



COLLEGE OF DENTAL HYGIENISTS OF ONTARIO ADVISORY	
ADVISORY TITLE	
Use of the dental hygiene interventions of scaling of teeth and root planing including curetting surrounding tissue, orthodontic and restorative practices, and other invasive interventions for persons ¹ with diverticulosis and diverticulitis.	
ADVISORY STATUS	
Cite as <i>College of Dental Hygienists of Ontario, CDHO Advisory Diverticulosis and Diverticulitis, 2019-12-14</i>	
INTERVENTIONS AND PRACTICES CONSIDERED	
Scaling of teeth and root planing including curetting surrounding tissue, orthodontic and restorative practices, and other invasive interventions ("the Procedures").	
SCOPE	
DISEASE/CONDITION(S)/PROCEDURE(S)	
Diverticulosis and diverticulitis	
INTENDED USERS	
Advanced practice nurses Dental assistants Dental hygienists Dentists Denturists Dieticians Health professional students	Nurses Patients/clients Pharmacists Physicians Public health departments Regulatory bodies
ADVISORY OBJECTIVE(S)	
To guide dental hygienists at the point of care relative to the use of the Procedures for persons who have diverticulosis and diverticulitis, chiefly as follows. <ol style="list-style-type: none"> 1. Understanding the medical condition. 2. Sourcing medications information. 3. Taking the medical and medications history. 4. Identifying and contacting the most appropriate healthcare provider(s) for medical advice. 	

¹ Persons includes young persons and children

5. Understanding and taking appropriate precautions prior to and during the Procedures proposed.
6. Deciding when and when not to proceed with the Procedures proposed.
7. Dealing with adverse events arising during the Procedures.
8. Keeping records.
9. Advising the patient/client.

TARGET POPULATION

Adult (19 to 44 years)
 Middle Age (45 to 64 years)
 Aged (65 to 79 years)
 Aged, 80 and over
 Male
 Female

MAJOR OUTCOMES CONSIDERED

For persons who have diverticulosis and diverticulitis: to maximize health benefits and minimize adverse effects by promoting the performance of the Procedures at the right time with the appropriate precautions, and by discouraging the performance of the Procedures at the wrong time or in the absence of appropriate precautions.

RECOMMENDATIONS

UNDERSTANDING THE MEDICAL CONDITION

Terminology used in this Advisory

Resources consulted

- [Diverticulitis: Medscape](#)
- [Diverticulosis and Diverticulitis: MedlinePlus](#)
- [Diverticulosis and Diverticulitis: eMedicineHealth](#)
- [Diverticular Disease: National Institute of Diabetes and Digestive and Kidney Diseases](#)

Diverticulosis and diverticulitis comprise

1. diverticulosis, the condition of having [diverticula](#)
2. diverticulitis, inflammation and swelling of [diverticula](#).

Other terminology includes the following.

1. Diverticula, [multiple pouches](#).
2. Diverticular disease, diverticulosis and diverticulitis together.
3. Diverticulum, a small abnormal pouch in the lining of the colon that bulges outward through weak places in the intestinal wall, usually in the colon, which in diameter
 - a. is typically 5–10 mm
 - b. may exceed 2 cm.
4. Fistula, an abnormal connection between two organs.
5. Peritonitis, inflammation of the peritoneum, the tissue that lines the wall of the abdomen and covers the abdominal organs, a life-threatening condition.

Overview of diverticulosis and diverticulitis

Resources consulted

- [Diverticular Disease: Canadian Digestive Health Foundation](#)
- [Diverticulitis: Medscape](#)
- [Diverticulosis and Diverticulitis: MedlinePlus](#)
- [Diverticulosis and Diverticulitis: eMedicineHealth](#)
- [Diverticular Disease: National Institute of Diabetes and Digestive and Kidney Diseases](#)
- [Diverticular Disease – Greatest Myths and Facts: Cleveland Clinic](#)
- [Who says you can't eat nuts: Canadian Society for Intestinal Research](#)

Occurrence

1. [Diverticulosis](#) in Western populations occurs in an estimated
 - a. 5 percent or less, under the age of 40 years
 - b. 30 percent, over 40 years
 - c. 60 percent or more, over 85 years
2. [Diverticulitis](#) occurs
 - a. in 10–20 percent of persons with [diverticulosis](#)
 - b. in the younger age group, predominantly in males in whom it may be
 - i. more severe
 - ii. more likely to require surgery during the first attack
 - c. as a repeat, acute attack in 30–40 percent of persons with a history of an initial attack.

Cause

[Diverticulitis](#) has causes which

1. include
 - a. inflammation initiated by small pieces of feces trapped in a [diverticulum](#)
 - b. a tear in a [diverticulum](#), which
 - i. may be small
 - ii. less often may be large enough to enable fecal matter in the colon to pass into the abdominal cavity, variously causing
 1. abscess
 2. [peritonitis](#)
2. are incompletely understood, particularly regarding the
 - a. reasons why diverticulosis progresses to diverticulitis in some persons but not others
 - b. role of insufficiency of insoluble dietary fibre intake and the risk of subsequent development of [diverticulosis and diverticulitis](#) given their
 - i. apparent association with the low-fibre diet common in North America and in other industrialized countries
 - ii. rarity in Asia and Africa, where high-fibre diets prevail
 - iii. possible association with constipation and lack of exercise.

Risk factors

[Diverticulitis](#) is subject to risk factors that may include older age or low-fibre diet.

Signs and symptoms

1. [Diverticulosis](#)
 - a. is usually asymptomatic
 - b. is often discovered during routine investigations
 - c. but may variously be variously experienced as
 - i. bleeding cramping pain
 - ii. bloating
 - iii. constipation
 - iv. discomfort in the lower abdomen
 - d. may be confused in diagnosis with abdominal conditions such as irritable bowel syndrome ([CDHO Advisory](#)).
2. [Diverticulitis](#)
 - a. presents most commonly as abdominal pain which
 - i. is accompanied by tenderness in the lower left of the abdomen
 - ii. is often severe and of sudden onset, though it can be mild and develop over a period of days
 - iii. fluctuates
 - b. may also be experienced as
 - i. appetite loss
 - ii. bloating or gas
 - iii. change in bowel habits
 - iv. cramping
 - v. fever and chills
 - vi. nausea and vomiting
 - vii. tenderness, usually in the left lower side of the abdomen.

Medical investigation

[Diverticulitis](#) investigation

1. includes
 - a. blood tests
 - b. CT scan
 - c. ultrasound of the abdomen
 - d. X-rays of the abdomen
2. such as routine colonoscopy screening may discover diverticulitis.

Treatment

[Diverticulitis](#)

1. usually responds well to treatment
 - a. that is aimed at
 - i. clearing up the inflammation and infection
 - ii. resting the colon
 - iii. preventing or minimizing complications
 - iv. correlating with the severity of symptoms, with
 1. bed rest
 2. liquid diet
 3. [oral antibiotics](#)
 4. pain medications

- v. gradual increase in the amount of high-fibre foods in the diet when symptoms subside
 - b. that may require
 - i. hospitalization in severe states of acute pain and complications, likely involving intravenous antibiotics and a few days without food or drink to help the colon rest
 - ii. surgery, in the event of [severe complications](#)
- 2. in the non-acute phase, is managed with high-fibre foods and [bulk additives](#) to reduce the risk of acute phase of diverticulitis.

Prevention

[Diverticulosis and diverticulitis](#) prevention

1. previously stressed the value of avoidance of nuts, popcorn, and sunflower, pumpkin, caraway, and sesame seeds because of concern such food particles could enter, block, or irritate the diverticula but little or no scientific data supports this attempt at prevention
2. now emphasizes the high-fibre diet as the only requirement with support in the medical literature
3. now holds that decisions about diet should be based on the experience of the person.

Prognosis

[Diverticulitis](#) prognosis depends on

1. the severity of illness
2. [comorbidities, complications and associated conditions](#)
3. age; younger persons with diverticulitis may be more severely affected, possibly because of delay in diagnosis and treatment.

Social considerations

[Diverticulitis](#) in the presence of comorbidities, complications or associated conditions may be difficult to identify, especially in the very elderly, creating the need for family caregivers to be alert to unusual abdominal symptoms in family members.

Comorbidity, complications and associated conditions

Comorbid conditions are those which co-exist with diverticulosis and diverticulitis but which are not believed to be caused by it. Complications and associated conditions are those that may have some link with it. Distinguishing among comorbid conditions, complications and associated conditions may be difficult in clinical practice.

Comorbid conditions, complications and associated conditions for diverticulosis and diverticulitis include the following.

1. Comorbidity may be a determinant of severity in acute diverticulitis, though the factors that determine severity are not well understood.
2. Irritable bowel syndrome ([CDHO Advisory](#)) which may be a comorbidity of [diverticulosis and diverticulitis](#).

3. Complications, which may cause serious illness or even death, and which may require surgery, include
 - a. infections, which often clear up after a few days of treatment with antibiotics but which, if not cleared up, may create an [abscess](#) in the
 - i. colon wall
 - ii. abdominal cavity adjacent to the colon
 - b. rectal bleeding deriving from diverticula
 - i. from 15 to 40 percent experience painless bleeding from the rectum
 - ii. about 5 percent experience massive bleeding
 - c. abscess in the wall of the colon causing perforation of the colon leading to [peritonitis](#), a medical emergency
 - d. narrowing in the colon, causing
 - i. partial intestinal obstruction
 - ii. total intestinal obstruction, a surgical emergency
 - e. [fistula](#), which may form in diverticulitis when an abscess or other infection establishes a passage between the colon and an adjacent organ, such as bladder, small intestine, and skin
 - f. repeated attacks of diverticulitis.

Oral health considerations

1. No oral health factors are conclusively associated with diverticulosis or diverticulitis.
2. Diet is an important consideration:
 - a. A high-fibre diet is the only requirement on which a medical consensus appears to exist.
 - b. No scientific data supports the need for avoidance of nuts, popcorn, and sunflower, pumpkin, caraway, and sesame seeds.
3. Eliminating specific foods is unnecessary because the seeds generally considered harmless, along with poppy seeds, include those in
 - a. cucumbers
 - b. raspberries
 - c. strawberries
 - d. tomatoes
 - e. zucchini.
4. Decisions about diet should be made in consultation with the physician or dietitian.

MEDICATIONS SUMMARY

Sourcing medications information

1. Adverse effect databases
 - [Health Canada's Marketed Health Products Directorate](#)
toll-free 1-866-234-2345
 - [Health Canada's Drug Product Database](#)
2. Specialized organizations
 - [US National Library of Medicine and the National Institutes of Health Medline Plus Drug Information](#)
 - [WebMD](#)

3. Medications considerations
All medications have potential side effects whether taken alone or in combination with other prescription medications, or as over-the-counter (OTC) or herbal medications.
4. Information on herbals and supplements
[US National Library of Medicine and the National Institutes of Health Medline Plus Drug Information All Herbs and Supplements](#)
5. Complementary and alternative medicine
[National Center for Complementary and Integrative Health](#)

Types of medications

1. Analgesics and antispasmodics may be prescribed for pain, cramps, bloating, and constipation include
 - a. analgesics, such as
 - [acetaminophen](#)
 - [codeine](#) and other prescription pain relievers, many of which cause constipation, a particular problem in diverticulosis and diverticulitis, and which are habit-forming
 - b. antispasmodics, chiefly anticholinergics, which are also used for irritable bowel syndrome, that
 - i. decrease movements of the stomach and intestine
 - ii. reduce the secretions of stomach acid and digestive enzymes that counteract acetylcholine; used chiefly for irritable bowel syndrome
 - iii. include
 - [dicyclomine](#) (Bentyl®).
2. Antibiotics, often needed for treatment of acute diverticulitis.
3. Bulk-forming laxative, used to treat constipation
 - [psyllium](#) (for example Metamucil®, Fiberall®)

Side effects of medications

See the links above to the specific medications.

[Non-steroidal anti-inflammatory drugs](#) are reportedly associated with complications in diverticulitis, which may therefore increase the severity of acute diverticulitis.

THE MEDICAL AND MEDICATIONS HISTORY

The dental hygienist in taking the medical and medications history-taking should

1. focus on screening the patient/client prior to treatment decision relative to
 - a. key symptoms
 - b. medications considerations
 - c. contraindications
 - d. complications
 - e. comorbidities
 - f. associated conditions
2. explore the need for advice from the primary or specialized care provider(s)
3. inquire about

- a. symptoms suggestive of recent or impending acute diverticulitis
- b. medications considerations, including
 - i. over-the-counter medications, herbals and supplements
 - ii. current treatment with antibiotics: medical advice may be needed about oral implications
- c. the patient/client's understanding and acceptance of the need for oral healthcare
- d. problems with previous dental/dental hygiene care
- e. problems with infections generally and specifically associated with dental/dental hygiene care
- f. the patient/client's current state of health
- g. how the patient/client's current symptoms relate to
 - i. oral health
 - ii. health generally
- h. recent changes in the patient/client's condition.

IDENTIFYING AND CONTACTING THE MOST APPROPRIATE HEALTHCARE PROVIDER(S) FOR ADVICE

Identifying and contacting the most appropriate healthcare provider(s) from whom to obtain medical or other advice pertinent to a particular patient/client

The dental hygienist should

1. record the name of the physician/primary care provider most closely associated with the patient/client's healthcare, and the telephone number
2. obtain from the patient/client or parent/guardian written, informed consent to contact the identified physician/primary healthcare provider
3. use a consent/medical consultation form, and be prepared to fax the form to the provider
4. include on the form a standardized statement of the Procedures proposed, with a request for advice on proceeding or not at the particular time, and any precautions to be observed.

UNDERSTANDING AND TAKING APPROPRIATE PRECAUTIONS

Infection Control

Dental hygienists are required to keep their practices current with infection control policies and procedures, especially in relation to

1. the [CDHO's Infection Prevention and Control Guidelines](#) (2019)
2. relevant occupational health and safety legislative requirements
3. relevant public health legislative requirements
4. best practices or other protocols specific to the medical condition of the patient/client.

DECIDING WHEN AND WHEN NOT TO INITIATE THE PROCEDURES PROPOSED

1. There is no contraindication to the Procedures.
2. With an otherwise healthy patient/client whose symptoms are under control and whose treatment is proceeding normally, the dental hygienist should implement the Procedures, though these may be postponed pending medical advice, which is likely to be required if the patient/client

- a. has symptoms or signs suggestive or recent of impending acute diverticulitis
- b. has a comorbidity, complication or a condition associated with diverticulosis and diverticulitis
- c. has not recently or ever sought and received medical advice relative to oral healthcare procedures
- d. has recently changed significant medications, under medical advice or otherwise
- e. has recently experienced changes in his/her medical condition such as medication or other side effects of treatment
- f. is deeply concerned about any aspect of his or her medical condition.

DEALING WITH ANY ADVERSE EVENTS ARISING DURING THE PROCEDURES

Dental hygienists are required to initiate emergency protocols as required by the College of Dental Hygienists of Ontario's [Standards of Practice](#), and as appropriate for the condition of the patient/client.

First-aid provisions and responses as required for current certification in first aid.

RECORD KEEPING

Subject to [Ontario Regulation 9/08](#) Part III.1, *Records*, in particular S 12.1 (1) and (2) for a patient/client with a history of diverticulosis and diverticulitis, the dental hygienist should specifically record

1. a summary of the medical and medications history
2. any advice received from the physician/primary care provider relative to the patient/client's condition
3. the decision made by the dental hygienist, with reasons
4. compliance with the precautions required
5. all Procedure(s) used
6. any advice given to the patient/client.

ADVISING THE PATIENT/CLIENT

The dental hygienists should

1. urge the patient/client to alert any healthcare professional who proposes any intervention or test
 - a. that he or she has a history of diverticulosis and diverticulitis
 - b. to the medications he or she is taking
2. should discuss, as appropriate
 - a. the importance of the patient/client's
 - i. self-checking the mouth regularly for new signs or symptoms
 - ii. reporting to the appropriate healthcare provider any changes in the mouth
 - b. the need for regular oral health examinations and preventive oral healthcare
 - c. oral self-care including information about
 - i. choice of toothpaste
 - ii. tooth-brushing techniques and related devices
 - iii. dental flossing
 - iv. mouth rinses
 - v. management of a dry mouth

<ul style="list-style-type: none"> d. the importance of an appropriate diet in the maintenance of oral health e. for persons at an advanced stage of a disease or debilitation <ul style="list-style-type: none"> i. regimens for oral hygiene as a component of supportive care and palliative care ii. the role of the family caregiver, with emphasis on maintaining an infection-free environment through hand-washing and, if appropriate, wearing gloves iii. scheduling and duration of appointments to minimize stress and fatigue f. comfort level while reclining, and stress and anxiety related to the Procedures g. medication side effects such as dry mouth, and recommend treatment h. mouth ulcers and other conditions of the mouth relating to diverticulosis and diverticulitis, comorbidities, complications or associated conditions, medications or diet <ul style="list-style-type: none"> 3. pain management with particular reference to <ul style="list-style-type: none"> a. analgesics associated with constipation b. NSAIDs, for which a warning relates to diverticulosis and diverticulitis.
BENEFITS/HARMS OF IMPLEMENTING THE RECOMMENDATIONS
POTENTIAL BENEFITS
<ul style="list-style-type: none"> 1. Promoting health through oral hygiene for persons who have diverticulosis and diverticulitis. 2. Reducing the adverse effects, such as stress, by <ul style="list-style-type: none"> a. generally increasing the comfort level of persons in the course of dental hygiene interventions b. using appropriate techniques of communication c. providing advice on scheduling and duration of appointments. 3. Reducing the risk of oral health needs being unmet.
POTENTIAL HARMS
<ul style="list-style-type: none"> 1. Causing stress. 2. Performing the Procedures at an inappropriate time, such as <ul style="list-style-type: none"> a. during antibiotic treatment about which neither the patient/client nor the dental hygienist has sought medical advice from the prescribing physician b. in the presence of complications for which prior medical advice is required c. in the presence of acute oral infection without prior medical advice. 3. Disturbing the normal dietary and medications routine of a person with diverticulosis and diverticulitis. 4. Inappropriate management of pain or medication.
CONTRAINDICATIONS
CONTRAINDICATIONS IN REGULATIONS
Identified in the Dental Hygiene Act, 1991 – O. Reg. 218/94 Part III
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