

Cancer Care Ontario

Action Cancer Ontario

Symptom Management Pocket Guides:

ORAL CARE



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Assessment

- Common symptoms to screen for include oral pain, dry mouth, taste changes and difficulty with opening/closing of the mouth.
- Common signs to screen for include cavities, bleeding, infections, ulcerations and abnormal lesions.

Diagnosis

- Significant risk factors for the development of oral complications include the type of cancer, type of cancer treatments, cumulative doses of chemotherapy or radiation treatment, method of delivery and duration of treatment.
- Predisposing medical, dental, and lifestyle factors may increase the severity of the complications.
- Oral complications can significantly affect the patient's morbidity, ability to tolerate treatment, and overall quality of life.
- Rigorous assessment, diagnosis and early intervention are important in preventing and decreasing oral complications.

General Oral Care

Non-Pharmacological Interventions

Principles of Oral Care

- Good oral care is fundamental in preventing and decreasing oral complications and has the potential to modify the acute and long term sequelae of therapy.
- The major purposes of oral care are to maintain normal function of the oral tissues, to maintain comfort, and to reduce the risk of bleeding, local infection and systemic infection.
- A uniform systematic education plan for oral care is recommended to help patients understand and cope with symptoms of oral complications.

- An important component of oral care management is the assessment of nutritional status, including adequacy of oral solid and fluid intake.
- It is important to keep oral mucosa and lips, clean, soft, moist and intact thus preventing infection.
- Good dental care is encouraged.
- The recommended rinsing solution is a bland rinse (1 teaspoon salt, 1 teaspoon baking soda in 1 liter/ 4 cups of water). The rinse should be prepared at least once daily and should not be refrigerated.
- Following emesis, patients should be instructed to rinse mouth with the bland rinse to neutralize the mouth immediately, minimizing tooth enamel demineralization.
- Patients may chew xylitol gum or suck on xylitol lozenges up to 6 grams a day.
- While there is no evidence to recommend either for or against the use of club soda, the Oral Care SMG working group suggests it should be avoided due to the acidic pH, a result of the carbonic acid content found in carbonated soft drinks.
- Factors to consider for oral care at the end of life;
 - Discussions with patients/families should be done early and as often as necessary to explain the etiology of mouth complications, determine the goals of care, clarify the declining health status and determine desired levels of care pertaining to nutrition, hydration and interventions.
 - As patients approach the end of life, the objective of oral care is to avoid complications, treat potentially reversible conditions rapidly and/or provide relief of symptoms caused by the offending oral complication.
 - Oral candidiasis is common in this patient population and therefore the oral cavity should be evaluated daily.

Pharmacological Intervention

Analgesics

- With continuous pain (e.g., moderate to severe oral mucositis) consider an oral analgesic prescribed **regularly** to allow for more thorough tooth brushing.

- When appropriate, oral opioid analgesics are preferably given 60 minutes before brushing.
- Topical anesthetics (e.g., viscous lidocaine 2% or viscous xylocaine 2%, 2-5 ml) may be applied 10 minutes before eating to provide enough comfort for the person to be able to eat or drink. As an alternative use an oral analgesic 1 hour prior to eating.
- For cognitively intact head and neck cancer patients receiving radiation therapy, 2 to 5 ml of viscous lidocaine 2% may be swallowed, up to a maximum of 6 times per day, to allow for adequate hydration, nutrition and oral care. This advisement would be at the discretion and recommendation of the patient's most responsible physician.
- If topical anesthetics are used only for rinsing, without swallowing, then the recommended maximum dose of viscous lidocaine 2% is 60 ml per day.
- If patient is allergic to lidocaine, dyclonine 0.5 to 1% may be used (5 ml q6-8 hours, swish and swallow as needed).

Medications for Excessive Secretions

- For excessive salivary secretions, tricyclic antidepressants (e.g., nortriptyline) are a consideration, starting at a low dose and titrating to effect.
- Another possibility is scopolamine transdermal 1.5 mg patch changed every 72 hours.
- At end of life, decreased cognitive ability, extreme fatigue and weakness may contribute to patient's inability to clear secretions from nose, mouth or throat.
 - Anticholinergic medications are often useful for managing excessive secretions at end of life.
 - Atropine 1% ophthalmic solution administered sublingually, 1-2 drops (1 drop ~0.5 mg) q4h prn.
 - Ipratropium 0.03% Nasal Spray administered intranasally or sublingually, 2 sprays at bedtime.
 - Scopolamine 0.2 to 0.8 mg subcut q2-4h prn.
 - Glycopyrrolate 0.2 to 0.6 mg subcut q2-4h prn.
 - Buscopan (hyoscine butylbromide) 10 mg subcut q4h prn.
 - Glycopyrrolate is less sedating than scopolamine.

Oral Mucositis - Prevention

Non-Pharmacological Interventions

- There is some evidence for the use of ice chips for the prevention of oral mucositis.
- IMRT is currently the treatment of choice for head and neck patients to minimize intra-oral complications.
- There is some evidence that Low Level Laser Therapy may reduce the incidence of oral mucositis and its associated pain, in patients receiving high-dose chemotherapy or chemo-radiotherapy before Hematopoietic Stem Cell Transplant (HSCT).
- To prevent nutritional deficiencies a multivitamin may be considered.

Pharmacological Interventions

- A systematic approach to oral care should be followed to reduce the amount of microbial flora, reduce pain and bleeding, prevent infection and reduce the risk of dental complications.
- There is no evidence of benefit for the use of chlorhexidine for the prevention of oral mucositis when compared with placebo or no treatment.

Oral Mucositis - Management

Non-Pharmacological Interventions

Nutritional Care

- Choose texture as tolerated and modify as required.
- May need to start with soft, moist, smooth foods; if not tolerated try extra soft/pureed foods.
- If only liquids are tolerated, choose high calorie, high protein fluids every 2 hours.
- Choose foods high in calories and protein, 6-8 small meals/snacks daily.
- Cook solid foods until tender, use moist sauces, choose soft, bland foods.
- Avoid foods that irritate the mouth or throat.

- Avoid eating foods which are abrasive, rough, tart, salty, spicy, acidic, very hot or very cold.
- Oral commercial nutritional supplements may be necessary.
- There is insufficient evidence to support the use of vitamin B12, beta-carotene calcium, chamomile, glutamine, or curcumin in the treatment of oral mucositis.
- If oral intake is inadequate for a prolonged period consider using a regular strength multivitamin.
- Severe oral mucositis during cancer treatment (grade 3 or 4) may be managed with an appropriately placed feeding tube or total parenteral nutrition (TPN) depending on the patient's goals of care.
- The type of tube (i.e., gastrostomy or jejunostomy) and the method of placement (i.e., surgical or radiological) should be determined by the degree and extent of mucositis and the potential worsening of symptom due to planned cancer treatment.
- Consult dietitian if possible.

Pharmacological Interventions

- Systemic analgesia with morphine (or other strong opioid) is the recommended treatment of choice for oral mucositis pain in patients undergoing HSCT.

Xerostomia - Prevention

Non-Pharmacological Interventions

- The use of parotid sparing Intensity Modulated Radiation Therapy (IMRT) is recommended for prevention of salivary gland hypofunction and xerostomia in head and neck cancer patients.

Pharmacological Interventions

- None.

Non-Pharmacological Interventions

Nutritional Care

- Add extra moisture to foods, increase fluid consumption.
- Oral rinses may improve swallowing/taste problems.
- Soft, mild tasting food is often better tolerated.
- Moisten food by adding sauces, gravy, butter, dressings, broth or another liquid.
- Food and drinks should be cold or tepid.
- Plain ice cubes, sugar-free popsicles, sugar-free gum, frequent sips of cold water or mouth sprays may increase fluid consumption and help cool and moisten mouth.
- Avoid foods, fluids and other items which may dry or irritate mouth and teeth, including highly acidic foods and fluids, foods high in sugar, caffeine and alcohol.
- To stimulate residual salivary secretion and to ameliorate the condition of the mucosa, regular use of fresh, lightly acidic fruits, slices of cold cucumber and tomato or thin slices of cold apples can be used as long as patient is not experiencing mucositis.
- The use of milk, jello, sherbet, applesauce and ice cream is also suggested.

Acupuncture

- Acupuncture treatment is a possible intervention for the treatment of radiation-induced xerostomia in patients with a residual functional capacity of the salivary glands and is a treatment modality without serious adverse effects.

Artificial saliva

- Artificial saliva products may also be considered for a brief course to determine effectiveness and patient acceptability, followed by continuing therapy when warranted.

Pharmacological Interventions

- Oral pilocarpine (sialogogue) 5mg tid following radiation therapy is recommended in head and neck cancer patients for improvement of xerostomia.
- Results for the use of pilocarpine HCl concomitantly with radiation therapy to reduce xerostomia and salivary gland hypofunction are inconsistent, however in some patients a beneficial effect has been shown on xerostomia.

Amifostine

- No consensus could be reached regarding a recommendation as most clinical studies do not have the statistical power to evaluate the influence of amifostine on the therapeutic index.

Dysgeusia - Prevention

Non-Pharmacological Interventions

- Excluding the tip of the tongue during radiation therapy may prevent dysgeusia. In one trial patients who had the tip of the tongue included in the radiation treatment field, reported marked increases in mean threshold values to the four taste qualities being tested (salt, sweet, sour, and bitter).

Pharmacological Interventions

- Zinc gluconate is not recommended for the prevention of dysgeusia in head and neck cancer patients.
- Amifostine is not recommended for the prevention of dysgeusia in head and neck cancer patients.

Dysgeusia - Management

Non-Pharmacological Interventions

Nutritional Care

- As taste changes are unique to each person and can vary over time, an individualized approach needs to be

taken to identify tolerable foods. Ongoing follow up is recommended.

- To prevent compromised food intake, patients may need encouragement and support to try foods again that may have resulted in food aversions secondary to taste changes.
- Encourage patients to:
 - Enjoy foods that taste good.
 - Experiment with food flavours to enhance taste.
 - Drink plenty of fluids.
 - Avoid strong smells.
- Nutritional counseling is recommended.

Pharmacological Interventions

- None

Intra-Oral Infections - Prevention

Non-Pharmacological Interventions

- The best prevention for any intra-oral infections is non-pharmacological in nature.
- It is necessary to follow meticulous oral care plans (See [Table 5 in Oral Care Guide](#)).

Pharmacological Interventions

- Fluconazole is found to be very effective in the prevention of clinical oral fungal infections and in reducing oral fungal colonization in patients receiving cancer therapy.
- Prophylactic fluconazole 100 mg po daily (400 mg po daily for HSCT patients) may be considered for prevention of oral candidiasis in cancer patients.

Intra-Oral Infections - Management

Non-Pharmacological Interventions

- None

Pharmacological Interventions

Topical agents are considered preferable to systemic agents for the management of **mild** intra-oral fungal infection due to the lower risk of side effects and drug interactions (e.g., sugarless nystatin rinse).

- Clotrimazole lozenges or sugarless nystatin suspension may be used as first-line therapy for the management of mild oropharyngeal candidiasis.
- Sugarless nystatin suspension 100,000 units/ml may be used as follows: Swish around and hold in the mouth for at least one minute, then swallow; use 5 ml qid for 7-14 days (works by direct contact).
- Soak dentures overnight in sugarless nystatin 100,000 units/ml solution or use sugarless nystatin 100,000 units/ml cream to treat dentures.
- Use sugarless nystatin popsicles (for cooling relief).
- Clotrimazole oral suspension (1mg/ml) may be used as follows: Swish around the mouth for one minute and then swallow; use 10 mL qid.

If topical agents are not well tolerated or the response rate is poor, then it is advised to proceed with the use of **systemic agents**.

- The management of moderate to severe oropharyngeal candidiasis, fluconazole 100 mg daily as first-line therapy is equal or more effective against oropharyngeal candidiasis in cancer patients than nystatin or clotrimazole.
- To prevent relapse after initial treatment, maintenance therapy using fluconazole 50 mg (up to 400 mg) daily may be considered.
- For fluconazole refractory disease, itraconazole or posaconazole are recommended, with voriconazole and amphotericin B reserved for refractory cases.
- Patients who cannot tolerate fluconazole (or other antifungals) may use sugarless nystatin suspension.
- Additional systemic agents include the lipid formulations of amphotericin B, and the echinocandins (caspofungin, anidulafungin, and micafungin).
- Use of these systemic agents may be limited by their side effects, especially for amphotericin B.

- These agents are optimally used for short durations of treatment.

Bacterial Infections

First line: amoxicillin 500 mg po q8h for 7-10 days

Alternative: penicillin V 300-600 mg po q6h for 7-10 days

Alternative: clindamycin 300-450 mg po q6h for 7-10 days

- Amoxicillin/ clavulanic acid (Clavulin®): 500 mg tablet (contains amoxicillin 500 mg and clavulanic acid 125 mg) po q8h OR the 875 mg tablet (contains amoxicillin 875 mg and clavulanic acid 125 mg) po q12h for 7-10 days.

If one is certain that the infection is periodontal in origin then the recommendation for first line therapy is metronidazole 500 mg po q8h for 7-10 days.

Viral infections

Herpes simplex

- Topical acyclovir: apply to affected area q3-4 hours, for a total of 6 times/day for 7 days (apply a sufficient quantity to adequately cover all lesions).
- Systemic acyclovir for larger lesions:
 - Primary Herpes Simplex Virus (HSV): acyclovir 200 mg po q4 hours, 5 times/day for 10 days or 400 mg po tid for 7-10 days (in immunocompromised patients, consider 400 mg po q4hours, 5 times/day for 10 days).
 - Recurrent HSV: acyclovir 200 mg po q4 hours, 5 times/day for 5 days; Valacyclovir 500 mg po bid (twice daily) or q12h for 3 days. Adjust for renal dysfunction.

Varicella-zoster

- Acyclovir 400 mg po 5 times/day for 7-10 days.
- For severe infection, acyclovir 5 mg (base) per kg body weight IV (over at least 1 hour) q8 hours for 5-7 days.
- Patients with acute or chronic renal impairment may require dose reduction (e.g., acyclovir 200 mg po q12 hours when CrCl is 0-10 mL/min).
- Valacyclovir 1000 mg po tid for 7 days (superior to acyclovir for post-herpetic infections).

Cytomegalovirus

- Ganciclovir: *induction*: 5mg/kg IV over 1 hour q12h, *maintenance*: 5 mg/kg IV over one hour once per day
- Dose reductions are recommended for renal impairment.
- Ganciclovir should not be administered in patients with severe neutropenia (ANC less than 500/ μ L) or severe thrombocytopenia (platelets less than 25,000/ μ L) or severe anemia (hemoglobin less than 80 g/L).

Edmonton Symptom Assessment System (ESAS)



Edmonton Symptom Assessment System:
(revised version) (ESAS-R)

Please circle the number that best describes how you feel NOW:

No Pain 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Pain

No Tiredness 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Tiredness
(Tiredness = lack of energy)

No Drowsiness 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Drowsiness
(Drowsiness = feeling sleepy)

No Nausea 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Nausea

No Lack of Appetite 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Lack of Appetite

No Shortness of Breath 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Shortness of Breath

No Depression 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Depression
(Depression = feeling sad)

No Anxiety 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Anxiety
(Anxiety = feeling nervous)

Best Wellbeing 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Wellbeing
(Wellbeing = how you feel overall)

No _____ 0 1 2 3 4 5 6 7 8 9 10 Worst Possible
Other Problem *(for example constipation)*

Patient's Name _____

Date _____ Time _____

Completed by (check one):

- Patient
- Family caregiver
- Health care professional caregiver
- Caregiver-assisted

BODY DIAGRAM ON REVERSE SIDE

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For full references and more information please refer to CCO's [Symptom Management Guide-to-Practice](#) document.

Disclaimer:

Care has been taken by Cancer Care Ontario's Symptom Management Group in the preparation of the information contained in this pocket guide.

Nonetheless, any person seeking to apply or consult the pocket guide is expected to use independent clinical judgment and skills in the context of individual clinical circumstances or seek out the supervision of a qualified specialist clinician.

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