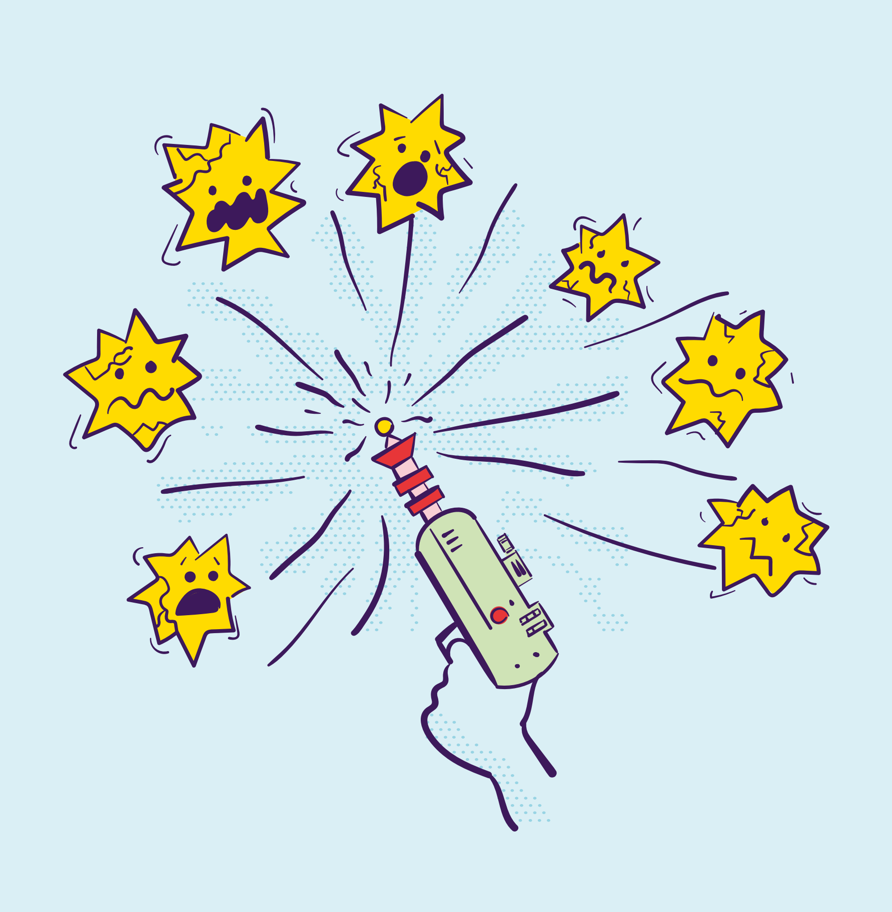
RADIATION THERAPY

Norwegian
Childhood Cancer
Society

For you who are going to have radiotherapy

And your parents



Our values

We give *hope* to each other and the world.

We have the *courage* to speak
out on behalf of our families.

We have the *strength* to support
children and families who are affected.

We create *joy* in daily life.

For you who are going to have radiotherapy

This brochure is for you getting radiotherapy. Radiotherapy is also named radiation therapy. We believe that it's easier for you to go through the treatment when you are well prepared. If you read the information together with an adult, you can talk about things that are difficult to understand.

Radiotherapy is intended be a collaboration between the staff, you and your parents. It's important for you to be well informed about the treatment, so we encourage you to ask the staff about anything you are wondering about.

→ Read further to find out more about radiotherapy.

What is radiotherapy?

Light from the sun is one type of radiation. X-rays are similar to sunlight, but penetrate through the skin and into the body.

Radiotherapy uses a special type of extra-strong rays — much stronger than those we use for ordinary X-rays. Our body is made up of cells. The rays can destroy diseased cells that are growing abnormally in our body. Cancer cells grow abnormally, so radiation is used against them.

Unfortunately, normal cells can also be damaged by the radiation, but between the treatments the healthy cells will have the opportunity to recover.

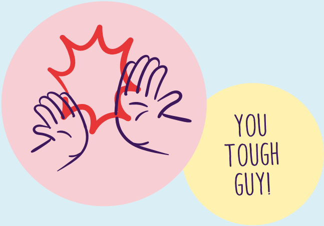
Most patients receive radiotherapy every day from Monday to Friday. A few receive the treatment twice a day. Sometimes treatment is given on weekends, but most patients have a break then.

You will be told exactly when you will receive the treatment. It's a good idea to have a treatment chart and tick off each treatment you have completed.

→ **See page 15 of the brochure for your radiation chart.**

Preparation for radiotherapy

- If you receive treatment for the head, neck or upper body, a plastic mask or mould will be made for you to lie in. The mask will help you lie completely still while the treatment is being carried out. It may feel a little warm in the beginning.
- The mask is made on a simulator. During the treatment it will be kept on the radiation machine.
- When you have finished all the treatments, you can ask to take the mask home with you!
- If you have a long time to wait, you can listen to music, draw or read. There are also some games you can borrow. Feel free to bring your own music, iPad or anything else you like to spend time with.



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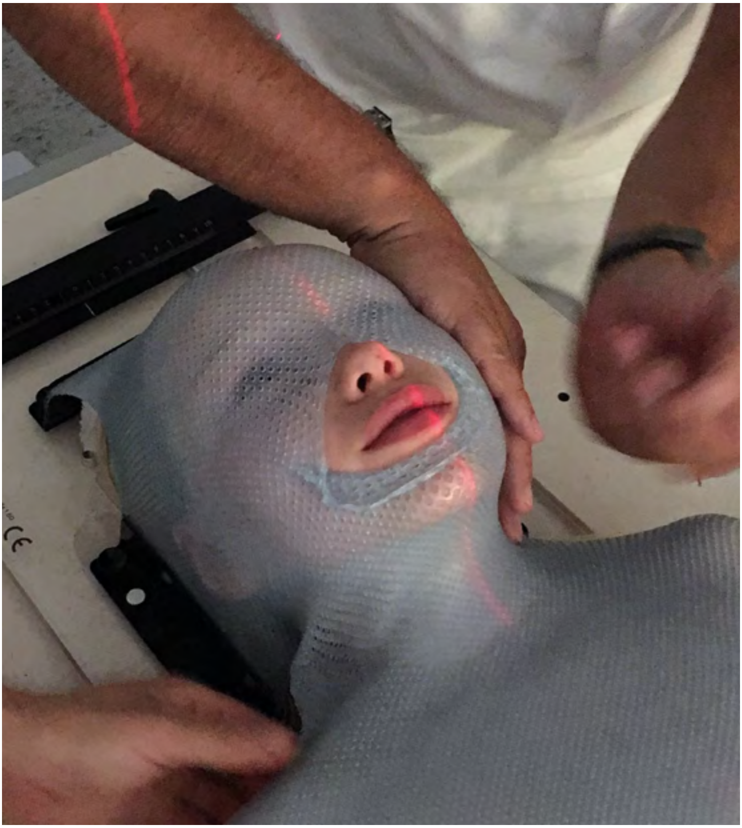

How will the treatment be carried out?

You just need to lie in the radiation machine for a few minutes. It’s important to lie completely still, and the people working there and your parents, can watch you the entire time.

First you enter a large room with thick walls. There’s a large radiation machine or bench. You are then helped to get up on the bench, and helped to lie properly on the treatment table. Then the machine is turned so that the rays hit just right.

This is done by the staff using a few red or green light beams, and a television screen on which they can read information from the CT simulator.

The set-up takes a little while because it has to be absolutely accurate. The light in the room is dimmed.

When the machine is fully set up, the others leave and go into a small room next to where you are lying, where they can watch you on a TV screen.

It’s important to lie perfectly still so the rays hit exactly where they should. Fortunately, this only takes a few minutes. Small children can practise this situation at home. The very youngest children, who are unable lie still, may be given an anaesthetic during the treatment.

The treatment is completely painless. You may hear buzzing and clicking sounds from the machine.

The staff and your parents will watch you on a TV screen the entire time you are lying there receiving treatment. If you need to ask about something, you can talk through a microphone to the people in the other room. If you want, you can get a buzzer to signal them.

The treatment staff can stop the machine at any time and come in to see you.

Perhaps you’d like to bring along a doll or stuffed animal you’re fond of?

TIPS **To help pass the time, it can also be nice to listen to music or to count.**

Side effects

The rays also affect the healthy cells in your body, so you may experience side effects after the treatment. Side effects depend on where on your body you are receiving treatment, and how much radiation must be administered.

Many patients will feel more tired after treatment. Rest as much as you need. It's a good idea to spend some time outside every day, as fresh air is good for you. You need to drink a lot while you're getting radiotherapy and in the days afterwards. Many diseased cells have to be flushed out of your body, and you need plenty of fluids to flush them out.

Dry and sore mouth and throat

If you receive radiation to your mouth or throat, you can easily become dry and sore there. To make more saliva, chew gum or suck on sugar-free lozenges. Bacteria thrive particularly well when the mouth and throat are sore. It's therefore extra important that you brush your teeth with a soft toothbrush after each meal. It's also a good idea to rinse your mouth with physiological saline (0.9%).

Sore skin

The radiation has the greatest effect inside the body, yet the skin in the treatment area can become red and a little sore, almost like "sunburn". It helps to apply an ordinary moisturiser. When you need to wash, you can shower with a mild soap. Dry yourself very carefully when you are done.

Infections

Your doctor needs to keep an eye on your blood cells. The white blood cells defend the body against infections. Usually, we have between 3 and 10 thousand million in each litre of blood! Radiotherapy can destroy some of them and the doctor can see this when they examine your blood.

Stomach problems

If you are receiving radiotherapy to the stomach, you may experience diarrhoea and possibly nausea and vomiting. Diarrhoea may continue for a while after the treatment is over.

You may also become nauseous after having radiation therapy for the head. You may be given medication for diarrhoea and nausea. Eat small portions, but often, and try to drink plenty of fluids.

Hair loss

After radiotherapy to the head, you may lose your hair for a period of time. This usually happens about two weeks after treatment starts.

If you want, you can get a wig/headwear. It's a good idea to go to a wig maker before you lose your hair so that he or she can see what your hair is like, to find a wig that looks like your own hair.

About six months after the last treatment, your hair will usually grow out again. It may be slightly thinner where the radiation field was.

It may be nice if the school or kindergarten knows that you're receiving radiotherapy. A doctor, nurse or radiotherapist will be happy to help inform them.

TIPS

Go to a wig maker before you lose your hair so that he or she can see what your hair is like to find a wig that looks like your own hair.

Radiotherapy to the head

If you are receiving radiation therapy to the head, you should use headwear when you are out in the sun. It is best to wear light cotton clothing and clothing that isn't itchy or tight. The treatment area should preferably not get direct sunlight on it for a year after the treatment. This is because the treatment area can become darker (pigmented) and more sunburnt than the rest of the body.

When you are out in the sun during the summer, you should always apply a high factor sun cream to the treatment area, especially where you received radiation.

TIPS

You can also draw or write what you like – preferably something you have experienced in connection with the radiation therapy. It's nice to have afterwards.

Late effects

Radiation therapy works in the body for many weeks after the end of the treatment. About 4–6 weeks after it's over, some children may experience temporary fatigue, nausea, vomiting and fever. This usually passes on its own.

After the end of radiation therapy, you should moisturise and care for the skin in the treatment area. Use an ordinary moisturiser without fragrance and light airy clothes that do not irritate the skin. The streaks on the skin will disappear gradually. You should not scrub them off, as you will easily get sores.

Late effects of radiation therapy may occur. The Childhood Cancer Society has a booklet called "Late effects after cancer treatment", and it may be a good idea to read it. If you have questions about the treatment and possible after-effects of the treatment, we recommend that you write them down, otherwise it's often easy to forget. Show your questions to the people treating you and they will answer as best they can.

→ **See also our late effects brochure for more information after treatment.**

Dietary advice

Nausea and diarrhoea are common side effects of radiation therapy. Children receiving radiation therapy have a poor appetite for periods due to the treatment. They feel nauseous and are sensitive to smells and tastes. It is important that the food you eat, have a high nutritional value. This can be porridge, pancakes, ice cream, yoghurt and pasta, possibly with cream and nutritional powder added.

Carbonated and acidic drinks such as mineral water, apple juice and cola can be good for nausea, unless you have sores in your mouth. Then these should be avoided. For some, it's good to start the day with a biscuit or crispbread and some water before getting out of bed. Then you can eat breakfast a little later. Some also find grated apple and raw vegetables good for nausea. Avoid strong and fatty foods.

Foods with a "neutral" taste, such as rice, pasta and potatoes, or cold foods, usually taste good. It may be wise to avoid favourite foods during this period because these foods may later be associated with nausea. It may help to brush your teeth before eating. Some people also benefit from anti-nausea medication.

Radiotherapy to the head and neck often causes sores in the mouth. It is then advisable to avoid hard food and food that tastes sour. Serve soft and mild food with a neutral taste. Sucking on an ice cube or ice lolly can help, and it may be easier to drink with a straw.

Most children have a poor appetite when suffering from nausea and diarrhoea. Calories are important, so let your child test what tastes good. Some children feel better if they are given milk in the form of cultured milk and yoghurt. As an extra supplement, you can use a nutritional concentrate for your child.

There are a number of products on the market, ask at the chemist's. If your child is losing weight and has major problems getting enough fluids, you may need to use tube feeding or intravenous nutrition.

Small, regular meals 2–3 hours apart are also recommended when a child has diarrhoea. Also remember that your child needs plenty of fluids during a period of diarrhoea.

→ **See our nutrition brochure for more great advice.**

My radiation chart

Here you can tick off or add a sticker for the days you have had radiation.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Radiation	Radiation	Radiation	Radiation	Radiation	Radiation	Radiation
Radiation	Radiation	Radiation	Radiation	Radiation	Radiation	Radiation
Radiation	Radiation	Radiation	Radiation	Radiation	Radiation	Radiation
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About the Norwegian Childhood Cancer Society

The Norwegian Childhood Cancer Society is a voluntary and nationwide organisation.

Our office is in Oslo, and we have county associations run by families who have or have had children with cancer. The associations work for the families on a voluntary basis. Our goal is that no child should die of cancer.

The Norwegian Childhood Cancer Society exists to help children and adolescents with cancer and their families. We are there for the whole family, meaning that the sick child, siblings and parents are all included. Some of the sick children have recovered, some are living with symptoms, some are under treatment, while others we have unfortunately lost.

At the hospitals, our peer contacts organise parents' meetings with the opportunity for new families to talk to someone. When your child is diagnosed with something as serious as cancer, it can be good to have someone to talk to who has experienced what you have. We also provide positive experiences for children who have to stay in the hospital for long periods.

The Norwegian Childhood Cancer Society wants to be the largest driving force in Norway to focus on childhood cancer in the media and society.

We also contribute to research and education to combat childhood cancer.

Become a member

→ Register on barnekreftforeningen.no

What does membership of the Norwegian Childhood Cancer Society mean?

As a member you have a unique ability to have an impact on conditions for children and adolescents with cancer and their families.

The membership fee is used for activities in the county association you belong to. Membership in the Norwegian Childhood Cancer Society means access to a community of families who are, or have been, in the same situation. The association provides information, advice and support at all stages of a child who has, or has had, cancer.

TIPS

Contact your county association or the staff of the Childhood Cancer Society and tell us what is important to you.

Contact

If you have any questions about membership or the Norwegian Childhood Cancer Society, please contact us.

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Make a donation

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barnekreftforeningen.no

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