

University Dental Hospital of Manchester  
Department of Restorative Dentistry

Information for Patients

# Head and Neck Cancer Patient Leaflet

Head and neck cancer treatment can involve having an operation and/or radiotherapy and/or chemotherapy. These treatments are often given to cure or try to reduce the size of the cancer. They can have a lasting effect on your mouth and face depending on where the cancer is. This leaflet explains the dental effects of such treatment.

Radiotherapy and chemotherapy can have harmful effects on your mouth and it is very important that the mouth is as healthy as possible before treatment starts.

Your cancer team involves dentists, dental hygienists and therapists who will help monitor your mouth throughout radiotherapy and chemotherapy.

After your initial cancer treatment we will help to rehabilitate your mouth and replace missing teeth wherever possible. This may include dentures, bridges or implants depending on what you need.

If you have any queries about the information contained within this leaflet or any other aspects about your treatment please do not hesitate to contact us:

**Restorative Dentistry, First Floor: (0161) 393 7734**

**Restorative Dentistry, Ground Floor: (0161) 393 7735**

Monday to Friday 9.00am to 5.00pm

**For out of hours emergencies please contact your local Accident and Emergency Department.**

## What can you do before treatment?

**Oral hygiene:** get into the habit of brushing your teeth twice daily and after meals. Use a medium tufted brush with a small head so that you can get around all the surfaces of all the teeth. Use dental floss or interdental brushes once a day. A single tufted brush can help to get to individual teeth.

**Fluoride:** make sure your toothpaste contains fluoride. This will help to prevent tooth decay and enamel erosion. After brushing **do not** rinse away the excess toothpaste, just spit the remainder out. A fluoride mouthwash at lunchtime can give a third dose of fluoride especially if you are unable to brush your teeth after lunch.

**Diet:** avoid eating sugar between meals. This includes fruit and fruit juice, as both of these have sugar to cause tooth decay and acid that can cause acid erosion. Eat a well-balanced diet, with artificial sweeteners rather than normal sugar.



**See a dentist:** Teeth with problems are better repaired or removed, before cancer treatment starts, to prevent problems during and after treatment.

In some situations, it will be necessary to remove some of your teeth before or during cancer treatment.

- Teeth that have infections or are badly broken down will need to be extracted (taken out) before radiotherapy and are often removed at the time of an operation.
- Teeth that may cause problems in the future, especially those in the areas to be affected by the radiotherapy.
- Teeth that help with surgical access (often a lower front tooth) are removed at the time of surgery (this is often replaced with a bridge).

If surgery is carried out on your top jaw, we may leave a denture in your mouth for 4-6 weeks to help you to eat, drink and speak normally after the operation. This denture will be left in during radiotherapy.

## Side Effects of Head and Neck Cancer Treatment

**Side effects of an operation:** How an operation affects you will depend on the location and size of the cancer that is removed. In some cases you may have a denture placed in the roof of your mouth. You may not be able to eat and swallow normally, but it is important to at least sip water to maintain your ability to swallow (unless advised nil by mouth). Even if you are not eating through your mouth, it is important to try and keep any remaining teeth clean at all stages.

**Side effects of chemotherapy & radiotherapy:** During and after radiotherapy eating, speaking, wearing dentures and cleaning your mouth can be difficult due to the following side effects:

**Mucositis:** The mouth can become red, sore, inflamed and even ulcerated. This usually starts in the first 2-4 weeks after radiotherapy and gets better 2-3 weeks after radiotherapy finishes.

**Taste loss:** You may suffer some temporary loss of taste sensation due to radiation damage to the taste buds.

**Xerostomia:** You may experience a dry mouth and initially you may have some swallowing difficulties in the first 2-4 weeks after radiotherapy, which will resolve after 2-3 weeks. The dryness may get a little better after several months, but the effects may be lifelong.

**Radiation caries:** Your teeth may decay rapidly and become very sensitive after radiation therapy.

**Trismus:** Due to radiation causing scarring of the facial muscles and reducing the blood supply to tissues, the opening of the mouth may be reduced.

**Osteoradionecrosis:** Due to radiation reducing the blood supply to the jawbones, injuries to the gum (for example surgery, extracting a tooth or dentures rubbing) may not heal. In the worst case, areas of the bone may die and can become infected if the mouth is not kept clean. The bone is usually fine as long as it is covered by healthy gum but can be exposed to the mouth by ulcerations caused by ill-fitting dentures.

## Managing side effects during and after cancer treatment

Your dental team will help you with your own dental hygiene advice.

**Tooth brushing:** Brush teeth and gums with a soft bristle brush 2 to 3 times a day for 2 to 3 minutes. Rinse the mouth 3 or 4 times while brushing. Rinse the toothbrush in hot water every 15 to 30 seconds to soften the bristles, if needed. Allow the toothbrush to air dry between brushings. When the mouth is uncomfortable you might only be able to use of a soft brush or mouth sponges (soaked with saline or chlorhexidine mouthwash). If few teeth remain, a modified single tufted brush or TePe Angles brushes are helpful.

**Toothpaste:** Control sensitivity and decay with fluoride toothpaste, mouthwashes and gels placed in mouthguards. Use mild- tasting fluoride toothpaste. If toothpaste irritates the mouth, brush with a solution of 1 teaspoon salt added in 1 cup of water or 1 teaspoon baking soda in 1 cup of water.

**Mouthwashes:** Avoid rinses containing alcohol. If your mouth is dry, rinsing may not be enough to clean the teeth after a meal. Brushing, flossing, the use of Interdental (e.g. TePe) brushes or a Waterpik may be needed.

Use Chlorhexidine mouthwash daily at a different time to when fluoride is used (keep the mouthwash in the mouth for 1-2 minutes and this may be repeated 2-4 times a day). Caphosol® is mouthwash also containing calcium and phosphate and can be used to relieve dry mouth.

**Diet:** Saliva plays an important role in neutralising acids, washing food away from the mouth and providing calcium and phosphate to the teeth. Losing the protective saliva can lead to tooth decay, periodontal (gum) disease, fungal infections of the mouth and infection of the salivary glands. Chewing sugar free, xylitol or sorbitol containing gum can promote saliva production. Avoid sugar – use sugar substitutes instead. Avoid flavoured waters, high sugar lozenges. Some salivary substitutes may also contain flavourings and sugar. Glandosane® saliva substitute is **not** recommended for patients with teeth due to the high acidity.

It is important to talk to your dietitian to make sure you are well nourished during and after your treatment. In times when you need to have high sugar drinks, please spend a little extra time making sure you follow the recommended cleaning regime.

**Dentures:** Should be fitted 4-6 weeks after radiotherapy, when the gums are less sore.

**Jaw exercises:** Jaw-opening exercises (e.g. using wooden sticks/ tongue spatulas or a Therabite device) may relieve tightness of the jaw. We advise the 777 regime:

- 7 stretches for 7 seconds each, 7 times a day.

### Therabite device:



### Wooden spatulas:



A sore mouth may be relieved by:

- Saliva substitutes such as Biotene Oral Balance gel and ice chips (or honey if you do not have any teeth).
- Topical applications of Lidocaine (local anaesthetic gel).
- Topical applications of Benzydamine (Diffiam) mouth rinse.
- Homemade mouthwash with a teaspoon (5ml) of salt and a teaspoon (5ml) of bicarbonate of soda mixed in 250ml of water or saline or soluble aspirin.



## Single Tufted brushes:



## Interdental brushes (TePe brushes):

These can be used horizontally and vertically.



### TePe Angles



### TePe Brushes





**High Fluoride gels:** (Have a long expiry date, therefore you can buy several packs of this together).

**GC Tooth Mousse:** (Has a short expiry date, therefore buy maximum of 2 tubes at a time, each should last two and a half months).



**Trident Recaldent gum:**

**Caphosol:**



**Phillips AirFloss:**

**WaterPik:**



For those people with teeth who undergo radiotherapy, we recommend the following once a day:

- 1. Soft splints (especially made by dentist) to fit over your teeth and you may have one for the upper teeth and one for the lower teeth. Both must be worn. Clean with cold water and clean the inside thoroughly with a toothbrush.**
- 2. Then brush teeth for 2 minutes.**
- 3. Then apply Tooth Mousse with your finger around the teeth, and then spit out any extra. Leave without rinsing for 5 minutes.**
- 4. Then apply a pea sized amount of a high fluoride toothpaste (Colgate Fluorigard, Gel-Kam or Duraphat 5000) into your soft splint and place in the mouth for 30 minutes.**

## Where to get the products:

TePe brushes, single tufted brushes	
Fluorigard & Caphosol mouthwashes	From your dental surgery, large pharmacies, the Internet
Waterpik, Phillips AirFloss Biotene toothpaste, gel, gum	TePe brushes, single tufted brushes and mouthwashes can also be purchased from the University Dental Hospital of Manchester
Colgate Fluorigard toothpaste	
Trident Recaldent chewing gum	
Colgate Gel-kam	From the internet – for example Survival-32
Duraphat 5000	On prescription from your dentist/doctor
GC Tooth Mousse	Buy from the Dental Team at the Maxillofacial Department at the MRI on a Thursday (9.00am to 5.00pm). Patients would be advised to ring beforehand on (0161) 276 4396 to check that staff are available before calling in.