

Oral care advice for patients having oral cancer treatment

Information for patients



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Radiotherapy and chemotherapy are treatments used to treat cancer; however, they can result in side-effects affecting your mouth. It is important that you have a dental check-up, before starting your cancer treatment.

Your cancer team may advise you to see a Restorative Dentistry Consultant or a member of their team.

You may also have surgery as part of your overall cancer treatment. Your Restorative Dentist will give you further advice and plan for any prosthetic replacement as part of your overall care.

Before starting cancer treatment

It is important to have a thorough dental check-up before you start cancer treatment to ensure your mouth is in the best possible state to proceed with radiotherapy and / or chemotherapy.

The Restorative Dentist will:

- Advise you on how to look after your mouth during and after your cancer treatment.
- Identify any teeth that require dental treatment before your cancer treatment.
- Discuss and plan any possible dental treatment you may need following cancer treatment.

Why do you need to have dental treatment before start of cancer treatment?

If you were to have any dental problems during your radiotherapy or chemotherapy treatment, this might disrupt or delay your treatment; it is important that this is avoided if at all possible. It is important to reduce the risk of future dental problems, particularly the need for tooth extractions if you are having radiotherapy. This is because radiotherapy treatment affects the blood supply to the bone and affects the ability of the jawbone to heal if you have an infection, have a tooth removed or undergo surgery in the area.

If you have a tooth out in an area where you have had radiotherapy, the bone may not heal properly. A condition may develop called Osteoradionecrosis (ORN). ORN can be difficult to treat, requiring antibiotics and possibly, further surgery. The incidence of ORN is between 7 - 10% of people who have extractions, following radiotherapy treatment to the jaws.

What dental treatment might I need before starting cancer treatment?

You may not require any treatment other than advice on how to look after your mouth, during and after your cancer treatment. You may be advised to use high-fluoride toothpaste (Duraphat). Using this toothpaste will help protect your teeth. You can start using this straight away and continue to do so in the long-term.

You may be advised to have a scale, filling(s) or extraction (removal) of teeth. Sharp teeth or fillings may be smoothed.

Teeth may require removal because of:

- Decay
- Infection
- Gum disease
- As part of an overall plan to reduce problems in the future.

If some, or all teeth require removal before cancer treatment, then this is done before you start your cancer treatment. If you are having an operation to remove the cancer, then the extractions may be done at the same time as the operation.

You may be asked to have a 3D scan of the jaws known as a CBCT before you undergo surgery for cancer treatment. This is different to the scans taken to diagnose the cancer. The purpose of this scan is to see if there are opportunities to place dental implants. Dental implants are occasionally useful as part of the dental rehabilitation after cancer treatment.

How to care for your mouth during and after cancer treatment?

Brush thoroughly in the morning and last thing at night with a medium texture manual or electric toothbrush.

It is important to keep the teeth and gums clean; however, if brushing is sore, try switching to a soft manual toothbrush, even a child brush, and Oranurse toothpaste, which is unflavoured but still contains fluoride. Brush twice a day, most importantly last thing at night. If brushing cannot be tolerated, then use a mild flavour fluoride mouth rinse 3 - 4 times per day and resume brushing with a toothbrush as soon as possible, working towards using a medium texture, ideally, electric tooth brush as soon as you are able to.

Use fluoride toothpaste.

Fluoride is very important in protecting the tooth surface to reduce the risk of tooth decay. Your dentist *may* ask that you use high fluoride toothpaste called Duraphat (2800-5000 ppm). This toothpaste is prescription only and you should not let other people use it. It should be kept out of the reach of children.

Spit out your toothpaste and do not rinse after brushing.

The ingredients in your toothpaste are much stronger than any mouth rinse. It is good to make the most of these by spitting out the excess toothpaste and leaving a slight residue of toothpaste on your teeth; therefore, do not rinse with any water or any mouth rinses straight after brushing. This maximizes the effect of fluoride on your teeth.

Mouth rinse

The content of fluoride in a mouth rinse is lower than that of toothpaste but is still of benefit when used at a separate time to brushing (e.g. straight after lunch or dinner). If you develop a fungal infection or have problems with plaque control after treatment, you may be asked by your dentist to use Chlorhexidine mouth rinse until the condition is controlled; however, it has a strong flavour and may require diluting 50:50 with water if the mouth is sore. This is intended for short-term use only. Long-term use of Chlorhexidine can cause staining to build up on the teeth which can be scaled off by your dentist.

Interdental aids

Your dentist will advise you on brushes or floss to clean in between the teeth. If this has never been a part of your daily routine, it is crucial that you begin this. Usually, interdental brushes will be advised.

This is a very important part of preventing decay in between your teeth and keeping your gums healthy in the areas where your brush cannot reach.

Fluoride trays

As part of long-term maintenance of your teeth your dentist may make you some clear toothguards called fluoride trays. These should be used to hold toothpaste next to your teeth to help the fluoride integrate with and protect the tooth surface from decay and acid erosion. They usually are worn for up to 20-30 minutes once-to-twice per week and are most helpful if you have had radiotherapy as part of your cancer treatment.

Why is dental home care important?

Plaque is made up of bacteria which is a sticky and acidic substance that builds up on your teeth. Plaque becomes more acidic and grows much more rapidly each time it is exposed to sugars in your diet. Saliva plays a big role in reducing the acidity of plaque but after cancer treatment, the mouth is often dry allowing plaque to become more acidic than normal. The longer plaque is allowed to grow without being cleaned off with a toothbrush and interdental brushes or floss, the more acidic it becomes allowing the tooth surface to decay and the gums to be sore, swollen or bleed.

When teeth decay, they can become sensitive or even painful. Dental decay if not caught early can cause the need for complex treatment, long dental appointments or extraction if the tooth can no longer be saved.

Teeth are important. They affect the way we speak and swallow, and maintain the supporting bone around our mouth intact, which helps maintain the appearance of our lips and face shape. Natural teeth can also be used to help support dentures and bridgework when replacing missing teeth.

How important is my diet?

It is important to note that dental decay cannot occur without sugar; therefore, to reduce your risk of decay, you are advised to reduce the overall amount of sugar in your diet but most importantly, the frequency of consumption (the amount of separate occasions where sugar is consumed) to no more than 3-4 sugary foods / drinks per day.

This usually means:

- Eating your three main meals (breakfast, lunch and dinner) which are likely to contain sugars / hidden sugars .
- Drinking only tap water or tea / coffee without sugar outside meal times.
- Any snacking between meals should be free from refined sugars (e.g. fresh fruit, vegetables or cheese).
- Keep fruit juices, squash and any fizzy drinks to a minimum, ideally, no more than once per week.

During treatment, if weight loss is an issue, you may be advised by a dietitian to eat frequent small meals with emphasis on high calorie foods; however, this can lead to a significant increase in your risk of dental decay. Therefore, it is important to try and increase your weight as advised, as efficiently as possible to limit the length of time your teeth are exposed to a high sugar diet.

Dental advice during this time would be:

- Accept that a high sugar diet is required short-term.
- Brush thoroughly two times per day including use of interdental brushes daily.
- Increased fluoride exposure as above (Duraphat 5000 and a fluoride mouth rinse after meals).

Dental recall

After cancer treatment, it is extremely important to attend your dentist for regular check-ups, every 3-6 months. This allows the dentist to assess for potential problems arising and to help you maintain your mouth. Regular reviews help keep reduce the risk of developing dental disease. Irregular dental examination can lead to rapid and uncontrolled deterioration of the teeth and gums.



Potential oral problems from cancer treatment

Dry mouth - also know as *Xerostomia*

Why does it happen?

Salivary glands are very sensitive tissues which can be damaged by chemotherapy, radiotherapy and surgery.

To some extent, this can be irreversible. When severe, it can cause problems with swallowing and speaking. In some cases, it may also disrupt sleep.

What can help?

- Stay hydrated with tap water only, avoid moistening the mouth with sugary or acidic drinks.
- Chew sugar free gum.
- Use a non-acidic saliva substitute (which can be prescribed by your doctor).
- Most patients find regular sips of tap water to be most effective.

Altered taste - also know as *Dysgeusia*

Why does it happen?

Taste buds may be damaged by radiotherapy. This is generally reversible but can take up to a year for it to resolve.

What can help?

- Stay hydrated and continue with your recommended nutritional intake.

Limited mouth opening - also know as *Trismus*

Why does it happen?

The mouth may not be able to open as wide due to surgical scarring, tightening of the jaw muscles caused by radiotherapy or a combination of both.

This can make tooth brushing, interdental cleaning and dental treatment difficult, and when extreme, can affect chewing.

What can help?

- Your dentist may recommend jaw opening exercises; for example, the use of a Therabite device or with the use of increasing thicknesses of wooden sticks /tongue spatulas in a '777 regime' - 7 stretches for 7 seconds, 7 times per day.

Sore mouth - also know as *Mucositis*

Why does it happen?

A sore mouth is a temporary side-effect of chemotherapy or radiotherapy causing pain, inflammation and ulceration of the lining of the mouth.

Soreness often starts around day four of treatment and peaks around day 10. It slowly improves and eventually, resolves within 6-8 weeks.

What can help?

- The key aim is the prevention of infection through good oral hygiene along with pain management.
- Pain may be managed with the use of mouthwashes such as Difflam, Caphosol or a gel such as Gelclair

Poor bone healing - also known as *Osteoradionecrosis (ORN)*

Why does it happen?

It occurs because the blood supply and cell turnover is reduced in the bone through which the radiotherapy beam travels. This reduces its healing potential.

Areas of exposed, non-healing bone can arise. They can be difficult to treat.

This may occur:

- Spontaneously (no known cause).
- After a dental extraction.
- Due to a poorly fitting denture rubbing on the gum.
- Due to gum disease around the teeth.

What can help?

Keeping your teeth clean, having a sensible diet and visiting your dentist regularly to prevent the need for any dental extractions after your cancer treatment.

Regular dental care will include making sure that any areas of decay are filled as soon as possible, that your gums stay healthy and that any dentures worn are well-fitting.

If any extractions are required, they should be carried out in hospital. If an area of exposed bone is identified, you should be referred into hospital for its management.

If I have dentures, how will these be affected?

A reduction in the amount of saliva in your mouth may make dentures difficult to tolerate. Having less saliva to lubricate your mouth may lead to dentures feeling looser, which are more likely to rub and cause ulcers. If the dentures cause ulcers, do not wear them and see your dentist for adjustment.

If you had surgery to your mouth, the muscles may not be able to control the dentures effectively. Your dentist will tell you if you require new dentures. If you had teeth extracted before your cancer treatment, it will be several months before dentures can be constructed to allow for the jaw bone to heal.

Following radiotherapy, you may be at a higher risk of fungal infections (thrush). You should clean your dentures after meals and leave them out at night. You should soak your dentures overnight in an appropriate cleanser such as Dentural.



Meet the dental team

It can be very confusing knowing who everyone you meet at the dental hospital is and what their role in your journey entails.

Consultant in Restorative Dentistry

The Consultant is a highly experienced specialist who leads the dental team. He / she makes decisions at the multi-disciplinary team meeting on the dental aspect of your cancer treatment. The Consultant discusses and agrees on the best treatment plan for you regarding your teeth, and organizes for your treatment to be carried out by the appropriate clinicians. The Consultant also treats the most complex dental cases.

Training Grade Dentists

Other dentists in the hospital work alongside consultants and have expert knowledge in the diagnosis and treatment of dental complications in Oncology patients. They can provide everything from very complex denture, crown and bridgework through to routine dentistry.

Dental Therapist / Dental Hygienist

The Dental Therapist provides basic dentistry like scaling and fillings. The therapist works to a treatment plan written by a dentist. They repair fractured teeth, provide fillings and treatment relating to gum disease. The therapist also provides oral health education, diet advice and smoking cessation.

Oral Health Educator

Oral Health Educators are dental nurses who have done additional training. They provide advice and help on caring for your mouth at home.

Contact details

The Restorative Department

Leeds Dental Institute, The Worsley Building, Clarendon Way,
Leeds, West Yorkshire, LS2 9LU.

Tel: **(0113) 244 0111**

We are all here to provide support and advice.





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Developed by: Mr A. Alhilou (StR), Mr M. Gahan (Consultant),
Mr S Bhakta (Consultant) and Mr P Nixon (Consultant)
Dr Ali Zaid (Consultant)

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