

The role and approach of the Dental Hygienist

- Gather information to obtain a complete medical and dental history of the patient.
- Expose the patient to dental radiographs if necessary as part of the dental examination.
- Collaborate with the dentist to provide oral education to the patient prior to chemotherapy treatment, as well as during and after treatment.
- Educate the patient to brush their teeth twice a day, floss at least once a day, and avoid using mouth rinses containing alcohol,
- Remind patients who use a complete or partial denture that they should clean it with a denture cleaning solution once a day.
- Recommend a dental cleaning at least three times a year and provide fluoride varnish or fluoride gel as an essential part of a dental treatment plan.
- Fabricate custom fluoride trays for the patient and provide instructions on how to use the trays with prescription fluoride for the prevention of cavities.
- Update the patient's medical history at every dental hygiene visit since the patient's immune system is altered due to the chemotherapy treatment.
- Provide education to patients on the importance of cessation of alcohol and/or tobacco use.
- Communicate with the dentist and the patient's oncologist to see if antibiotic prophylaxis should be used before any dental prophylaxis procedure.

Antibiotic Prophylaxis: Antibiotic prophylaxis is a preventive protocol where the patient is prescribed an antibiotic to be taken one hour before a dental procedure to prevent possible bacteremia-induced infections that could result during treatment. The dental hygienist should speak to the dentist, and the dentist will prescribe the antibiotic to the patient if necessary. Often a consultation with the patient's physician or oncologist is made. The antibiotic prescription would be the following:

- Adults: Amoxicillin: 2 grams one hour before the dental procedure. **If the patient has a penicillin allergy:** Clindamycin: 600 mg one hour before the dental procedure.
- Children: Amoxicillin: 50mg/kg one hour before the dental procedure. **If the patient has a penicillin allergy:** Clindamycin: 20mg/kg one hour before the dental procedure

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Chemotherapy and Dental Hygiene



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What is Cancer? Cancer is a disease where abnormal cells divide uncontrollably and spread into surrounding tissue.

What is chemotherapy? Chemotherapy is a type of cancer treatment that uses chemicals to stop the cancer cells from dividing. This works throughout the whole body but can have some dire side effects on the oral cavity and these effects are a major cause of illness in patients undergoing chemotherapy

Oral Manifestations from Chemotherapy

- Mucositis: most common, it is the painful inflammation and ulceration of the mucous membrane (soft tissues of mouth like the inside of the cheek). It can result in an increased risk for infection and inability to eat due to open sores.
- Bleeding in the mouth from brushing: sometimes chemotherapy drugs affect the ability of the blood to clot. Bleeding may be mild or severe, especially at the gum line and from ulcers in the mouth from mucositis. If the patient has pre-existing gingivitis or periodontitis, gingival oozing can be induced even by normal brushing and flossing
- Dysgeusia: changes in taste perception
- Mouth infections and vulnerability to infection
- Xerostomia: dry mouth, however this particular side effect can lead to a whole assortment of serious oral problems. It can lead to increased dental caries (cavities), parotid gland enlargement, difficulty eating, oral candidiasis (fungal infection), salivary gland infection (sialadenitis), and halitosis (bad breath)
- Tongue Pain (glossodynia)
- Osteoradionecrosis: the loss of large areas of bone and soft tissue due to necrosis *

*Only a minority of patients will develop osteoradionecrosis which can be attributed to a multidisciplinary collaboration along with **better oral hygiene patient education**

Signs and symptoms of Xerostomia



Osteoradionecrosis



Mucositis



Oral Care Before, During and After Chemotherapy

Treatment Before: It is important to have a dental visit at least 4 weeks prior to beginning chemotherapy treatment because dental care prior to treatment can reduce oral complications by decreasing the number of bacteria in the mouth and reducing the risk of infection. How is this accomplished?

- Identifying and treating existing conditions such as cavities, periodontal disease, endodontic disease and infections
- Removing any source of dental trauma such as ill-fitting dental appliances and dentures
- Providing preventative treatment
- Completing all invasive procedures at least 14 days prior to the start of chemotherapy
- Patient education is also a key factor for optimum oral health.

During: Many patients undergoing chemotherapy become immunocompromised and cannot receive dental treatment. Thus, good oral hygiene is critical and should include:

- Brushing twice daily with a soft toothbrush
- Flossing and rinsing daily
- Eating healthy foods that are low in sugar
- Using lip balm and chewing sugarless gum and/or sugar-free candies

After: In some cases, oral health problems that arise during chemotherapy treatment can become permanent. Thus, long term surveillance of patients is important and should be done every 3-6 months. *

* Patients need to be aware that invasive procedures should not be performed up to 1 year after receiving bone marrow transplant.

What have some patients had to say about the importance of dental care? “My doctor referred me to the dentist. She said it would be dangerous to begin chemotherapy with my mouth in such bad condition.” “As my dentist puts it, you need to take good care of your mouth now more than ever.”