

# **DENTAL CARE FOR THE HEAD AND NECK ONCOLOGY PATIENT**

## **ORAL HEALTH ASSESSMENT PRIOR TO CANCER TREATMENT**

Your oral health will be assessed by the Oncology Team and the Hospital Dental Department to minimise complications that can arise from an unhealthy mouth. These complications can have a significant impact on your cancer treatment, and can have ongoing effects after your treatment. Dental treatment and extractions may be advised before any cancer treatment begins. This treatment may be undertaken at the hospital or with your own dentist, in conjunction with advice from the hospital dental department.

Gum disease and tooth decay are the two biggest infection risks prior to cancer treatment and ideally should be treated before cancer treatment begins. Your dentist will also look for cracked teeth, that could fracture in the future, in the radiation treatment areas. Unfortunately in some instances, teeth may need to be extracted if they are within the field of radiation for your cancer treatment. These teeth may not have caused you problems in the past, but if extracted after your radiotherapy, may cause very significant issues. You should discuss this with your dentist.

Waikato Oncology Department gives good information about the risks to oral health from head and neck cancer treatment.

## **ORAL HYGIENE DURING RADIOTHERAPY AND CHEMOTHERAPY**

You have been diagnosed with a tumour in your head and/or neck that could affect your salivary glands and your teeth and gums. Treatment for this type of tumour can involve surgery, radiotherapy and/or chemotherapy, or a combination of these treatments.

Your salivary glands are important to the health of your mouth. Saliva has many functions but the main ones are to: prevent tooth decay; wash away food debris; saliva helps in speaking, swallowing and tasting; it contains antibodies that help fight infection; and saliva helps digest food.

If part, or all, of a salivary gland is removed it can cause changes in your mouth. You are at much higher risk of tooth decay. You may also find your ability to eat certain foods changes and may be more difficult. Your mouth may feel dry and uncomfortable. Your taste may also be affected.

Radiotherapy can be used to treat cancer in a salivary gland or cancer in other parts of the head and neck. If the area of radiation involves the salivary glands it can permanently damage the glands.

Chemotherapy affects all tissues and can cause irritation of the skin (gingiva and mucosa) inside your mouth during treatment. During radiotherapy and chemotherapy the tissues in your mouth can become sore, inflamed, and ulcerated (oral mucositis) or infected. We need to keep your mouth healthy to prevent or lessen these possible side effects of your treatment.

## **ORAL HYGIENE ADVICE**

### **1) CLEAN BETWEEN YOUR TEETH DAILY**

Your toothbrush does not clean in between your teeth. We need to use dental floss, interdental brushes, or a water flosser to clean in between our teeth. Rinse with water after flossing to get rid of all the debris before you brush your teeth.

Dental floss can be used by hand or using various disposable flossing tools. Common Interdental brush brands include Dental Pro, Tepe and Piksters. You can purchase these at the supermarket, chemist, or your dentist. You may find your dentist has a better range of the smaller size interdental brushes.

Common water floss brands include Waterpik and Phillips Sonicare Airfloss. A quick Google search will give you a competitive selection of prices from various stores. These prices are often better than what your dentist can buy them for.

## **2) BRUSH TWICE DAILY WITH A SLS-FREE TOOTHPASTE**

Treatment of head and neck cancer can put your teeth at much higher risk of decay. A fluoride toothpaste is one of the simplest ways to lower this risk.

Radiotherapy and Chemotherapy can make your tissues inside your mouth more sensitive to some toothpastes. SLS (Sodium Lauryl Sulphate) is an ingredient in toothpastes that helps kill bacteria and makes your toothpaste foam. Sometimes it can cause irritation to the sensitive tissues inside your mouth. During cancer treatment and after cancer treatment, while your mouth and surrounding tissues are healing, we recommend an SLS free toothpaste.

A ) Below is a list of SLS free toothpastes, that also contain fluoride, available at your supermarket or the Chemist Warehouse:

Colgate Sensitive Pro Relief Repair and Protect, 1450ppm Fluoride

Oral-B Pure Enamel Care, 1450ppm Fluoride

Oral-B Pure Multiprotect, 1450ppm Fluoride

Sensodyne Daily Care, 1450ppm Fluoride

Sensodyne Gentle Whitening, 1450ppm Fluoride

Sensodyne Repair and Protect Impact, 1450ppm Fluoride

Sensodyne Pronamel, 1450ppm Fluoride

B ) Below is a list of SLS free toothpastes, that also contain fluoride, available at your dentist or online:

Oranurse Unflavoured toothpaste 1450ppm, online at [Toothshop.co.nz](http://Toothshop.co.nz), or at your dentist through Healthcare Essentials

Oral 7 mouth moistening Toothpaste, 1000ppm Fluoride, Chemist Warehouse shop or online

Grin - Kids Berry-licious, 1000ppm Fluoride, Chemist Warehouse, some supermarkets

Grin Natural Whitening, 1000ppm Fluoride, Chemist Warehouse, some supermarkets

Colgate Smile For Good, 1000ppm Fluoride, Chemist Warehouse, some supermarkets

Xerostom Dry mouth toothpaste, 1000ppm Fluoride, online at [Toothshop.co.nz](http://Toothshop.co.nz) or [Smilestore.co.nz](http://Smilestore.co.nz)

### **3. MOUTHWASHES**

Mouthwashes have different ingredients that do different jobs. Below we will discuss the different mouthwashes that can be useful during and after your cancer treatment. Your dentist can assess the health of your mouth and advise which is best for you. Throughout your treatment the salt and baking soda mouthwash is recommended.

#### **Prevention of Oral Mucositis**

A ) Rinse with salt and baking soda mouthwashes four times a day

This mouthwash is neutral and alkaline. It helps flush away food and debris and hydrates the mouth. It is soothing on sensitive tissues and baking soda, being alkaline, helps to restore a normal pH, which helps fight the acid attack which causes tooth decay.

You may also add **Xylitol** crystals (from health food stores). Xylitol can make it taste better and can also provide an antimicrobial effect- it is a type of natural sweetener used in many dental products and chewing gum.

Mix 2 teaspoons each of salt and baking soda (and xylitol if you wish) in a glass of water (250ml), rinse for 1 minute, spit out. One glass gives you plenty of rinse for each day. A kids water bottle is 250ml, you can reuse this bottle and keep this rinse with you when you are out and about for the day.

B ) Difflam Mouthwash

Available at your chemist Difflam is a mouth wash that contains pain relief and anti-inflammatory ingredients. Its use has been shown to reduce Oral Mucositis in Radiotherapy and Chemotherapy patients.

Constant long-term use is not advised. The risk of pain, irritation and infection is greater as your treatment proceeds. You may find Difflam useful during the middle and later stages of your treatment course.

C ) Raw Honey

Honey applied to the oral tissues has been shown to reduce the incidence of oral mucositis. Honey has antibacterial, anti-inflammatory, and wound healing abilities. It is also pleasant tasting, cheap and natural.

Apply 15-20ml of honey to the soft tissues of the mouth once a day.

***NOTE that long term consumption of honey can increase the risk of tooth decay. Its use in cancer treatment is only advised during radiotherapy and chemotherapy and not when this treatment is finished.***

#### **Treatment of Oral Mucositis (Mouth Ulcers)**

A ) Rinse with salt and baking soda mouthwashes, as above

B ) Aftamed mouthwash/spray/gel. Available from your dentist through Oraltec NZ. Aftamed reduces the pain of ulceration and speeds up the healing time.

## **Prevention of Infection**

### A ) Chlorhexidine Mouthwash

Chlorhexidine is a fantastic bug killer that is extremely useful in the prevention of tooth decay and the prevention and treatment of gum disease. It is not recommended for the prevention of oral mucositis.

It can be useful prior to your cancer treatment to reduce infection and get your mouth healthy. Your dentist may recommend that you use chlorhexidine for 2 weeks prior to your cancer treatment to really knock back those bacteria.

If you have any infection during your cancer treatment it can help reduce this infection. Bacteria can become resistant to chlorhexidine, just like bacteria become resistant to some antibiotics. So, we recommend that you use this mouth wash every night for 1 week only to treat the infection.

Floss or use interdental brushes or a water flosser (to remove food debris and plaque), brush (using an SLS-free toothpaste with fluoride) and **then** use the mouthwash. Rinse with 10ml for 1 minute and then spit out the mouthwash. Do not rinse with water afterwards.

Common Chlorhexidine mouthwash brands are listed below:

- 1) Savacol mouthwash and Alcohol-free Savacol mouthwash.

Found at your supermarket, chemist or dentist. Chlorhexidine does not taste particularly good.

- 2) Cervitec Alcohol-free mouthwash

Found at your dentist, supplied by Ivoclar Vivadent. This mouthwash has a more pleasant taste than other chlorhexidine mouthwash brands.

- 3.) Curaprox PerioPlus

Found at your dentist, supplied by Aluro, or online dental shops.

## **DIET DURING RADIOTHERAPY AND CHEMOTHERAPY**

During radiotherapy and chemotherapy, the tissues in your mouth can become extremely sensitive to different foods and drink. Below we will discuss options to reduce pain and irritation and keep your mouth hydrated.

### **1 ) DRINK PLAIN WATER**

Sipping on plain water keeps your mouth hydrated. You can also suck on ice cubes to improve hydration and lubrication for a dry mouth.

Carbonated/fizzy water is not advised. Carbonated water is acidic. Acid causes tooth decay and can irritate sensitive tissues.

Sugar free drinks are also acidic and increase your risk of tooth decay.

## **2 ) AVOID ACIDIC OR SPICY FOODS**

Soft and less spicy foods are tolerated better by your sensitive oral tissues. Stews and sauces are also easier to swallow if you have less saliva to lubricate digestion in the mouth. Smoothies can be a good option if chewing becomes uncomfortable.

## **3 ) LIMIT IN BETWEEN MEAL SNACKS**

If you snack all day your teeth are at constant sugar and acid attack. This increases your risk of tooth decay. Your chemotherapy or radiotherapy may affect you in different ways. If you find you can only eat small amounts often during the day, we need to ensure that we are diluting the sugar and acid attacks after each meal.

Ensure you have a good drink of water after a meal to wash away food debris. Rinsing with baking soda and saltwater mouthwashes after a snack also lubricates the mouth and lessens decay risk.

If possible, choose sugar-free/ non-sweet/ non-acidic foods and drinks for snacks in-between meals.

## **LONG TERM ORAL HYGIENE AFTER HEAD AND NECK CANCER TREATMENT**

If one or more of your major salivary glands have been removed by surgery and/or damaged by radiotherapy your risk of tooth decay has significantly increased. Your cancer treatment is funded by the Government. Ongoing dental care is **not** funded by the Government. Prevention is better and cheaper than cure.

A dry mouth is a normal side-effect of cancer treatment to the head and neck. Excellent home care is the best way to reduce the risk of decay and complications following this cancer treatment.

Following are several recommendations to keep your mouth healthy. It is best to discuss this with your dentist to get an ideal customised preventative plan for **your** mouth.

### **ORAL HYGIENE ADVICE**

#### **1 ) Dental Exam and Fluoride varnish application every 3 months.**

Research shows that application of a High Fluoride varnish two to four times a year lowers your risk of tooth decay. It is recommended to see your dentist 3 monthly to closely monitor your risk of decay. Decay develops faster in patients with a dry mouth.

When you have a great preventative plan with your dentist, you may be able to extend the time between check-ups. Continue your meticulous homecare routine as recommended during your treatment.

#### **2 ) Clean between your teeth daily**

Your toothbrush does not clean in between your teeth. We need to use dental floss and/or interdental brushes, or a water flosser to clean in between our teeth. As per the Oral Hygiene Advice on pages (1) and (2).

#### **3 ) Brush twice daily with a fluoride toothpaste**

If you have had radiotherapy/chemotherapy/surgery that involves your jaws and salivary glands to treat your head/neck cancer, you are classified as being at higher risk of tooth decay.

Complete twice daily brushing using a soft fine bristled toothbrush or an electric/ power brush with a sensitive or gum care head.

Immediately after radiotherapy and chemotherapy it is best to use the SLS Free toothpastes as discussed earlier.

When your oral tissues have healed and no longer have the side-effects of cancer treatment, it is recommended to use a high fluoride toothpaste. High fluoride toothpaste contains 5000ppm fluoride, compared to between 1000 to 1500ppm fluoride in normal toothpaste. Research shows excellent prevention of decay in high-risk patients when high fluoride toothpaste is used.

In a small number of cases a high fluoride toothpaste can cause gum irritation. This high fluoride toothpaste contains SLS so if any irritation occurs you can just go back to your SLS free paste that contains fluoride.

High fluoride toothpaste is not suitable for children or pregnant or breast-feeding women.

High Fluoride toothpastes available are listed below:

- A ) Colgate NeutraFluor 5000. Available from your chemist or dentist.
- B ) 3M Clinpro 5000. Available from your dentist. This toothpaste has a lower level of SLS.

#### **4 ) Chlorhexidine Mouthwash**

Savacol, Cervitec and Curaprox PerioPlus brands as mentioned previously.

For prevention of decay and gum disease, rinse 10ml of mouthwash for 1 min after flossing and brushing. Use the mouthwash every night for 1 week a month. For the rest of the month follow your daily brushing and flossing routine. Repeat monthly.

#### **5 ) Drink plain water**

Sip on plain water frequently as discussed previously.

#### **6 ) Baking soda rinses**

Because you do not have much saliva, you cannot buffer the acid that is produced from eating and drinking. If you rinse with a baking soda mouthwash after you eat or drink anything it buffers this acid attack instantly.

Mix 2 teaspoons of baking soda (and xylitol if you wish) in a glass (250ml) of water. Rinse with 10ml for 1 minute after you eat or drink. As previously mentioned you can put this mouthwash in a small bottle and carry it with you during the day.

#### **7 ) Chew sugar-free gum**

For example: Extra chewing gum. If you have some saliva gland remaining chewing sugar-free gum increases the amount of saliva that the gland can produce. You need to chew gum for at least 20 minutes after a meal.

Do not chew sugar free gum all day. Your jaw joints are not designed to work all day, and this can cause joint pain.

## **8 ) Tooth mousse**

Tooth mousse is a paste that you rub on your teeth at night after flossing and brushing. It contains Calcium and Phosphate (minerals that are in your tooth) and is alkaline. Tooth mousse is available from your dentist.

## **MANAGEMENT OF DRY MOUTH**

Dry mouth can cause irritation and difficulty when talking and eating. There are several products that you can use to help lubricate the mouth and stimulate saliva production. These products are not a toothpaste. They are designed to be rinsed, rubbed, or sprayed onto the soft tissues of your mouth.

Below is a list of brands that you may find useful:

a ) Biotene mouthwash, gel or sprays.

Biotene products can be purchased at a pharmacy, online at [www.toothshop.co.nz](http://www.toothshop.co.nz) or from your dentist (Crown Dental and Medical supply dental practices).

b ) Xerostom mouthwash, spray or toothpaste.

Xerostom does produce a dry mouth toothpaste that contains 1000ppm fluoride. If you use this toothpaste, do not use other Fluoride containing toothpastes at the same time.

Xersostom products are available online at [www.smilestore.co.nz](http://www.smilestore.co.nz) or from your dentist (Dental supplier Aluro).

c ) Xylimets Adhesive Discs

Xylimets adhesive discs are formulated to provide dry mouth relief by coating, lubricating, and stimulating saliva. They are the only xylitol containing disc that stimulates saliva during sleep. Xylitol is a natural ingredient that also can lower your risk of tooth decay.

Xylimets are available online at NZ Online Pharmacy or from your dentist (Dental supplier Crown Dental and Medical)

d ) Spry Xylitol Moisturising Oral Spray

Available from your dentist (Dental supplier DRC) or online dental shops or online health shops.

## **SUMMARY DURING RADIOTHERAPY AND CHEMOTHERAPY**

- 1) CLEAN BETWEEN YOUR TEETH DAILY
- 2) BRUSH TWICE A DAY WITH A SLS FREE TOOTHPASTE THAT CONTAINS FLUORIDE
- 3) MOUTHWASHES  
Use the best combination for your mouth in discussion with your dentist.

## **DIET DURING RADIOTHERAPY AND CHEMOTHERAPY**

- 1) DRINK PLAIN WATER
- 2) AVOID ACIDIC OR SPICY FOODS
- 3) LIMIT IN BETWEEN MEAL SNACKS

## **SUMMARY LONG TERM ORAL HYGIENE AFTER HEAD AND NECK CANCER TREATMENT**

- 1) Dental Exam and Fluoride varnish application every 3 months
- 2) Clean between your teeth daily
- 3) Brush twice a day with a fluoride toothpaste
- 4) Chlorhexidine Mouthwash
- 5) Drink plain water
- 6) Baking soda rinses
- 7) Chew sugar free gum
- 8) Tooth mousse

## **SUMMARY MANAGEMENT OF DRY MOUTH**

- 1) Biotene
- 2) Xerostom
- 3) Xylimets
- 4) Spry Xylitol Moisturising Oral Spray



## DENTAL CARE PRODUCT LIST

### **SLS-free toothpaste (1450 ppm fluoride)**

- Sensodyne Repair and Protect
- Sensodyne Pronamel
- Sensodyne Daily Care
- Sensodyne Gentle Whitening
- Colgate Sensitive Prorelief
- Oral B Pure Enamel Care
- Oral B Pure Multiprotect

*All available at the your supermarket or Chemist Warehouse*

*-Oranurse-unflavoured toothpaste 1450ppm fluoride is available online at the Toothshop or at your dentist through Healthcare Essentials*

### **SLS-free toothpaste (1000ppm fluoride)**

- Xerostom Dry Mouth Toothpaste
- Oral 7 mouth moistening Toothpaste
- Grin - Kids Berry-licious
- Grin Natural Whitening
- Colgate Smile For Good

*All available at the Chemist Warehouse shop or online. Colgate and Grin is also available at your supermarket*

**High Fluoride Toothpaste (5000 ppm)** for post-treatment use *is available through your dentist or pharmacy*

- Colgate Neutrafluor 5000
- 3M Clinpro 5000 (contains a lower level of SLS)

### **Mouthwashes**

**Chlorhexidine** based and alcohol free

- Savacol- alcohol free option
- Cervitec (mouthwash/gel)
- Curaprox PerioPlus

*All available through your dentist or online dental shops*

### **Diffiam**

Pain relief and anti-inflammatory  
Available through your pharmacy

**Aftamed** (mouthwash/gel/spray)

*Available through your dentist or online dental shops or pharmacy online*

### **Spry Xylitol Moisturising Oral Spray**

*Available through your dentist or online dental shops or online health shops*

### **Interdental Brushes, floss and disposable flossers**

Interdental brushes- Dental-Pro, Piksters, Tepe brands  
Spry xylitol floss  
Reach Access flosser with a long handle and disposable, clip on heads  
Short disposable flossers- various brands

*All available at your dentist, pharmacy, online dental shops or supermarket*

**Water flossers** are available through your dentist or appliance stores, also Chemist Warehouse and online dental shops.