



# Radiotherapy that includes the mouth and care of your teeth

Radiotherapy

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This information leaflet is a guidance document for patients who are going to receive radiotherapy to their mouth area. The mouth area includes the areas of the tongue, gums, palate and insides and back of the mouth.

This leaflet will explain how you should care for your teeth following your radiotherapy treatment.

**The mouth area often needs to be treated using radiotherapy when:**

- The primary site is within the mouth, e.g. tongue, floor of mouth
- The main site is next to the mouth, e.g. parotid salivary glands and so it is impossible to avoid the mouth
- Treatment includes the lymph nodes near to the mouth

## Dental care before radiotherapy

Before you start radiotherapy treatment, the condition of your mouth needs to be as good as possible. This has benefits before, during and after your radiotherapy. It is usual to see a dentist and dental nurse as part of your radiotherapy care plan. This appointment is at The Clatterbridge Cancer Centre in Wirral and includes:

- Assessment of the mouth and treatment, e.g. removal of any unhealthy teeth, as required

- Giving you information and products to help improve the condition of your teeth, e.g. high strength fluoride toothpaste
- Explain the need for good mouth care routines **during treatment and afterwards**, as a life long habit, to reduce the risk of developing and/or reducing the severity of (non-cancer) related problems, for example frequent infections

This is especially important as there is a risk of long term changes in your mouth, teeth and jaws. The risk is related to:

- How much of your mouth is treated. This varies depending upon the main site of the disease
- If any of the salivary glands are treated (if they are not the main site of the cancer): **see later**
- The total radiation dose given

These risks need to be balanced against your current health needs. **Your oncology doctor will explain in detail how these various factors relate to you and your treatment.** Please read this leaflet very carefully. If there is anything you do not understand, then please ask any members of your cancer team to help you. The dental team will see you again about four weeks after finishing your radiotherapy.

## Support during treatment

During treatment, many staff are here to help you cope. These include the treatment radiographers, being seen regularly by the



doctors and, if necessary, our specialist nurse. We also have a dietitian, a nutritional nurse and a speech and language therapist and you are likely to be seen by them as part of your care.

We also have a range of information leaflets, e.g. Eating well & coping with side effects. See our booklet called 'Radiotherapy to the head and neck' or our website for more information on what to expect when you come for radiotherapy. In addition, Macmillan Cancer Support has free information on living with cancer and the effects of treatment – see contact details on page 9.

## Changes related to radiotherapy

The salivary glands are sited around the sides of the face and in the floor of the mouth. They produce a fluid called saliva (spit). Radiotherapy affects these glands making them produce less saliva leading to a dry mouth. The amount of dryness you will experience depends on any previous surgery, how much of your mouth is treated and the dose the glands receive. However, when the mouth is treated everyday over 2-3 weeks or more it is more likely to happen and may be a permanent effect.

## How is a dry mouth related to tooth decay?

A dry mouth increases the chance of tooth decay. Saliva is very important in protecting teeth from decay as it continually 'washes' the mouth to remove food particles etc and reduces the chance of infection. When you have a dry mouth, even small amounts of sugary foods and drinks can cause **very severe tooth decay**.

It may be difficult to treat and may result in you needing some tooth extractions (see later). Even if you have only a few teeth it is important to have good mouth care routines to help keep them, and your mouth, in good condition.

Help to keep your mouth moist by increasing your fluid intake (water is best) and rinsing your mouth frequently both during and after completion of treatment.

## How to look after your teeth during radiotherapy

After every meal and before going to bed:

- Clean your teeth with a soft, small headed brush (baby toothbrush may help) and the fluoride toothpaste provided. Spit out the paste after brushing and do not rinse your mouth afterwards. If you use dentures, use a different brush to clean them (see denture care on page 5)
- If you use 'build up' drinks such as ENSURE, rinse your mouth very well afterwards with water to remove all traces which may be stuck to your teeth

As your mouth becomes sore you may need to stop using your toothbrush for a short while. In this case ensure you rinse your mouth well and frequently. Whenever you rinse your mouth ensure that the liquid is swished around your mouth and between your teeth.



If you are prescribed a mouthwash leave 30 minutes between using it and tooth brushing.

Stop using a denture as soon as any soreness develops.

Keep your mouth moist by rinsing frequently. In-between use of a mouthwash, use water at room temperature. When you start treatment, rinse every four hours, whenever possible. As your mouth becomes drier and sore do this as often as you find soothing, but at least every two hours is recommended. Products to make the mouth moist (saliva substitutes) will be given as required.

## Care of dentures (and prosthesis if used)

Use liquid soap or a denture cleaning cream and a brush for cleansing.

Soak your dentures using denture cleaning tablets as this removes bacteria and plaque. Follow manufacturers instructions for use.

After cleansing, leave your dentures out overnight in a glass of water, this will give your palate a rest and reduce the chances of a fungal infection (thrush).

## How can I look after my teeth immediately after radiotherapy?

Your mouth is likely to be sore for a number of weeks after finishing radiotherapy. You should continue with regular mouth

care routines during this time, if possible. Even if only mouth rinsing is possible, it is still beneficial. **Once your mouth has recovered** you should continue to look after your teeth by considering the following:

**a) Watch what you eat!**

Radiotherapy can alter taste sensation and you may find that you prefer a more sugary diet. However, you should avoid sugary foods & drinks as much as possible – especially in-between meals or before bedtime. If you do have them, do so with a meal and clean your mouth afterwards. Sugary foods include sweets, biscuits and cakes, fizzy drinks such as cola and lemonade. Use a sweetener rather than sugar in drinks and foods.

If you take 'build up' type drinks such as ENSURE, brush your teeth afterwards (or at least rinse your mouth very well with water) to remove all traces which may be stuck to your teeth.

**b) Get enough fluoride into your teeth**

Continue to use a high strength fluoride toothpaste. It is available by repeat prescription from your GP.

**c) See your dentist regularly**

In addition to your follow-up appointments with your oncology doctors, it is extremely important that you see a local dentist regularly. Doing so helps to spot problems early, start treatment and try to prevent more serious conditions developing (see



Osteoradionecrosis below). If you do not have a dentist, we will contact a dentist near to you and ask them to see you. We recommend that you have a check up every three months for the first year. We will send your dentist a summary of your dental treatment. You should ask for an urgent appointment with them if you have any concerns.

After radiotherapy some people find their dentures don't fit as well and need a new set. It is important to use dentures that do fit well to avoid trauma to the gums (see Osteoradionecrosis below).

## About Osteoradionecrosis (bone death)

This is a rare condition that can develop at any time following surgery, radiotherapy and/or chemotherapy. It is related to trauma to the bones of the jaw and/or the soft tissues nearby. Trauma can be the removal of the teeth for either decay or infection, accidental injury to the area and/or poorly fitting dentures. Good mouth care routines together with seeing your dentist regularly helps to reduce the risk of developing this condition. However, the use of alcohol and tobacco increases the risk, particularly if used in excess.

It can occur following radiotherapy as the blood vessels that supply the jaw bones (especially the lower jaw) can be affected: the area of jaw at the back of the mouth being more at risk than the front. Following injury, there is a risk that the jaw bone (area under the gums) will be slow to heal or not heal properly.

At any time in the future, **should you need teeth removed, your dentist must refer** you back to the local head and neck cancer unit (this is usually Aintree Hospital for anyone treated at The Clatterbridge Cancer Centre). The dental care you need is likely to be different to 'standard' care so helping to reduce the chance of developing this condition.

If the tissues do not heal properly treatment may involve the use of hyperbaric oxygen therapy (breathing pure oxygen at a pressure higher than normal) or removing the affected part and/or rebuilding the jaw with bone from your leg or hip area.

We will give you an 'alert card' for your use to show your dentist/health care staff. Please ensure your relatives/carers know about this too.

For the same reasons, you should alert staff who deal with you if you have an accidental injury to your upper or lower jaw.



## Contact details

### **The Clatterbridge Cancer Centre**

Tel: 0151 334 1155

Dental Service Ext. 5905 (staffed on a part time basis/answer phone)

[www.clatterbridgecc.nhs.uk](http://www.clatterbridgecc.nhs.uk)

### **Macmillan Cancer Support**

Tel: 0808 808 0000

[www.macmillan.org.uk](http://www.macmillan.org.uk)

### **Changing Faces**

Helps those with facial disfigurement to face the world with confidence

Tel/fax: 020 7706 4232

[www.changingfaces.co.uk](http://www.changingfaces.co.uk)

### **British Dental Health Foundation**

Tel: 0870 333 1188

[www.dentalhealth.org.uk](http://www.dentalhealth.org.uk)

### **Aintree University Hospital**

Tel: 0151 525 5980

[www.headandneckcancer.co.uk](http://www.headandneckcancer.co.uk)

## How we produce our information

All of our leaflets are produced by staff at The Clatterbridge Cancer Centre and this information is not sponsored or influenced in any way. Every effort is made to ensure that the information included in this leaflet is accurate and complete and we hope that it will add to any professional advice you have had. All our leaflets are evidence based where appropriate and they are regularly reviewed and updated. If you are concerned about your health in any way, you should consult your healthcare team.

We rely on a number of sources to gather evidence for our information. All of our information is in line with accepted national or international guidelines where possible. Where no guidelines exist, we rely on other reliable sources such as systematic reviews, published clinical trials data or a consensus review of experts. We also use medical textbooks, journals and government publications.

References for this leaflet can be obtained by telephoning 0151 482 7722.

If you need this leaflet in large print, Braille, audio or different language, please call 0151 482 7722.

**If you have a comment, concern, compliment or complaint, please call 0151 482 7927.**

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