

Department of  
**Dental Surgery**

# Dental Advice for Patients After Head and Neck Radiation Therapy



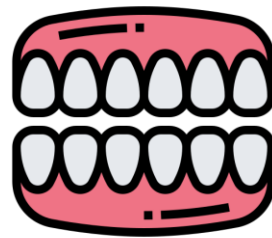
# What is Radiation Therapy?

Radiation therapy (RT) may be necessary to treat cancer. It uses radiation to kill cancer cells. However, this may damage healthy cells and tissues near the treatment area.

RT may also affect body parts such as:



Skin lining of the mouth



Teeth



Salivary glands  
(Organs which make saliva)



Jaw bones

# Long-Term Side Effects and Its Consequences

Even after the treatment is completed, some of the side effects may persist:

## 1. Dry Mouth

### What is Dry Mouth?

Dry mouth happens when the salivary gland is damaged, and insufficient saliva is produced. The loss of saliva and its protection of the teeth and oral cavity may lead to:

- A high risk of tooth decay, gum disease, oral infections and mouth discomfort
- Difficulty in swallowing and wearing of dentures

### How Can I Relieve Dry Mouth?

- Frequently sip on water throughout the day
- Ensure that you drink a good volume of water (approximately two litres) each day
- Dab one to two drops of olive oil or moisturising oral gel on your tongue and cheeks, as needed

## 2. Tooth Decay

- It is an infection where decay-causing bacteria attack the tooth's surface, causing holes to form on teeth
- Dry mouth may cause a high risk of tooth decay, which could progress faster than normal
- If the decay becomes severe, tooth extraction may be required (with related risks, as seen in the next section)



Rapid tooth decay  
Photo retrieved from Directorio Odontologico

## 3. Poor Wound Healing and Osteoradionecrosis

### What is Osteoradionecrosis?

RT may lower the ability of the gums and jaw bones to heal after tooth extraction. These side effects include:

- Slower wound healing process
- Osteoradionecrosis (ORN), which is the development of dead and exposed bone that may not heal
- Infected bone, that could cause pain

## How Can I Reduce the Risk of Developing ORN?

- Prevent dental infection and future need for dental extractions by maintaining good oral health and going for regular dental checks
- If possible, avoid tooth extraction at areas of the jaw which received high doses of radiation



Dead, exposed bone  
Photo retrieved from RSNA Journals

# How Can I Maintain Good Oral Health?

## Gargle With Baking Soda Mouthwash After Every Meal

1. Dissolve ½ teaspoon of baking soda in 100ml glass of water
2. Gargle for 30 seconds before spitting out
3. You may use the same mixture for the whole day
4. You may add a pinch of salt into the mixture to improve the taste of the mouthwash



Use of baking soda to make the mouthwash

## Brush Your Teeth After Every Meal

- Brush your teeth after gargling with baking soda mouthwash
- Use toothpaste that contains fluoride, which helps to protect our teeth against decay
- After brushing, spit out the toothpaste without rinsing your mouth
- This allows your teeth to gain the full protective benefits of the toothpaste



Brush your teeth after every meal



## Floss Your Teeth Once a Day

- Flossing removes disease-causing bacteria found between your teeth, which your toothbrush is unable to reach



Dental floss

## Choose a Low Sugar Diet

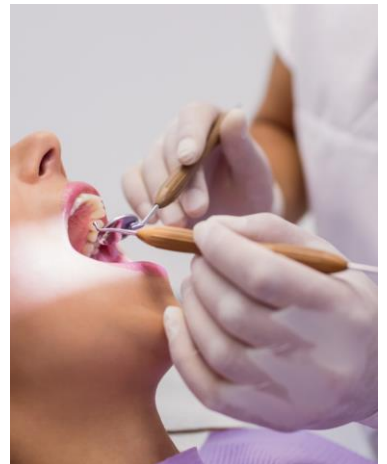
- Consume food and beverage with zero or low sugar levels
- Take note of edibles with hidden sugar (e.g. fruit juice and bubble tea)
- Switch to artificial sweeteners if you do not have dietary issues
- Avoid flavoured, fizzy drinks



Fruit juice with hidden sugar

## See a Dentist Regularly for a Check-up

- Your dentist should monitor your oral health to keep your teeth healthy
- Inform your dentist about your history of RT, including when it was done and the area of treatment, if any



Go for regular dental check-up

**Clinics 6B**  
TTSH Medical Centre, Level 6B

**Contact:**  
6357 7000 (Central Hotline)



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