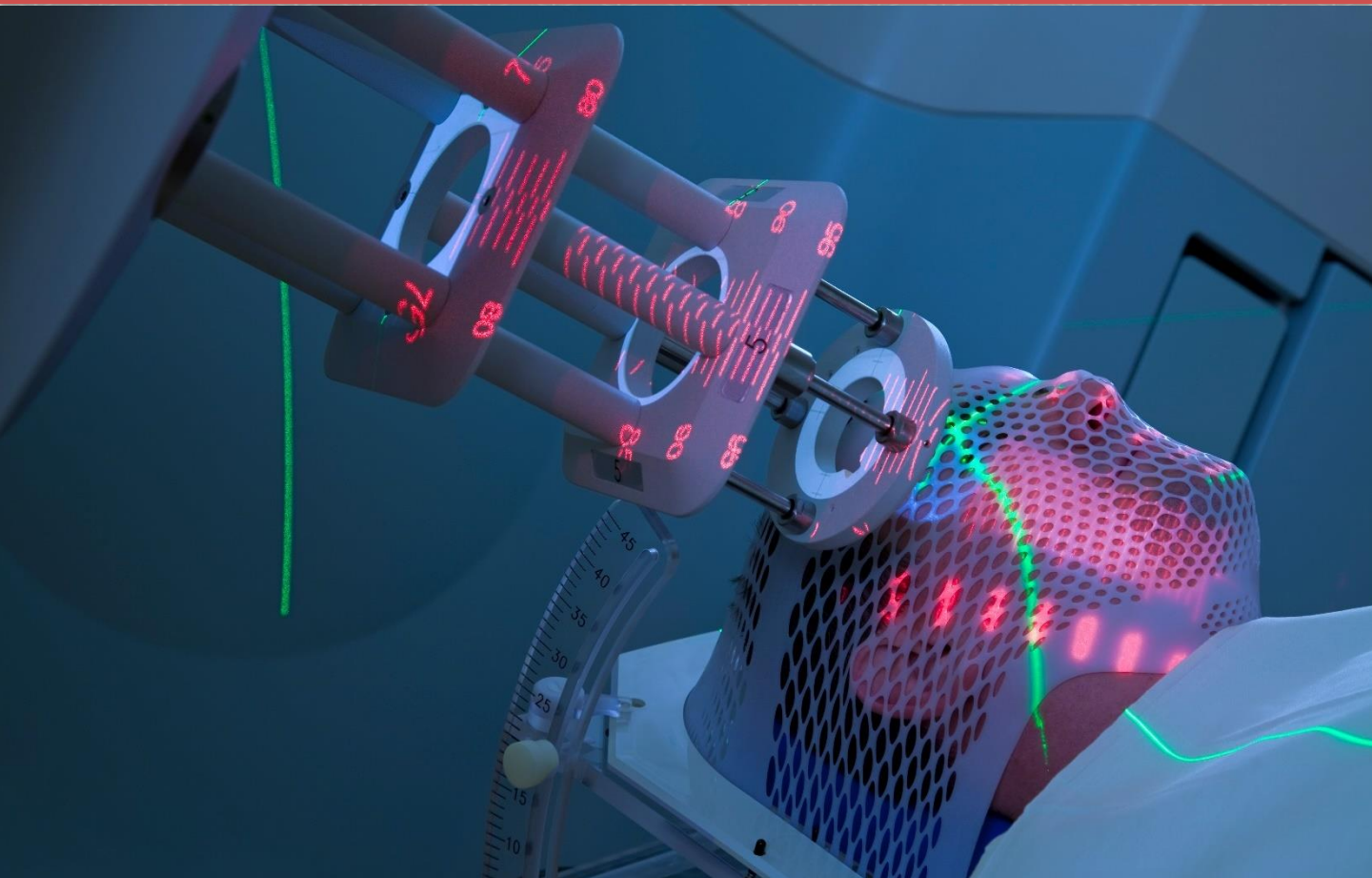


Department of
Dental Surgery

Dental Advice for Patients Before Head and Neck Radiation Therapy



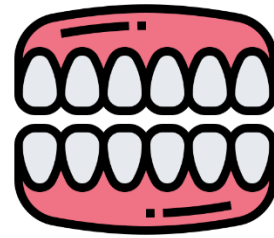
What is Radiation Therapy?

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

Short-Term Side Effects

1. Mucositis

It is the formation of open sores on the skin lining of the mouth and throat. It usually develops two to three weeks after the start of RT, with common symptoms such as:

- Soreness
- Mouth ulcers
- Red patches
- Bleeding
- Temporary difficulty in swallowing and talking
- Temporary loss of taste

Mucositis heals from two to four weeks after the completion of RT.



Oral mucositis
Photo retrieved from The American Academy
of Oral Medicine

Long-Term Side Effects

1. Dry Mouth

Dry mouth happens when the salivary gland is damaged, and insufficient saliva is produced. This may be a permanent side effect. 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
- Mouth discomfort
- Difficulty in swallowing and wearing of dentures

Long-Term Side Effects

2. Tooth Decay

- It is an infection where decay-causing bacteria attack the tooth's surface, causing holes to form on the 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 page)



Rapid tooth decay
Photo retrieved from Directorio Odontologico

Long-Term Side Effects

3. Poor Wound Healing and 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



Dead, exposed bone
Photo retrieved from RSNA Journals

How Can I Relieve Dry Mouth and Mucositis?

1. Frequently sip on water throughout the day to relieve dryness
2. Ensure that you drink a good volume of water (approximately two litres) each day
3. Dab one to two drops of olive oil or moisturising oral gel on your tongue and cheeks, as needed to relieve dryness
4. Use mouthwash or gargles that contain oral pain reliever to soothe the pain caused by mucositis
5. If you have difficulty brushing your teeth because of mucositis, you may consider:
 - Using an unflavoured toothpaste that is free of sodium lauryl sulphate (SLS)
 - Using a toothbrush with soft bristles
 - Skipping the brushing step if the ulcers cause discomfort
 - Gargling with baking soda mouthwash after every meal, instead of brushing

How to Begin RT With a Healthy Mouth?

1. Dental Check-Up

You may be referred by your doctor for a dental review before starting RT. During this review, the dentist should check for sources of infection in your mouth, such as:

- Badly decayed tooth
- Dead tooth
- Dental abscess, which is the collection of pus in or around the teeth
- Teeth that are impacted, or stuck in the gum
- Gum disease

2. Recommendations by Your Dentist

- Dental extractions of badly infected teeth may be done before RT, to allow time for healing
- Scaling and fillings may be carried out

How Can I Keep My Mouth Clean During RT?

Keeping your mouth clean helps to lower the risk of mucositis and its consequences. These are the recommended steps you can follow:

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

How Can I Keep My Mouth Clean During RT?

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

Clinics 6B

TTSH Medical Centre, Level 6B

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