



Government of **Western Australia**
North Metropolitan Health Service
Sir Charles Gairdner Osborne Park Health Care Group



Head and neck treatment

Radiation Oncology

Patient information





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Introduction

Radiation therapy is often given to patients with cancers that arise in the head and neck region. This may be given on its own or in conjunction with other types of treatment, such as surgery or chemotherapy.

Treatment involves a series of outpatient treatments given for up to five days a week over several weeks. It is painless and although the appointment times may be 10 to 20 minutes in duration, the treatment itself only takes a few minutes.

The treatment varies from patient to patient and invariably causes some reactions within the body's normal tissues. Your radiation oncologist, a specialist doctor who uses radiation therapy in the treatment of cancer patients, will explain these to you in more detail.

This brochure outlines common side effects and suggests ways to minimise them. If required, your radiation oncologist will prescribe medications to soothe reactions that may occur.

You will need to have a mask made to wear for your CT (computer tomography) planning appointment and every treatment. This helps to ensure that you are in the same position each day and makes the treatment quicker and more accurate.

Possible reactions

When radiation therapy is delivered, it has to pass through normal structures to reach the treatment area. As a result, reactions in normal tissues within the treatment area can be expected to occur to some degree.

Individual patients will have different reactions, depending on the site to be treated, the dose given, the number of treatments and their overall health. Reactions may also be influenced to a greater extent by other forms of treatment given; for example, reactions are likely to be greater if chemotherapy is given at the same time as radiation therapy.

Usually, reactions would not be expected until the second or third week of treatment. They are likely to persist throughout the treatment and subside a couple of weeks after treatment is completed.

You will have regular reviews during your treatment. These appointment times will be included in your treatment schedule. In between the review appointments you are encouraged to mention any treatment-related issues that you have with the radiation therapists or nursing staff, who will be able to offer advice or refer you to the appropriate person/area.

Common side-effects include:



Loss of appetite and difficulty maintaining weight



Nausea and/or vomiting



Difficulty swallowing



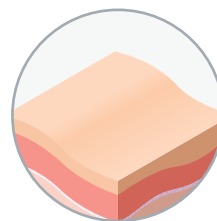
Dry mouth (xerostomia)



Inflammation/ulceration of the mouth/throat (mucositis)



Hair loss



Skin reactions



Fatigue



Loss of appetite and difficulty maintaining weight

Loss of appetite is a common side effect of cancer and its treatment. You may eat

less because you do not feel hungry, food may taste different, or you may feel nauseous. It is very important to maintain an adequate intake of food to help minimise weight loss.

Some suggestions to maintain an adequate intake of food

- Avoid skipping meals; an empty stomach can make you feel worse.
- Eat small, frequent meals and snacks throughout the day; try eating every two to three hours.
- Choose foods and drinks that are high in energy and protein (ask your nurse or dietitian for a list of suggestions).
- Clean your teeth, or rinse your mouth, before and after eating.
- Gentle exercise can stimulate your appetite.
- Modify the texture of your diet as required.

Loss of taste or taste change is another reason for lack of appetite and subsequent weight loss.

Nausea and/or vomiting

Aside from the discomfort, nausea and/or vomiting can be an issue as constant vomiting can lead to dehydration and loss of body salts.

The following may help to reduce feelings of nausea:

- Eat and drink slowly
- If the smell of food triggers nausea, try cooking in a microwave to reduce odours
- Snack on dry foods
- Avoid very sweet, fatty, greasy, rich and spicy foods
- Try cold food or clear liquids
- Drink plenty of fluids in between meals.

Everything may start to have a metallic, salty or cardboard taste. This is due to damage to the tastebuds in the mouth. It is usually only a temporary problem and your ability to taste should return to normal after your treatment has finished. The duration may vary from a few weeks to many months and may be exacerbated if you are also having chemotherapy.

You could:

- Focus on pleasant tasting foods
- Experiment with different foods and retry unpleasant foods often to check for improvement
- Try cold food
- Use a straw positioned to the back of your mouth to bypass the tastebuds
- Clean your teeth, or rinse your mouth, before and after eating.

Keeping your weight stable and your energy levels up is important for your health and your treatment. Significant weight loss can delay your treatment as the treatment plan is specific to your shape and size. Sometimes, even if you are eating well, you will still lose weight and this is why seeing a dietitian is essential. The nurses will weigh you weekly and ask you questions about dietary intake and side effects that you may be experiencing.





Difficulty swallowing

This can happen because of the cancer or the treatment. Problems can start a few weeks after treatment has started and may last for some time after the radiotherapy has been completed.

The reaction may be worse if chemotherapy is given at the same time as radiation therapy. If you experience this reaction, please let your radiation therapist, nurse or doctor know so that pain-relieving medication can be recommended or prescribed.

Dietary modifications can be recommended to ensure an adequate intake of food is maintained. Changing the texture of your food to soft, minced or pureed can help. Please speak to your dietitian for more information.

A speech pathologist will see you regularly throughout treatment. They will provide you with further information and exercises to assist with any difficulty swallowing.

Dry mouth (xerostomia)

Dry mouth symptoms are a common side effect of radiotherapy treatment, and may lead to problems in eating and swallowing, as well as altered taste, speech and dental decay. The following may help manage the symptoms.



- Rinse your mouth and dentures after eating.
Recommended rinses include:
 - 1/2 teaspoon of bicarbonate of soda plus 1/2 teaspoon of salt dissolved in 500ml of lukewarm water. This can be made in the morning and used throughout the day.
 - A mouthrinse marketed for dry mouth, such as Oral 7 rinse, Biotene rinse or Colgate Dry-mouth relief.
- Brushing your teeth after every meal. A common regime is the use of a high-fluoride toothpaste (Neutrofluor 5000) morning and night and a regular toothpaste at other times.
- Stimulate saliva by using sugar-free lollies, such as TheraBreath dry mouth lozenges or chewing sugar free gum.
- Drink adequate fluids (unless directed otherwise).
- Choose soft foods and foods with a high fluid content.
- Cease smoking.
- Avoid alcohol (including mouthwashes with alcohol).
- Avoid drinks containing caffeine.

You will be seen by the oral health specialist, who will give advice on mouth care and suggest products to use, depending on your situation. Nurses can also provide a nebuliser machine to trial as this can help with thick saliva secretions and patients find this beneficial. Please ask the nurses for assistance if you would like to trial one.



Inflammation/ulceration of the mouth/throat (mucositis)

Mucositis occurs when radiotherapy treatments damage the cells lining your mouth or other parts of the gastrointestinal tract (gut). This can cause pain, sores and ulcers in the mouth and throat. This may appear after about two weeks of radiation, and usually reaches a peak in severity at the end of treatment, or up to two weeks after completion of treatment, and may persist for up to eight weeks. It is very important to keep your mouth clean.

To achieve this:

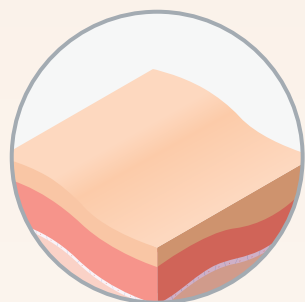
- Inspect your mouth daily and report any changes, such as:
 - Red or white areas
 - Ulcers
 - Bleeding of your gums
 - Pain
 - Difficulty eating or drinking.
- Rinse your mouth copiously throughout the day. The frequent use of a salt and bicarbonate mouth rinse (see 'Dry mouth' above) can lessen adherence of microorganisms to the lining of the oral cavity, reducing inflammation and the risk of infections.
- Drink enough water to keep the mouth moist.
- Keep lips lubricated (using lip balm that does not contain paraffin or petroleum jelly).
- Use a soft toothbrush or swab four times a day, after meals and before sleep (change the toothbrush monthly).
- Ideally, patients undertaking radiotherapy should be using Neutrofluor toothpaste at least twice a day. If this toothpaste becomes uncomfortable to use, change to a mild toothpaste, such as Oral 7 toothpaste. This toothpaste is less minty and has no foaming agent, which can be irritating.
- If in the habit of using dental floss or interdental brushes, continue to do so daily; if this is not already habitual, do not start it while having cancer therapy as incorrect use can result in tissue damage.
- If you have dentures, remove them before performing oral care. Dentures should be cleaned with a denture cleaning paste or a liquid soap and then thoroughly rinsed with water. Clean the 'gums' gently with a swab or a special extra-soft toothbrush, which can be provided to you.
- Avoid painful stimuli such as smoking, alcohol, acidic foods (such as tomatoes and citrus), hot drinks, spicy, hot, raw and crusty foods, fizzy drinks and too much salt.

After you have finished your course of radiotherapy, frequent dental check-ups (every 6 months) with regular cleaning and scaling of the teeth are necessary. Always tell your dentist you have had radiotherapy.

Hair loss

Hair loss usually occurs 2 to 3 weeks into treatment and it may take 3 to 5 months after treatment for hair to grow back. For some people hair loss may be permanent, or regrowth may be patchy.

In most cases, radiation will only cause hair loss in the area of the body that is being treated. However, in some cases hair loss can occur where the radiation exits the body. The radiation therapists can show you where this will likely be.



Skin reactions

Radiotherapy to the head and neck can cause a skin reaction. Reactions present as irritation like sunburn that can be relieved by the soothing cream provided.

Some degree of reddening (erythema) usually develops in the treated area about 10 to 14 days after the first treatment. It may persist for up to a month after treatment is finished with the peak of the reaction being the week after you finish treatment. The reaction is localised to the area being treated - your radiation therapist can indicate where this is likely to occur.

Skin reactions can be managed by our nurses, who can see you daily after treatment if required.

The following suggestions may help minimise reactions:

- Gently wash skin in the treatment area with lukewarm water and a non-perfumed gentle soap such as Simple soap, Unscented Dove, or a non-soap wash such as QV wash.
- Gently pat the skin dry using a soft towel – do not rub.
- Start moisturising with Sorbolene (or similar) cream provided as soon as treatment begins. Apply the cream twice a day to the entire treatment area and gently massage into the skin until absorbed. Apply more than two hours before your treatment and keep in the fridge for greater soothing. If you have not been given this cream, please ask the radiation therapists or nursing staff. Alternative soothing creams will be provided if the area becomes itchy or sore.
- Wear loose-fitting clothes. Tight clothing can irritate the affected areas.
- Avoid sun exposure to the treatment area. Wear a wide-brimmed hat and turn the collar up on your shirt.
- When swimming outdoors, always cover the treatment area with a cotton T-shirt or rashie. If you do wish to swim in a chlorinated pool, it is advisable to shower and change into dry clothes as soon as possible after your swim. Swimming in chlorinated pools may worsen the skin reaction. If this happens, please ask the radiation therapist or nurse whether it is advisable to continue swimming.

You will have regular skin checks during your treatment. However, please report to a nurse, radiation therapist or doctor if you experience itching, irritation or blistering, so that extra care and advice can be given. Your skin will be more susceptible to sun damage after radiotherapy. Clothing that protects the skin against direct sunlight is recommended for 18 months to two years after treatment. A maximum sun block lotion (at least SPF+30) is recommended after this time and care to avoid burning should always be exercised.



Fatigue

Fatigue associated with treatment can occur at any time during the treatment, but in general usually develops as the course of radiation therapy progresses. There can be many causes, but the main one is your body requires extra energy to heal healthy cells.

Daily travelling, working and running a household can also contribute to this tiredness. You may find that you generally slow down and don't have as much energy. This tiredness may be worse if you are also having chemotherapy.

Ensure you have adequate sleep, allow time to rest and drink plenty of fluids. Mild forms of exercise, such as walking, can be beneficial, especially if you make it social by involving friends or family. There are exercise programs that benefit patients with fatigue. Please ask staff for further information.

Pregnancy

It is strongly recommended that women use a reliable form of birth control during and shortly after treatment. Radiation therapy can be harmful to the unborn baby. Please inform a staff member immediately if you suspect that you may be pregnant.



Chemotherapy

Chemotherapy can be recommended in addition to surgery and radiation therapy. Reactions to chemotherapy vary for each individual – your doctor will discuss this in detail with you.

If there is any change to your chemotherapy schedule, it is important that you make the staff in Radiation Oncology aware of this immediately.

Emotional wellbeing

It is completely normal for you to feel emotional for some time after the diagnosis of cancer. Sleeping, eating and mood disturbances are all quite common under these circumstances.

Try spending time with people that make you feel good. Relax and do things you enjoy. Try to exercise regularly and say no to those activities you don't feel like doing.

Tell the radiation therapists or nursing team if you feel you are having difficulty coping with your diagnosis, treatment, domestic and travel arrangements or finances. They will organise for you to see trained professionals as needed.

Follow-up appointment

When radiation therapy is completed, your doctor will organise a follow-up appointment. If you experience any problems related to your treatment after the completion of treatment and before your follow-up appointment, please contact the department on (08) 6383 3000, Monday to Friday from 8am to 4pm.

This brochure discusses common problems or reactions that may occur when having radiation therapy to the skin. Not all reactions described will occur in every situation and every attempt will be made to reduce or relieve any reactions.

For further clarification or information on the treatment side effects outlined in this brochure, feel free to ask any of the radiation therapists, nurses, or your doctor or registrar.

Further support

There are many services offering support to people undergoing cancer treatments.

These include:

Look Good Feel Better

Free call: 1800 650 960

Website: www.lgfb.org.au

Look Good, Feel Better is a free workshop run by professionals from the cosmetics industry for women. The practical workshop covers skincare, make-up and headwear demonstrations and participants receive a complimentary Confidence Kit full of skincare and make-up products.

Experienced volunteers from the beauty industry help show how to manage the changes that may occur to the skin, hair and general appearance as a result of treatment.

Workshops are run frequently in the Radiation Oncology Department. Please speak to the radiation therapists or nursing staff if you are interested in attending.

WA Psycho-Oncology Service

Phone: (08) 6457 1177

Email: wapos@health.wa.gov.au

This service is available to adult Western Australians diagnosed with cancer. Clinical psychologists apply psychological theory and evidenced-based assessment and treatment strategies to help people address their needs and meet their goals. You may self-refer or ask a health professional to refer you.

Cancer Council WA

Phone: 131 120

Website: www.cancerwa.asn.au

The charity works across every area of every cancer, from research to prevention and support, assisting people from diagnosis through treatment and beyond.



Healthdirect

Phone: 1800 022 222

Website: www.healthdirect.gov.au

This free 24-hour health service offers general guidance for patients, including symptoms, diagnosis and treatment options.

Solaris Cancer Care

Phone: (08) 6383 3475

Website: <https://solariscancercare.org.au>

DD block,
Ground floor,
Sir Charles Gairdner Hospital,
Hospital Avenue, Nedlands

Solaris Cancer Care provides up-to-date, practical, evidence-based information on complementary integrative approaches to cancer management, disease prevention, health and wellbeing activities and support services that are designed to help people feel and cope better with their cancer and treatment.

Cancer Australia

Phone: 1800 624 973

Website: www.canceraustralia.gov.au

Established by the Australian Government to benefit Australians affected by cancer.

WA Cancer and Palliative Care Head and neck nurse coordinator

Phone: 0400 021 654



References

1. Janina Christoforou, Oral Health, Radiation Oncology, SCGH
2. Head & Neck Dietitians Group, Radiation Oncology, SCGH
3. <https://www.eviq.org.au/radiation-oncology/head-and-neck/3390-head-and-neck-scc-adjuv-ebrt-with-or-without#side-effects>
4. <https://www.eviq.org.au/clinical-resources/radiation-oncology/423-management-of-radiation-induced-xerostomia#patient-education>
5. <https://www.eviq.org.au/clinical-resources/side-effect-and-toxicity-management/oropharyngeal/210-oral-mucositis-and-stomatitis#patient-education>
6. <https://www.eviq.org.au/side-effects-documents/1834-alopecia>
7. <https://www.eviq.org.au/patients-and-carers/patient-information-sheets/managing-side-effects/3100-nausea-and-vomiting-during-cancer-treatment>
8. <https://www.eviq.org.au/patients-and-carers/radiotherapy-patient-information-sheets/3101-skin-changes-and-skin-care-during-radiotherap>

Radiation Oncology

Cancer Centre
Sir Charles Gairdner Hospital
Gairdner Drive
Nedlands WA 6009
Phone: (08) 6383 3000,
Monday to Friday, 8am to 4pm



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