

Head and neck cancer and your dental care

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

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 oral health educators, 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 each clinical situation.

If you have any queries about the information contained within this leaflet or any other aspects about your treatment please contact the oral health advisor and lead nurse for oral and maxillofacial dentistry, Tracy Watford on 020 8725 0161 (Monday to Friday, 9am to 5pm). Out of hours, for emergencies please contact your local emergency department (ED or A&E).

What can I do before my treatment?

Oral hygiene – get into the habit of brushing twice daily 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 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. Toothpaste is not for cleaning the teeth as such but for supplying your tooth with topical fluoride to prevent tooth decay and enamel erosion. Fluoride can also help combat the effects of acid 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 sugary drinks and food **in between meals**, such as soft drinks, sweets and fruit. This includes fruit juice, as this has both sugar, causing tooth decay and acid that can cause acid erosion. Eat a well-balanced diet and try artificial sweeteners rather than normal sugar to limit sugar intake. Fruit eaten at meal times and fruit juices taken at meal times through a straw is better, especially if the mouth is rinsed afterwards with plain still water or a fluoride mouthwash. It is better to wait for 30mins after meals to brush your teeth so you do not brush away the surface of the tooth, which may have been softened by acids. These are neutralised by your mouth over time.

See a dentist – it is better to have any teeth with problems repaired or removed before treatment to prevent problems later.



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 before radiotherapy and are often removed at the time of surgery. This is to prevent flare up of teeth during radiotherapy, that may delay completion of radiotherapy, and to prevent long-term problems that are difficult to manage. In case of developing limited mouth opening, which would make access to back teeth difficult, some teeth in the line of radiation will be removed (especially at the back of the mouth).
- Teeth that help with surgical access (often a lower front tooth) are removed at the time of surgery. These are often replaced with a resin-bonded bridge.
- If surgery is carried out in your top jaw, we may leave a denture in your mouth for four - six weeks to help you eat, drink and speak normally after your surgery. This plate will be left inside during radiotherapy.

What dental side effects are possible from my head and neck cancer treatment?

Side effects of surgery: how surgery affects you will depend on the location and size of the cancer that is removed. In some cases you may have a plate 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 keep your swallowing ability going. This should be discussed with your speech and language therapist and their advice followed as swallowing can be unsafe for some people after treatment. 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 very difficult due to the following side effects. The effects of radiotherapy are worsened if chemotherapy is also given.

- **Mucositis (inflammation of the inside of the mouth):** the mouth can become red, sore, inflamed and even ulcerated. This usually starts in the first two - four weeks after radiotherapy and often gets better two - three weeks after radiotherapy finishes, but can take longer.
- **Taste loss:** you may suffer some temporary loss of taste sensation due to radiation damage to the taste buds.
- **Xerostomia (dry mouth):** you are likely to have a dry mouth and find it hard or painful to swallow, in the first two - four weeks after radiotherapy. This usually becomes less painful after two - three weeks, but may take longer for some patients. The dryness may get a bit better after a few months but on the whole the effects are lifelong. At best you may get back about 50% of the saliva you had before radiotherapy, if both sides of your face undergo radiation treatment.
- **Radiation caries (dental decay after radiotherapy):** radiation can directly damage the teeth, causing them to decay rapidly and become very sensitive.
- **Trismus (limitation of mouth opening):** radiation can also cause scarring of the facial muscles and reduce the blood supply to your tissues, which in turn can make it difficult to fully open your mouth.
- **Osteoradionecrosis (irreversible damage to the jaw bones after radiotherapy):** because radiation reduces the blood supply to the jawbones, injuries to the gum e.g. from 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 not kept clean. The bone is usually fine as long as it is covered by healthy gum. It can become exposed if you have by ulcerations caused by ill-fitting dentures.

How do I manage my side effects during and after my cancer treatment?

Tooth brushing: brush teeth and gums with a soft bristle brush two - three times a day for two - three minutes. Rinse the mouth three or four 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 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/or gels applied with a finger or placed in mouthguards. If toothpaste irritates your mouth, brush with a solution of one teaspoon of salt or one teaspoon of baking soda in one cup of water. OraNurse unflavoured toothpaste is specially formulated for people sensitive to strong flavours (1450ppm fluoride, SLS free, non-foaming).



Mouthwashes: avoid rinses containing alcohol. If your mouth is dry, rinsing may not be enough to clean the teeth after a meal so brushing, flossing or 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 one - two minutes, this may be repeated two - four times a day). Caphosol mouthwash also contains calcium and phosphate and can be used to relieve a dry mouth.

Diet: saliva plays an important role in neutralising acids, washing food away from the mouth and delivering calcium and phosphate to the teeth. Losing this 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. We usually recommend avoiding sugar (use sugar substitutes instead) and avoiding flavoured waters and high sugar lozenges. Some salivary substitutes may also contain flavourings and sugar so check for this. Glandosane saliva substitute is **not** recommended for patients with teeth due to high acidity.

It is important to talk to your dietician to make sure you are well nourished during and after your treatment. In times when you may need to have high sugar drinks, please spend a little extra time making sure you follow the recommended mouth cleaning regime. If it is possible try to have these drinks straight after meals and drink them through a straw to avoid coating your teeth. Then rinse your mouth out with a fluoride mouthwash.

Dentures: should be fitted four - six weeks after radiotherapy, when the gums are less sore. If your dentures rub, please see our team to make sure they fit properly.

Jaw exercises: jaw-opening exercises using wooden sticks, tongue spatulas or a TheraBite device, may help with any tightness of the jaw. A '777' regime is usually advised: seven stretches for seven seconds each, seven times a day. Please speak to your speech and language therapist about the right regime for you.

TheraBite device



Wooden spatulas



We aim to help you try to keep your teeth healthy to avoid needing any extractions in the future. Extraction could lead to a failure to heal and the death of the bone supporting your teeth.

If this happens it normally means:

- not smoking or drinking alcohol
- wearing removable dentures / appliances as little as possible
- using painkillers.

Sometimes other treatments are used, such as:

- surgery to remove dead bone or reconstruct mouth or jaw bones
- extraction of infected teeth and medication such as antibiotics, pentoxifyline, tocopherol
- hyperbaric (pressurised) oxygen therapy to aid healing.

A sore mouth may be relieved by:

- Saliva substitutes such as Biotene Oral Balance gel or ice chips (or honey if you do not have any teeth)
- Topical applications of Lidocaine, a local anaesthetic gel
- Topical applications of Benzydamine (Difflam) mouth rinse
- Homemade mouthwash with one teaspoon (10ml) of salt and one teaspoon (10ml) of bicarbonate of soda mixed in 250ml of water / saline / soluble aspirin
- Some people find using olive oil or coconut oil to rinse out the mouth helps to relieve dryness.



What can I use to help with my oral hygiene?

We will show you how to use these brushes.

Single tufted brushes: we can adjust these to suit each patient and we will teach you how to modify these brushes



Interdental brushes (TePe brushes):



These can be used horizontally and vertically and must be a tight fit in every gap



TePe Brushes



TePe Angles

High fluoride toothpaste: Only available on prescription

Morningside Healthcare Toothpaste

Duraphat Toothpaste



GC MI Paste plus (contains Fluoride): short expiry date, buy a maximum of two tubes at a time, each lasting two and a half months.



Caphosol mouthwash:

Fluoriguard mouthwash:



WaterPik:

Phillips AirFloss:



How do I look after my teeth if I undergo radiotherapy?

We recommend you do the following once a day:

1. Brush teeth for two minutes as normal
2. Then apply a small amount of tooth mousse with your finger around the teeth, like an ointment, and spit out any extra. Leave without rinsing for 5 minutes
3. Then apply a pea-sized amount of high fluoride toothpaste (such as Duraphat 5000) with your finger around the teeth, like an ointment, and spit out the extra. Leave overnight. Do not rinse out.

Where can I buy specialist dental products?

The following can be purchased from your dental surgery, large pharmacies, or the internet:

- TePe brushes, single tufted brushes
- Caphosol mouthwash
- Waterpik
- Phillips AirFloss
- Biotene toothpaste, gel and gum
- Colgate Fluoriguard mouthwash
- Oral Nurse toothpaste.

The following can be obtained on repeat prescription from your dentist or doctor:

- Duraphat 5000
- Morningside Healthcare Fluoride 5000ppm toothpaste.

The following can be purchase from Amazon.co.uk:

- GC Tooth Mousse.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Support Groups:



www.theswallows.org.uk



Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9am and 5pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough Wing (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111: You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel: 111**