



Radiation treatment for head and neck tumours

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Looking after your skin, mouth and teeth is of the utmost importance during radiation treatment on your head and neck. This brochure provides some useful advice that will help you prevent certain problems or limit any discomfort.

If you would like more information or have specific questions, please do not hesitate to contact your doctor or nurse about them. They will be happy to help.

The Radiotherapy Department

SKINCARE DURING HEAD AND NECK RADIATION TREATMENT

HOW DO PROBLEMS DEVELOP DURING RADIATION TREATMENT?

You may suffer from skin problems as a result of the radiation treatment. Exposure to ionising radiation can lead to infection or injury of the skin (radiodermatitis). The intensity of the skin's reaction to the radiation depends upon a number of factors: the type of radiation, the applied dose, whether or not you are also having chemotherapy and the site of the radiation treatment. Any skin reactions can be painful, e.g. when touched by clothing.

Your skin may react as follows:

- dry and more sensitive skin
- itchy skin
- discoloration (pale to dark red)
- flaky skin
- blisters and open wounds, particularly in skin folds (behind the ears, in skin folds, etc.)
- the wounds may develop into large, usually wet patches that may get worse, even after the treatment has stopped

Skin reactions usually occur around the third week of the treatment, and will gradually get worse thereafter. Minor skin reactions will heal within one to two weeks of the treatment, more severe reactions will only heal two to four weeks after treatment.

Discoloration tends to fade gradually after a few weeks but this can take months.

Recommendations on how to treat the skin during treatment

- X Protect your skin from additional irritation, wounds and infection throughout the treatment and until your skin has healed completely.
- X Apply moisturising cream (e.g. Flamigel®), which can also be used in the event of itching or very dry skin. Apply the cream to irradiated skin from the first day of radiation (up to maximum twice a day). You will be given a tube of Flamigel® on the first day of the radiation treatment.
- X Do not use perfume directly on the skin before a radiation session.
- X Apply lip balm to your lips.
- X Prevent the skin from drying out by limiting the time you spend in the shower or bath.
- X Preferably use lukewarm rather than warm water when washing. Warm water tends to dry out the skin even more.
- X Use oily soap (e.g. Lipikar®) or oil (e.g. Eucerin®, Balneum®, Lipikar Syndet®) instead of shower gel or bath foam.
- X Wash your neck with care using a soft flannel.
- X Dry your skin with care by gently patting rather than rubbing it.
- X Use an electric razor so as not to cut yourself.
- X Do not use aftershave.
- X Avoid scratching or rubbing if your skin feels itchy or develops a burning sensation. Use a cold flannel or gel pad from the fridge. Wrap the gel pad in a cover before placing it against the skin to cool it down.

- X Avoid clothing that is too tight or rubs such as shirts with a collar or tie. If necessary wear a soft or a silk scarf.
- X Wear cotton clothing if possible if it comes into direct contact with irradiated skin.
- X Protect your skin from direct sunlight by wearing a hat or scarf. Avoid sun protection products during radiation treatment as they do not provide full protection from the sun and could cause irritation.

Recommendations on how to treat the skin after treatment

- ✓ Continue observing the above mentioned recommendations after the treatment until the skin has completely healed.
- ✓ Protect your skin from direct sunlight until one year after the treatment. Use sun protection products with factor 30 or higher, if your skin is exposed to the sun. Wear a hat if necessary.

ADVICE IN THE EVENT OF SEVERE RADIODERMATITIS

Radiation treatment on the head or neck can lead to painful and burning **radiodermatitis**. This is an infection or damage to the skin as a result of exposure to ionising radiation. The following are a few typical examples with appropriate recommendations.



Problem: Redness in the neck area, sometimes combined with itching.

Advice: Use a self-adhesive foam or silicone dressing (e.g. Mepilex® or Mepilex® Border Lite behind the ear). This type of dressing is very easy to use: it can be worn for several days, alleviates pain and is easy to change. Remember to remove the dressing before the start of the radiation treatment. Do not apply cream underneath the dressing as it will no longer adhere.



Problem: Minor wounds can develop into large wet patches.

Advice: Clean the wound with water. Then apply an alginate based hydroactive colloid gel (Flaminal® Hydro or Flaminal® Forte). Cover the wound with an absorbent compress and fix with a bandage. Never use sticking plasters on irradiated skin. If the wound is infected a culture should be taken, followed by local or general antibiotic treatment. Iso-Betadine® gel can be used whilst awaiting the results of the culture.



Problem: Chapped and cracked lips.

Advice: Use a magistral preparation consisting of 1% salicylic acid in Eucerin® anhydrous ointment ad 20g.

Consult your doctor or the nurse handling the equipment if your skin becomes very red, painful or burning, or if blisters develop and the skin becomes wet or sticky.

In the event of severe skin problems you can get additional advice from the department wound care nurse (by appointment only). Any advice and care provided are free of charge, you will only be charged for the products that are used.

IMPACT OF RADIATION TREATMENT ON MUCOSA

Radiation treatment will cause the mucosa in the mouth and throat area to become red and inflamed.

As a result you may suffer from any of the following:

- pain when chewing, swallowing and talking
- oversensitivity to hot, cold and very spicy food
- white or yellowish deposits in the mouth and throat area

If the largest salivary glands are also irradiated, they will produce less saliva. Your saliva will become less fluid and more sticky than usual, resulting in a dry mouth.

A dry mouth will affect your taste and make it more difficult to swallow. Your saliva will not protect and clean your mouth and teeth as effectively, resulting in an increased risk of tooth decay and gum problems.

Radiation treatment can also lead to changes in and loss of taste.

WHEN AND HOW LONG DO SYMPTOMS PERSIST?

Oral mucositis as a result of radiation treatment is not permanent. Infection usually occurs around the second week of the radiation treatment, but as a rule it heals within two to four weeks of the treatment being stopped.

Changes in saliva usually occur after the first week of radiation treatment and will become more noticeable as the treatment progresses.

The symptoms will reduce during the first few months after the treatment has stopped. The symptoms can often last quite a while. It is important, therefore, to take special care of your teeth. You must visit the dentist regularly as prescribed by your doctor or dentist, even after the radiation treatment has been completed.

Changes in taste will get worse over the course of the treatment and will remain clearly noticeable during the initial months after radiation. Sense of taste usually improves between six and twelve months after the radiation treatment. Permanent changes in taste are exceptional.

ORAL HYGIENE

Good oral hygiene

- X prevents tooth decay
- X prevents inflammation of the gums
- X prevents jawbone infections
- X stimulates the appetite
- X prevents pain and other discomfort
- X leaves a pleasant clean taste in your mouth
- X prevents bad breath (halitosis)

WHAT CAN YOU DO IF MUCUS DEVELOPS AND YOUR MOUTH IS SORE?

- Rinse your mouth several times a day with water or mouth-wash, prescribed by your doctor. Regular rinsing dissolves mucus and prevents the unpleasant odour associated with excess mucus.
- Use the medication for a sore mouth as prescribed by your doctor. Let the nurse or your doctor know if the medication isn't effective so that they can introduce the necessary changes.
- Systematically take sufficient pain medication.
- Consult our dietician about an appropriate diet. To make an appointment with the dietician please contact the secretariat or call +32 16 34 76 00.

WHAT CAN YOU DO IF YOU SUFFER FROM A DRY MOUTH?

- Avoid tobacco and alcohol, and drink less coffee than usual.
- Regularly keep up the moisture level in your mouth as your teeth will be better protected from the impact of bacterial agents (including acids) and food particles.

Practical tips

- ✓ Regularly take small sips of water.
- ✓ Regularly rinse your mouth with water.
- ✓ Drink repeatedly during a meal to flush through your food.
- ✓ Put water within reach during the night to ensure that you can drink or rinse your mouth even during the night.
- ✓ Sucking ice cubes can be very refreshing.
- ✓ Use sugar free chewing gum, preferably based on Xylitol.
- ✓ Keep a small bottle of water with you at all times to have a drink now and then, and keep sugar free chewing gum or sweets handy too.
- ✓ Ensure that the humidity level in your living room and bedroom is high enough and install a humidifier if necessary.
- ✓ Drink a cup of clear bouillon before a meal to stimulate the production of saliva.
- ✓ Eat small tasty snacks rather than large portions of the same thing.
- ✓ Avoid alcohol, hard and very spicy foods.



Remember: a dry mouth is particularly sensitive to tooth decay. You can limit the risk by maintaining good oral hygiene and by using less sugar.

PRACTICAL RECOMMENDATIONS CONCERNING MOUTH WASH

Rinsing your mouth with iso-Betadine® Buccale or Perio-Aid®

- Has a cleaning and soothing effect.
- **Use:** rinse for 30 to 60 seconds 3 times a day with 1 tablespoon (15 cc) of the undiluted solution. Do not swallow the solution, spit it out.

Rinsing your mouth with a mucositis cocktail

(prescribed by your doctor/to be stored in the refrigerator)

- Is anti-inflammatory and alleviates pain.
- The product works for approximately 4 hours.
- **Use:** rinse 6 times a day with undiluted mucositis cocktail and swallow the liquid every other time.
- Once the radiation treatment has stopped gradually reduce the use of the mucositis cocktail over the following two months.



Remember: under no circumstances does the use of mouth wash replace cleaning your teeth.

CANDIDIASIS

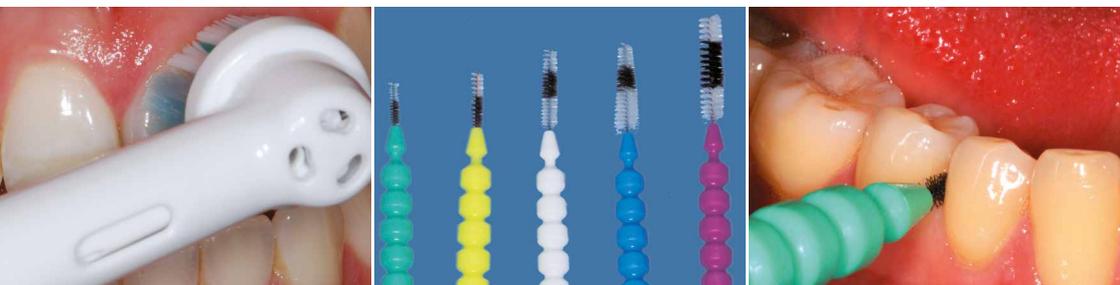
Candidiasis is a fungal infection, which can occur as a result of a weakened immune system or reduced saliva production. Good oral hygiene can help prevent it. If you wear dentures, you should look after them properly and remove them during the night. The mucositis cocktail will also help prevent yeast infections during the radiation treatment.

DENTAL HYGIENE

The doctor will refer you to a dentist, who will treat any dental problems before the start of the radiation treatment.

WHAT IS THE BEST WAY TO LOOK AFTER YOUR TEETH?

- X Clean your teeth regularly.
- X Clean your teeth after every meal and before going to bed.
- X Even if you're not eating, it is advisable to clean your teeth several times a day.
- X Use a soft, small headed toothbrush.
- X Use toothpaste or gel with fluoride. A small amount the size of a pea is sufficient.
- X Replace your toothbrush every two months.
- X Use the right cleaning method:
 - Position the brushes of the toothbrush at a 45° angle against the tooth surface, touching the edge of the gums



and systematically clean all dental surfaces using small circular movements.

- Hold the brush in a vertical position on the inside of the front teeth.
 - Never brush your gums.
- X Also gently brush the back of the tongue or use a tongue scraper, as the coating on the tongue can cause an unpleasant taste and bad breath.
- X Thoroughly rinse your toothbrush in lukewarm water after cleaning your teeth and leave it to air dry.
- X Clean properly between your teeth, at least once a day:
- with an appropriate toothpick: triangular and made of softwood. Take care not to injure your gums.
 - with dental floss: ask your dentist how to use this properly.
 - with appropriate dental brushes: ask your dentist for advice.
- X Your dentist may advise the use of fluor trays, i.e. small made to measure moulds filled with fluor based gel that are used daily and left on your teeth for a while. Your dentist will provide relevant information.
- X In some cases your dentist may advise an additional fluoride supplement.
- X Visit your dentist regularly for a check-up and always consult a dentist if your oral hygiene is difficult or painful.

WHAT IF YOU WEAR DENTURES?

- X Clean your dentures at least once a day.
- X Rinse your dentures under running water after every meal.
- X Remove your dentures for a few hours every day to give your gums and mucosa a rest. Definitely remove your dentures at night or if your mouth is sore.
- X Keep the dentures dry during storage and clean them before reinserting them in your mouth.

WHAT SHOULD YOU DO IN THE EVENT OF DENTAL PROBLEMS DURING OR AFTER RADIATION TREATMENT?

Your doctor will recommend that any dental interventions (fillings or extractions) be postponed until after the radiation treatment. If you subsequently require dental treatment you must tell your dentist that you have had radiation treatment, even if this happens many years after the treatment.

WILL THE COST OF YOUR DENTURES BE SUBSIDISED?

If you require dentures, they may in some cases qualify for financial support irrespective of your age. If you would like further information on this, ask a nurse to put you in touch with the social worker or contact your health insurance fund.

NUTRITIONAL ADVICE

Eating will become more problematic as your mouth becomes more sensitive. Reduced saliva production can also affect the taste and make swallowing more difficult. It is important, however, to ensure that you consume sufficient calories and nutrients (particularly proteins) every day and that you continue to drink enough.

It will be useful to seek expert advice on changes to your diet and the dietician will be happy to make appropriate recommendations.

To make an appointment with the dietician contact the secretariat or call +32 16 34 76 00.

NUTRITIONAL ADVICE IF YOU HAVE PROBLEMS SWALLOWING

- ✓ Soft, liquid food will be least painful. Chop a hot meal into small pieces or puree it. Use sauce, bouillon or milk to moisten the food. It will make swallowing easier. Remove the crusts from bread if possible.
- ✓ Thick liquid foods such as porridge, custard, yoghurt, chocolate mousse, blended soups are often easier to eat.
- ✓ Avoid very acidic, salty, sugary or spicy foods as they may irritate your mouth and throat.
- ✓ Fried (deep fried) foods with sharp edges (e.g. chips) and hard foods (e.g. unripe fruit and nuts) may be painful to swallow.
- ✓ Cold or lukewarm food is often easier to eat than hot food.

NUTRITIONAL ADVICE IF YOUR MOUTH IS SORE

Sometimes it is easier to drink with a large straw but cut it short to make it easier to suck.

- X Avoid citrus fruits such as oranges, grapefruit, kiwi, lemons or mandarins.
- X The following foods are usually recommended: milk, ice cream, bananas, soft ripe fruit or tinned fruit and yoghurt.
- X Avoid the use of pungent herbs and spices such as pepper, paprika, curry, pili-pili, mustard, etc.
- X Make acidic and sharp dishes less tart by adding cream.
- X Carbonated drinks and alcohol can often feel unpleasant in the mouth.
- X Be careful with hot dishes; allow them to cool down to room temperature.
- X Cold foods such as ice cream are usually easier to eat.

NUTRITIONAL ADVICE IN THE EVENT OF A CHANGE IN/UNPLEASANT TASTE

- Clean your teeth often using a soft toothbrush.
- Use sugar free chewing gum.
- Sparkling or flat water with ice cubes and a slice of lemon can be refreshing.
- If your taste is affected your food will taste differently, even though it has been prepared in the usual way. It may suddenly taste very sweet, salty, bitter, tart or even be tasteless.
- Try to find out which dishes you prefer and avoid other ones.

- If you don't fancy a hot meal, you could have sandwiches with a savoury filling, a milky drink and fruit instead.
- If you don't fancy meat, you could have an extra portion of cheese, egg, fish or a dairy product.
- Some patients experience a metallic taste. Sometimes it helps to replace metal cutlery with plastic or wooden cutlery.
- Always try to eat and drink enough.

Take sufficient painkillers to make swallowing easier.

SOCIAL WORK

Illness can be very worrying for you and for your family. The social workers at the radiation department can help you tackle the difficulties you encounter in your personal and family life.

You can contact them if you have questions concerning:

- X personal problems, partner relationships and family life
- X social contacts, how to occupy yourself and your work situation
- X practical arrangements concerning the treatment (e.g. transport)
- X financial matters, social provisions, insurance
- X home help
- X residential assistance (e.g. a convalescent home)

Social workers can also provide information, advice, support and referrals to external and/or specialist care providers. You can request an appointment, either directly via the social workers, via the nursing staff in charge of the radiation unit or via your doctor.

Contact social support services:
tel. +32 16 34 86 20

RADIOTHERAPY CONTACT DATA

Should you have any questions when reading this brochure or afterwards, please do not hesitate to contact the nurse or doctor in charge of your treatment.

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