometimes also loose stools.

Discuss your complaints with the laboratory technicians or the doctor. They can advise you on how best to deal with the complaints or what you can do about them. If there are serious complaints, they will consult the relevant radiation therapist or his/her replacement.

It goes without saying that eating healthily and refraining from smoking contribute to your overall fitness and help minimise the occurrence of side effects.

## Check-ups

Once treatment has been completed then you will remain under control for a while and you will receive aftercare. How often you are checked depends on the type of cancer and the treatment you have had. Usually this is every three months in the first year. This may become less frequent later. For instance once every six months or once a year. If you have any concerns about a complaint you have in the meantime then bring your appointment forward.

The check-ups are intended to:

- identify and treat any side effects of treatment
- detect possible recurrence of the disease at an early stage in people who are no longer getting better: keep track of how the disease develops and what complaints there are.

## Questions?

If you have any questions about the Radiation treatment brochure or the actual treatment, you can contact the oncology nurse on workdays during office hours on  
Telephone number: 7800493

For further detailed information about radiation see [www.kwf.nl](http://www.kwf.nl)



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