

Mouth health and cancer treatment

Information for people affected by cancer

Some cancer treatments cause side effects in the mouth (oral) area. This fact sheet has been prepared to help you, your family and friends understand more about the mouth changes you may experience and how to take care of your mouth before, during and after treatment. Not all cancer treatments cause mouth changes.

How treatment affects the mouth

Many types of cancer treatments can cause side effects that affect the mouth area. For example:

- some chemotherapy and targeted therapy drugs can damage healthy cells in the mouth, causing mouth sores or infections
- radiation therapy to the head, neck or upper chest area may injure cells in the mouth and salivary glands, or cause changes to the strength of the muscles and nerves used in swallowing
- surgery to the head and neck area can affect the ability to chew and swallow.

Your health care team will discuss the likely oral side effects of treatment and suggest ways to manage them (see the next page for more information).

Having ongoing problems with your mouth can be difficult to cope with. Taking care of your mouth before, during and after treatment will help protect your teeth, mouth lining and gums, reduce discomfort, and help the mouth area heal more quickly. Most mouth problems gradually improve and go away after treatment is over. In some cases, they may be permanent and need long-term care.

“ Find a dentist who understands the effects of treatment and get advice for the health of your teeth long term. ” Julie

Taking care of your mouth before treatment

It is often a good idea to visit your dentist for a thorough check-up before starting cancer treatment. Tell the dentist about the type of treatment you will be having so they can develop an oral health care plan (see box below).

It is especially important to see your dentist if you already have mouth problems or tooth decay, or if you are going to have high-dose chemotherapy, a stem cell transplant or radiation therapy to the head and neck area. If you are having radiation therapy to the mouth, your treatment team may require you to have a dental check-up before treatment starts.

You may need to have any decaying teeth removed before starting treatment. There is a higher risk of infection and bleeding if you have dental work during cancer treatment.

You can also take care of your mouth by:

- eating a balanced, nutritious diet that includes a variety of foods from the five major food groups – fruits, vegetables and legumes, wholegrains, meat (or alternatives) and dairy (or alternatives); if you are having difficulty eating, talk to a dietitian or speech pathologist about suitable foods
- quitting smoking – call Quitline 13 7848 or talk to your doctor
- limiting how much alcohol you drink
- learning how to care for your mouth – ask your dentist or health care team for advice.

An oral health care plan sets out any dental work you need before having treatment. It also provides detailed instructions about how to look after your mouth before, during and after treatment to help prevent tooth decay and deal with any oral side effects such as mouth sores.



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Oral side effects caused by cancer treatments

Cancer treatments can cause a number of oral side effects. The type of side effects you experience depends on your treatment. Not everyone will have all of these side effects.

Mouth changes – You might experience mouth sores and ulcers (oral mucositis), thick saliva or a dry mouth (xerostomia). See box opposite.

Tooth decay – Your teeth may be at increased risk of decay, especially if you have a dry mouth.

Mouth infections – The most common is oral thrush, which usually appears as white patches or a white or yellow coating on the lining of the mouth and tongue. Thrush can cause taste changes and bad breath, and be uncomfortable.


Bleeding gums – Your gums may look red, shiny or swollen and they may bleed. Bleeding may occur if your platelet count falls, which can happen with chemotherapy. Platelets help the blood to clot.

Taste changes – Cancer treatment may make foods taste different (e.g. bitter or metallic). You may lose interest in eating (loss of appetite).

Trouble swallowing (dysphagia) or opening your mouth fully (trismus) – This can be caused by head and neck cancer or treatment side effects.

Your doctor or nurse will advise you on how to cope with any side effects. You may be prescribed medicine or given suggestions to make eating, drinking and swallowing easier. Your doctor may refer you to a dietitian or speech pathologist to help you manage your oral side effects, eating and drinking.

If you have any side effects, especially if they weren't discussed with you before treatment, let your treatment team know. See the next page for some ways to manage side effects.

“At times life was tough but it slowly improved. I still suffer from a dry mouth and always carry a bottle of water.”  Mary

Oral mucositis and saliva changes

Oral mucositis and a dry mouth are considered more severe side effects of cancer treatment.

Oral mucositis

Radiation therapy to the head or neck area, some chemotherapy and targeted therapy drugs, or high-dose chemotherapy before a stem cell transplant can damage the cells lining the mouth. This is known as oral mucositis. Being treated with both chemotherapy and radiation therapy (chemoradiation) increases the risk.

Symptoms include:

- painful spots, sores or ulcers in your mouth
- bleeding in the mouth
- mouth infections such as oral thrush
- difficulty and pain with eating, swallowing or wearing dentures
- sensitivity to hot, cold, salty, spicy or acidic foods and drinks.

Your doctor can give you medicines to reduce the discomfort when you eat, drink or speak. Some medicines can be applied directly to the mouth sores to numb them. Mucositis usually gets better a few weeks or months after treatment ends.

Dry mouth and saliva changes

Radiation therapy or surgery to the head or neck area, some chemotherapy drugs and some pain medicines can reduce the amount of saliva (spit) in your mouth, make your mouth dry or make your saliva thick and sticky. This is known as xerostomia.

Symptoms include:

- not having as much saliva as usual
- thick or stringy saliva
- a sticky or dry feeling in your mouth
- problems chewing, tasting and swallowing
- finding it hard to speak (the tongue may have trouble moving)
- ridges or cracks on the tongue surface or the corners of the mouth
- difficulty with swallowing saliva or spitting it out.

Thick, sticky saliva or a dry mouth can make it harder to keep your teeth and mouth clean, which can increase the risk of tooth decay and mouth infections such as oral thrush. Thick saliva tends to improve in the weeks after treatment. Dry mouth from radiation therapy to the head and neck area can last for many months after treatment. For some people, it can be permanent.

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Taking care of your mouth during and after cancer treatment

General tips

- Check your mouth, tongue and teeth daily during treatment. Use the light on a mobile phone or a torch to look for changes on the surface of your tongue, roof of your mouth and insides of your cheeks.
 - Tell your treatment team if you notice any changes to your mouth – they may prescribe medicines and mouthwashes that can make you more comfortable.
 - If you need to have any dental work, it is important to tell your dentist that you are having cancer treatment.
 - Your dentist may be able to apply fluoride treatments, which can slow any tooth decay.
 - Try to keep eating nutritious foods to help your body recover from the cancer treatment.
 - Visit speechpathologyaustralia.org.au to find a speech pathologist and dietitiansaustralia.org.au to find an accredited practising dietitian.
- See our *Understanding Taste and Smell Changes* fact sheet and *Nutrition and Cancer* booklet.

Keep your mouth moist

- Drink 6–8 glasses of water and other fluids throughout the day. Try sugar-free cordial, diluted juices, milky drinks and herbal tea. Carry a water bottle with you and take frequent sips.
- Limit how much caffeine you drink (e.g. from coffee, tea, energy drinks or soft drinks).
- Consider using a cool mist humidifier at night. This can be helpful if you have a very dry mouth – check with your treatment team.
- Suck on ice chips, ice blocks or soft sugar-free sweets, or use sugar-free chewing gum.
- Keep lips moist with a lip balm containing beeswax, shea butter or plant-based oils. Avoid lip balms based on petroleum jelly.
- If you find swallowing difficult, talk to a speech pathologist. You can also try using artificial saliva or oral moisturisers.

Keep your mouth clean

- Rinse your mouth several times a day – when you wake up, after you eat or drink, and at bedtime. Ask your doctor or nurse what type of alcohol-free mouthwash to use and how often to use it.
- Try making a mouthwash by dissolving bicarbonate of soda and salt in 1 cup of warm water. While your mouth is very sensitive during treatment, use ¼ tsp of each ingredient. After treatment is over, you can increase this to ½ tsp. Swish it around your mouth, spit it out and then rinse your mouth with plain water.
- If you wear dentures, make sure they fit properly. Wear them only when eating and clean well after use. Ask your treatment team to recommend denture cleaning products that will not irritate your mouth.
- Clean your teeth with a soft-bristled or electric toothbrush and replace regularly (at least every three months) to prevent infection. Use a mild toothpaste recommended by your dentist. Avoid whitening toothpastes, which may irritate the mouth and gums.
- If your mouth is too sore to brush or bleeds when you clean your teeth, rinse it using the mouthwashes described above. Ask your dentist or nurse if they can suggest alternatives to a standard toothbrush.
- Check with your dentist or treatment team whether you should gently floss your teeth. This may not be recommended during treatment.

Managing pain and difficulty eating

- Take pain medicine as prescribed, particularly before meals, so that eating is less painful.
- Eat foods that are soft, moist and easy to swallow, such as rice, mashed potatoes, mashed vegetables, tinned fruit, minced or slow-cooked meat, chicken or fish, soup, scrambled eggs, yoghurt and custard. Choose nourishing drinks such as milk, milkshakes and smoothies. Use gravies and sauces to moisten foods and add flavour.
- Avoid foods that irritate your mouth or cause discomfort. These may include rough, crunchy or dry foods (e.g. chips, nuts, toast, crackers), vinegar, spices, salty foods, alcohol, very hot or very cold foods and drinks, and citrus or tangy tomato-based food and juice.
- Try to stop smoking as it will irritate your mouth and make dryness worse.
- Drink through a straw if you have mouth sores. Metal straws may add a metallic taste so paper or plastic straws may be better.
- Try to eat a well-balanced diet including foods from the five major food groups.
- Ask a dietitian or speech pathologist what you can eat to reduce discomfort and help you stay well nourished.

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When to contact your doctor or go to emergency

Talk to your doctor about any mouth side effects you have. You may have to contact a health professional or go to the emergency department immediately if you:

- have a temperature of 38°C or higher
- feel that your pain can't be controlled
- are unable to eat or drink
- have a lot of bleeding from the mouth or many white spots in the mouth (infection).

How carers can help

A partner, family member or friend may be able to help you cope with oral side effects and encourage you to care for your mouth. They could:

- use a torch or the light on a mobile phone to look for red or white patches or sores in the mouth
- do the grocery shopping and buy soft foods or frozen foods that may be soothing to the mouth
- help prepare meals by mashing or pureeing foods in a blender and making gravies or sauces to moisten food
- provide pain medicines 30 minutes before meals
- track your fluid intake (number of glasses of water or other fluids each day)
- keep drinking straws and chewing gum handy
- go to the chemist to buy artificial saliva (or other products prescribed)
- attend appointments with the doctor, nurse, dietitian or speech pathologist.

Useful websites

You can find many useful resources online, but not all websites are reliable. These websites are good sources of support and information.

- Cancer Australia
canceraustralia.gov.au
- Cancer Council Online Community
cancercouncil.com.au/OC
- eviQ Cancer Treatments Online
eviQ.org.au
- *The Thing About Cancer* podcast
cancercouncil.com.au/podcasts

Where to get help and information

Call Cancer Council **13 11 20** for more information about mouth health and cancer. Trained health professionals can listen to your concerns, connect you with local services, and send you free copies of our booklets. They can also put you in touch with a Cancer Connect volunteer who has had a similar cancer experience. You can also visit your local Cancer Council website:

ACT..... actcancer.org
 NSW cancercouncil.com.au
 NT nt.cancer.org.au
 QLD cancerqld.org.au
 SA..... cancersa.org.au
 TAS cancertas.org.au
 VIC..... cancervic.org.au
 WA..... cancerwa.asn.au
 Australia..... cancer.org.au

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Note to reader

Always consult your doctor about matters that affect your health. This fact sheet is intended as a general introduction and is not a substitute for professional medical, legal or financial advice. Information about cancer is constantly being updated and revised by the medical and research communities. While all care is taken to ensure accuracy at the time of publication, Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this fact sheet.



For information and support on cancer-related issues, call Cancer Council **13 11 20**. This is a confidential service.