### 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 fetal alcohol spectrum disorder.

#### ADVISORY STATUS

Cite as

*College of Dental Hygienists of Ontario, CDHO Advisory Fetal Alcohol Spectrum Disorder 2011-09-01*

#### 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)**

*Fetal alcohol spectrum disorder*

#### 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 fetal alcohol spectrum disorder, chiefly as follows.

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.

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\(^1\) 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.

TARGET POPULATION

Child (2 to 12 years)
Adolescent (13 to 18 years)
Adult (19 to 44 years)
Middle Age (45 to 64 years)
Aged (65 to 79 years)
Aged 80 and over
Male
Female

Parents, guardians, and family caregivers of children, young persons and adults with fetal alcohol spectrum disorder.

MAJOR OUTCOMES CONSIDERED

For persons who have fetal alcohol spectrum disorder: 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
- Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis
- Fetal Alcohol Spectrum Disorder: Public Health Agency of Canada
- Fetal alcohol syndrome: First Nations and Inuit Health Committee, Canadian Paediatric Society
- Fetal Alcohol Syndrome: Guidelines for Referral and Diagnosis
- Fetal Alcohol Syndrome: MedLinePlus
- Fetal alcohol syndrome: PubMed Health

Fetal Alcohol Spectrum Disorder (FASD)
1. is an umbrella term
   a. intended for use in grouping the conditions and effects that result from prenatal alcohol exposure
   b. not intended for use as a clinical diagnosis but instead as a label for the range of effects that may occur in a person whose mother consumed alcohol during pregnancy
CDHO Advisory | Fetal Alcohol Spectrum Disorder

3. That refers to a group of conditions and effects which
   i. together constitute the leading known cause of developmental disability in Canada
   ii. are incurable
   iii. are associated with injury to the brain
   iv. are considered preventable

2. Includes medical diagnoses and effects such as
   a. fetal alcohol syndrome (FAS)
   b. partial FAS (pFAS)
   c. alcohol-related neurodevelopmental disorder (ARND)
   d. alcohol-related birth defects (ARBD)

Other terminology used in this Advisory includes the following.

1. Alcohol, abbreviation of the term ‘ethyl alcohol’, the chemical used in alcoholic beverages.

2. Epicanthal fold, the skin of the upper eyelid that
   a. covers the inner corner, the canthus, of the eye
   b. extends from the nose to the inner side of the eyebrow.

3. Fetal alcohol syndrome, a common yet under-recognized condition that is identified by all of the following
   a. confirmed or unconfirmed maternal alcohol consumption during pregnancy
   b. three facial abnormalities
      i. smoothness of the space between the upper lip and the nose (the philtrum)
      ii. thinness of the exposed mucosal (red) part of the upper lip (the vermilion border)
      iii. narrowness of the horizontal dimension of the openings for the eyes between the eyelids (the palpebral fissures)
   c. growth impairment
      i. low birth weight relative to gestational age
      ii. smallness of the head
      iii. shortness of stature
   d. brain injury manifested by deficits in at least three of the following
      i. academic achievement
      ii. adaptive behaviour, social skills and social communication
      iii. attention span, activity level and distractibility
      iv. remembering, producing and understanding language
      v. communication
      vi. thinking and acting in ways that solve problems

4. Partial fetal alcohol syndrome, identified by
   a. confirmed maternal alcohol consumption during pregnancy
   b. the presence of two of three of the facial abnormalities
   c. the absence of growth impairment
   d. brain injury

5. Alcohol-related neurodevelopmental disorder
   a. confirmed maternal alcohol consumption during pregnancy
   b. absence of facial abnormalities
c. absence of growth impairment
d. brain injury

6. Alcohol-related birth defects
   a. attributed to maternal alcohol consumption only in the presence of another of the fetal alcohol spectrum disorders
   b. include
      i. congenital heart disease or defects, including
         1. atrial septal defects
         2. ventricular septal defects
      ii. hypertension (CDHO Advisory)
      iii. diabetes (CDHO Advisory)
      iv. seizures (CDHO Advisory), which may be linked to binge drinking during weeks 11 to 16 of pregnancy.

7. Teratogen, refers to radiation, maternal infections, chemicals, medications and drugs that may
   a. impair the development of an embryo or fetus
   b. cause a birth defect
   c. terminate the pregnancy in
      i. miscarriage
      ii. stillbirth.

Overview of fetal alcohol spectrum disorder

Resources consulted
- Alcohol disorder takes toll: Children’s Mental Health Ontario
- Effects of Alcohol on the Developing Embryo and Fetus: Substance Abuse & Mental Health Services Administration
- FASlink
- Fetal Alcohol Spectrum Disorder (FASD) Prevention: Canadian Perspectives | Public Health Agency of Canada
- Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis | Canadian Medical Association
- Fetal Alcohol Spectrum Disorders: Centers for Disease Control and Prevention
- Fetal Alcohol Syndrome: MedicineNet.com
- Fetal alcohol syndrome: MedlinePlus
- Fetal Alcohol Syndrome: Medscape
- Fetal alcohol syndrome: PubMed Health
- Forward, together: addressing fetal alcohol spectrum disorder (FASD) in Atlantic Canada | Health Canada First Nations and Inuit Health Atlantic Region
- Identifying fetal alcohol spectrum disorder in primary care: Canadian Medical Association Journal
- Introduction to FASD Overview: Canadian Centre on Substance Abuse
- Suicidality in Adolescents and Adults With Fetal Alcohol Spectrum Disorders: Canadian Psychiatric Association
- Women and Alcohol: National Institute on Alcohol Abuse and Alcoholism
Occurrence

Fetal alcohol spectrum disorder
1. Occurs in the US at a rate of 9.1 per 1000 live births, though diagnosis is believed to be often missed or delayed.
2. Occurs in Canada at the rate of 9 per 1000 births, in apparent concurrence with the US estimates, though the Canadian rates vary considerably among studies and, in the absence of comprehensive national statistics, are disputed on the grounds of
   a. underestimation of the scale and scope of fetal alcohol spectrum disorder in the Canadian population as a whole
   b. understatement of the diversity of the ethnic, educational and economic backgrounds with which fetal alcohol spectrum disorders are associated
   c. failure to make sufficiently clear that fetal alcohol spectrum disorders are not confined to the specific ethnocultural background of First Nations, as is sometimes erroneously believed
   d. errors in diagnosis that
      i. arise because of the lack of a definitive genetic or blood test
      ii. cause fetal alcohol spectrum disorders to be confused with conditions such as
         1. attention deficit hyperactivity disorder
         2. autism (CDHO Advisory).

Cause

Fetal alcohol spectrum disorder
Is caused by maternal consumption of ethyl alcohol, which is
1. classified as a teratogen
2. considered the leading preventable cause of birth defects and childhood disability in the United States and, by inference, Canada
3. believed to possess no ‘safe’ level of alcohol use during pregnancy, which signals that zero risk corresponds to zero exposure.

Risk factors

Fetal alcohol spectrum disorder
Risks are linked with maternal and fetal blood-alcohol concentrations and other variables such as
1. timing of exposure during fetal development, involving
   a. distinctive facial features of fetal alcohol syndrome, which occur only if the mother happens to consume alcohol in one particular week, believed to be the third of the first trimester
   b. neurological damage; the part of the brain damaged is believed to be determined by the point of time during the pregnancy at which the alcohol is consumed
2. patterns of alcohol consumption by the mother, especially binge drinking
3. frequency of alcohol use by the mother
4. biological and social factors that increase risk for women
   a. who are older than 30 years and who drink heavily of giving birth to a functionally impaired infant, a risk which appears to exceed that for younger women who report similar patterns of alcohol consumption
   b. of low educational level
c. with prenatal exposure to tobacco, cocaine and other substances of abuse
   (CDHO Advisory)
d. of lower socioeconomic status
e. in an environment of paternal drinking, smoking and drug use at the time of
   pregnancy even though the damage to the fetus occurs after fertilization by
   father’s sperm
f. with reduced access to prenatal and postnatal care and services
g. with inadequate nutrition
h. in unfavourable development environments, such as
   i. social isolation
   ii. abuse, including sexual abuse
   iii. neglect
   iv. stress
5. the yet-to-be developed ability of the immature liver of the fetus to metabolize alcohol
   which
   a. has crossed the placenta and travelled in the umbilical cord to the blood stream
      of the fetus causing the alcohol to persist in the blood of the fetus
   b. having crossed the placenta causes fetal damage that
      i. may be increased by interactions between the alcohol, the mother’s
         metabolism, and substances of abuse (CDHO Advisory), including
         i. cocaine
         ii. heroin
         iii. marijuana
         iv. methadone
         v. some prescription medications
         vi. tobacco
      ii. leads to brain injury, manifested in learning disabilities that, in
         combination with behavioural problems, leads to chaotic lives reflected
         in secondary disabilities
      iii. increases the risk of stillbirth and sudden infant death syndrome.

Signs and symptoms
Fetal alcohol spectrum disorder
Is associated with signs and symptoms variously reflecting comorbidities, complications and
associated conditions that affect
1. mothers
2. infants
3. young children
4. young adults and adults.

Medical investigation
Fetal alcohol syndrome
Medical diagnosis rests on evidence pertaining to
1. a confirmed history of maternal alcohol exposure
2. distinctive facial features
   a. of which those considered diagnostic are
      i. smooth philtrum
      ii. thin vermilion border
iii. **small palpebral fissures**
b. which also may include
   i. narrow, small eyes with large **epicanthal folds**
   ii. small head
   iii. small upper jaw
   iv. smooth groove in upper lip
   v. smooth and thin upper lip

3. growth retardation
4. central nervous system dysfunction
5. multidisciplinary assessment that is costly and may therefore be inconsistently provided, resulting in diagnostic errors and delays
6. behavioural and performance problems that frequently are the first manifestations to attract attention, whether of parents, teachers, health professionals, social workers or the justice system
7. examinations and tests for developmental problems, such as
   a. heart defects
   b. delayed mental development
   c. structural disorders of the face and skeleton
8. brain imaging studies, CT or MRI, to reveal abnormal brain development
9. ultrasound testing during pregnancy to assess the growth of the fetus
10. tests for substances of abuse *(CDHO Advisory)*.

**Treatment and prevention**

**Fetal alcohol spectrum disorder**
1. Involve for the woman who
   a. is pregnant or who is trying to get pregnant: advice to avoid drinking any amount of alcohol during pregnancy
   b. is pregnant or who is trying to get pregnant and who is affected by alcoholism: advice to join an alcohol-abuse rehabilitation program and to be checked closely by a health care provider throughout pregnancy
   c. has borne a child with fetal alcohol syndrome: counseling which may help prevent recurrence
   d. is sexually active and prone to heavy drinking: birth control and control of drinking behaviour.
2. Involve for children
   a. early diagnosis
   b. early referral to a team of providers who can work with families on educational and behavioural approaches that best fit the individual child’s needs.

**Prognosis**

**Fetal alcohol spectrum disorder**
Is determined by the degree of the learning disabilities that, in combination with behavioural problems, lead to
1. outcomes for infants with fetal alcohol syndrome which
   a. vary depending on the extent of the learning disabilities and behavioural problems
   b. spare almost none from abnormal brain development
2. **chaotic lives** reflected in a wide range of troublesome challenges.
Social considerations

Fetal alcohol spectrum disorder
Creates significant social challenges associated with
1. the possibility that as many as 10 to 15 percent of children are affected by prenatal alcohol exposure to an extent that requires special education
2. serious implications for the
   a. person, for whom continuation of childhood effects into adult life results in difficulties with family relationships, employment, mental health and the legal system such as
      i. disrupted school experience
      ii. inappropriate sexual behaviour
      iii. suicide attempts
      iv. trouble with the law
      v. unemployment
   b. mother, for whom the social stigmatization of alcohol problems within a family plus guilt feelings associated with permanent injury to the child provide a strong incentive for reticence or even denial, which may inhibit her in
      i. accurately disclosing her history
      ii. seeking screening or care for the child
   c. family and family caregivers, who may confront social stigmatization associated with alcohol problems within a family
   d. community and the justice system, in meeting the pressures for services for children and adults.

Multimedia and images

- Areas of the brain that can be damaged in utero by maternal alcohol consumption
- Atrial septal defect
- Craniofacial features associated with fetal alcohol syndrome
- Epicanthal folds
- Simian crease
- The face
- The Story of Iyal
- Ventricular septal defect

Comorbidity, complications and associated conditions

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

Comorbid conditions, complications and conditions associated with fetal alcohol spectrum disorder include the following.

1. Mothers
   a. miscarriage
   b. premature delivery
   c. stillbirth.
2. Infants
   a. growth
      i. during pregnancy: poor
      ii. after birth: slow
   b. decreased muscle tone and poor coordination
   c. heart defects such as
      i. atrial septal defect
      ii. ventricular septal defect
   d. structural disorders of the face
   e. behaviour problems
   f. death
   g. mental retardation.

3. Young children
   a. delayed development
   b. significant functional problems in three or more of
      i. movement
      ii. social skills expected for the child’s age
      iii. speech
      iv. thinking.

4. Young adults, adults
   a. are affected by a complex collection of symptoms and signs involving
      i. mental challenges, variously including
         1. autistic traits
         2. behaviour of a sociopathic type
         3. behavioural problems
         4. central auditory processing disorder
         5. depression
         6. dyslexia
         7. echolalia: meaningless repetition of another person’s spoken words
         8. impulsiveness that may be extreme
         9. intellectual functioning: underdeveloped
        10. intellectual potential: unrealized
        11. interpersonal empathy: little or no capacity
        12. judgment: poor
        13. memory impairment
        14. mental retardation
        15. moral judgment: little or no capacity
        16. night terrors
        17. pain tolerance: higher than normal or even dangerously high
        18. perseverance: pathological, persistent repetition of a word, gesture, or act
        19. reactive outbursts
        20. social problems
        21. speech and language developmental: impaired
        22. suicide
   ii. physical challenges, variously including
      1. asthma
2. deafness  
3. dental abnormalities and implications  
4. developmental coordination disorder  
5. facial deformities  
6. heart defects  
7. height and weight deficiencies  
8. immune system disorders  
9. physical developmental delay  
10. premature death  
11. puberty: precocious  
12. rigidity  
13. seizures  
14. sleep disorder  
15. squint  
16. tics: physical and vocal  
17. tremors  
18. vision impairment: mild to severe  

b. may be subject to mistaken diagnosis possibly leading to sub-optimal care, as may occur when a fetal alcohol spectrum disorder is confused with other mental health conditions for which treatment differs  
c. who are already affected by a fetal alcohol spectrum disorder may develop their own alcohol and substance-abuse problems  
d. may require intensive support to deal with factors underlying problematic use of alcohol or substances of abuse  
e. may have siblings with fetal alcohol spectrum disorders because they are children of the same mother  
f. may experience problems with parenting manifested in poor judgment and poor impulse control, possibly compounded by alcohol dependence.  

Oral health considerations  

Relative to fetal alcohol spectrum disorder, the dental hygienist’s role may involve or, according to circumstances, should involve  
1. recognizing a fetal alcohol spectrum disorder in a patient/client  
2. paying particular attention to the medical history  
3. delivering oral healthcare in the presence of the challenges associated with fetal alcohol spectrum disorder with the intention of  
   a. maintaining the patient/client’s mouth in the healthiest condition possible  
   b. eliminating actual or potential sources of infection  
4. providing oral healthcare in ways that are most appropriate for the patient/client’s particular needs in relation to  
   a. orofacial deformities such as  
      i. abnormal smallness of the jaws, especially of the mandible  
      ii. cleft lip  
      iii. cleft palate  
      iv. malocclusions  
      v. misaligned teeth  
      vi. mouth breathing and consequent dry mouth associated with facial deformities
vii. oral/motor deficits
viii. poor tongue thrusting
ix. small teeth with defective enamel
x. temporomandibular joint disorders

b. poor oral hygiene reflected in
i. spontaneous gingival bleeding
ii. gingivitis
iii. plaque
iv. decay

c. the possibility of heart defect, which may indicate a requirement for medical advice relative to the risk of bacterial endocarditis and the need for prophylactic antibiotics (CDHO Advisory)

d. the likelihood of the patient/client’s exhibiting behavioural and emotional difficulties that complicate the provision of oral healthcare to persons with a fetal alcohol spectrum disorder, which include
i. aggressive behaviour when upset, with the possibility of injury to the dental hygienist or damage to equipment
ii. anxious, hostile, and uncooperative behaviour
iii. hyperactivity: inability to keep a stable position in the dental chair, which may lead to a requirement for general anesthesia, including nitrous oxide administration, for some procedures of oral healthcare
iv. short attention span: easily distracted
v. inability to answer questions appropriately or at all owing to
   1. speech disorder
   2. brain dysfunction
xi. danger of self-injury from removable prosthetic devices

e. the possibility of seizures (CDHO Advisory) in the course of oral healthcare which may require
i. medical advice about anticonvulsant or other medications regarding
   1. compliance by the patient/client
   2. current dosages
ii. synchronization of the oral healthcare visit with the medication regimen
iii. awareness of the gingival overgrowth as a side effect of the anticonvulsant phenytoin and hence the importance of oral hygiene

5. consulting with the primary-care physician or nurse practitioner regarding
   a. needs for pre-medication or antibiotic prophylaxis for heart conditions
   b. medication needs relative to
      i. seizure and other risks
      ii. side effects
   c. pain management
   d. comorbidities, complications and associated conditions
   e. special precautions
   f. any matters on which the dental hygienist feels insufficiently informed or prepared

6. recognizing conditions which
   a. may be noticed during the course of oral healthcare
   b. if not already the subject of specialized care may signal a need for referral to the primary-care physician or nurse practitioner
7. minimizing stress for the patient/client and the family or other caregiver
   a. to avoid psychosocial challenges
   b. to reduce the risk of seizures in patients/clients with a seizure history
8. reviewing and complying with safety and security practices
   a. relative to
      i. seizures
      ii. emergencies or risky situations associated with
         1. anxious, hostile, or uncooperative behaviour
         2. emotional instability
         3. misuse of dental prostheses with risk of self-injury
   b. which may include monitoring the patient/client’s vital signs
9. providing advice on
   a. diet from the perspective of oral hygiene and carries control
   b. maintenance of oral hygiene for family members cared for by family caregivers
10. communicating sensitively and informatively with patients/clients and family and other caregivers about
    a. uncertainties concerning a patient/client’s competence to make rational decisions relative to consent to treatment
    b. efforts to ensure that, to the extent possible, the patient/client comprehends the treatment proposed and accepts the need for it.

Other more general oral health considerations include the following.
1. Sparse reporting in the dental literature\(^2\) of the oral healthcare aspects of fetal alcohol spectrum disorder and fetal alcohol syndrome.
2. Maternal discomfort with questions pertaining to alcohol consumption associated with pregnancy, which may complicate history-taking.
3. Recognition of the potential that a patient/client, especially a child, may have an unrecognized fetal alcohol spectrum disorder should lead the dental hygienist
   a. to help the patient/client and his or her family in receiving appropriate advice
   b. to recognize that, prior to any disclosure of any personal health information to anyone, including the family physician, the dental hygienist should obtain full, informed consent of the patient/client, parent, family caregiver, or substitute decision-maker.
4. When cardiovascular conditions are controlled, the patient/client may be treated, though medical advice may be required about the need for monitoring of vital signs including blood pressure.

\(^2\) For example, searches on 2011-09-25 for fetal alcohol spectrum disorder and fetal alcohol syndrome produced no articles from the Journal of the Canadian Dental Association; from the Journal of the American Dental Association, searches produced only a 1988 case report and a pilot study in 2003 of the demographic and prenatal factors of patients with cleft lip and cleft palate which reported no evidence that alcohol consumption contributes to “cleft status differences”.
MEDICATIONS SUMMARY

Sourcing medications information

1. Adverse effect database
   - 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 Alternative Medicine

Motherisk
Although there is good reason for therapeutic caution during pregnancy, in some instances the benefits outweigh the risk, which favours continuation of drug therapy for conditions such as
   a. medication to treat seizure disorders
   b. antidepressants to control mood disorders common in pregnancy.

Types of medications

Resource consulted
Mental Health Medications

Fetal alcohol spectrum disorders’ many effects are reflected by an extensive list of medications used for children and adults.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Brand Name</th>
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<tbody>
<tr>
<td>alprazolam</td>
<td>Xanax®</td>
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<tr>
<td>amantadine</td>
<td>Symmetrel®</td>
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<tr>
<td>amitriptyline</td>
<td>Elavil®, Endep®, Vanatrip®</td>
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<tr>
<td>aripiprazole</td>
<td>Abilify®</td>
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<tr>
<td>atomoxetine</td>
<td>Straterra®</td>
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<tr>
<td>bupropion</td>
<td>Wellbutrin®</td>
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<tr>
<td>buspirone</td>
<td>BuSpar®</td>
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<td>carbamazepine</td>
<td>Tegetrol®</td>
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<td>chlordiazepoxide</td>
<td>Librium®</td>
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<td>imipramine</td>
<td>Tofranil®</td>
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<td>lamotrigine</td>
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<tr>
<td>lithium</td>
<td>Eskalith®, Lithobid®</td>
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<tr>
<td>meprobamate</td>
<td>Equagesic®</td>
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<tr>
<td>methylphenidate</td>
<td>Concerta®</td>
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<td>methylphenidate</td>
<td>Ritalin®</td>
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<td>mirtazapine</td>
<td>Remeron®</td>
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<tr>
<td>modafinil</td>
<td>Provigil®</td>
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<tr>
<td>naltrexone</td>
<td>ReVia®</td>
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</table>
Side effects of medications

See the links above to the specific medications.

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 and signs, including
      i. mental-health manifestations
      ii. behavioural manifestations
      iii. neurological manifestations
      iv. seizures, which may require discussion with the patient/client, family
caregiver or other caregiver about warning signs and symptoms of an
impending seizure, such as irritability
      v. physical manifestations
   b. medications considerations
   c. reasons for visits with the primary care physician
   d. previous experience with
      i. oral healthcare
      ii. out-patient surgery
   e. contraindications
   f. complications
   g. comorbidities
   h. associated conditions
2. explore the need for advice from the primary or specialized care provider(s)
3. inquire about
   a. the patient/client’s understanding and acceptance of the need for oral
      healthcare
   b. problems with infections generally and specifically associated with
dental/dental hygiene care
c. the patient/client’s current state of health
d. how the patient/client’s current symptoms relate to
   i. oral health
   ii. health generally
   iii. recent changes in the patient/client’s condition

4. engage in careful and sensitive discussion with the patient/client and family caregiver, as appropriate, to
   a. overcome reluctance on the part of the patient/client, parent or guardian to disclose a history of a fetal alcohol spectrum disorder
   b. express supportive, nonjudgmental attitudes
   c. reassure the patient/client that such information
      i. is necessary for the provision of safe oral health, especially relative to
         1. contraindications
         2. obtaining advice from the appropriate primary care provider(s)
      ii. will be kept confidential.

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 Recommendations published by the Centers for Disease Control and Prevention (a frequently updated resource)
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 and signs are under control and whose treatment is proceeding normally, the dental hygienist should implement the
Procedures, though these may be postponed pending medical advice, may be required if the patient/client has
   a. symptoms or signs suggestive of the likelihood of behavioural or emotional problems, or seizures
   b. what appear to be serious complications of a fetal alcohol spectrum disorder
   c. not recently or ever sought and received medical advice relative to dental procedures
   d. recently changed medications, under medical advice or otherwise
   e. recently experienced changes in his/her medical condition such as medication or other side effects of treatment
   f. recently experienced changes in his/her symptoms and signs.

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 fetal alcohol spectrum disorder, 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 or the family caregiver, as appropriate, to alert any healthcare professional who proposes any intervention or test
   a. that patient/client has a history of fetal alcohol spectrum disorder
   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 or as an alternative frequent checking of the mouth by the family caregiver
      ii. reporting to the appropriate healthcare provider any changes in the mouth
   b. the need for regular oral health examinations and preventive oral healthcare, which
      i. may include a care plan that is
1. realistic relative to the patient/client’s mental and physical limitations
2. shared with the patient/client, and the family or other caregivers

ii. reflects the importance of
   1. making oral hygiene procedures comprehensible to the extent possible for the patient/client
   2. involving the family caregiver, as appropriate

   c. topics of particular importance for the patient/client, such as
      i. the availability of local social and oral healthcare services
      ii. the role of regular oral healthcare in
         1. maintaining general health
         2. maintaining self-image
         3. identifying needs for specialized help in dealing with
            a. orofacial abnormalities
            b. speech and language difficulties
      iii. medication side effects such as dry mouth, and recommend treatment
      iv. scheduling and duration of appointments, accompanied by explanations that are comprehensible to patient to the extent possible
      v. comfort level while reclining, and stress and anxiety related to the Procedures
      vi. mouth ulcers and other conditions of the mouth relating to a fetal alcohol spectrum disorder, and its complications, comorbidities, medications
      vii. infection control within the oral cavity
      viii. pain management
      ix. oral self-care appropriate for the patient/client, such as
         1. choice of toothpaste
         2. tooth-brushing techniques and related devices
         3. dental flossing
         4. mouth rinses
         5. management of a dry mouth
      x. the importance of
         1. appropriate diet in maintaining oral health
         2. scheduling and duration of appointments to minimize stress and fatigue
         3. comfort level while reclining, and stress and anxiety related to the Procedures
      xi. mouth ulcers and other conditions of the mouth relating to fetal alcohol spectrum disorders, comorbidities, complications or associated conditions, medications or diet
      xii. pain management

3. should consider techniques for communication with patients/clients and family caregivers, such as that advocated by the The Academic Edge, reflective of the understanding that children with fetal alcohol spectrum disorders generally
   a. experience much frustration in their school lives, as they do in their lives as a whole; for example they
i. listen to instructions but understand only part of what is said, often with negative consequences
ii. cope with their lack of understanding with signals for help suited to their individual learning needs, for example by
   1. pretending indifference
   2. clowning
   3. becoming belligerent
b. are easily over-stimulated
   i. by noise or strong visual stimuli that are especially distracting because of the child’s inability to react appropriately
   ii. in ways that the child’s parents are most likely to interpret correctly
c. have verbal skills that exceed their nonverbal skills for assimilating information and reacting appropriately in social situations
d. have emotions and coping skills well below their chronological age
e. variously appear volatile, egocentric, manipulative, angry or resentful, lacking in empathy, and out of touch with their own feelings
f. may have exaggerated mood swings that are unresponsive to negative consequences because brain damage impairs learning from mistakes: the most effective form of behaviour modification is rewarding good behaviour
g. may be struggling with complications, comorbidities and secondary disabilities.

### BENEFITS/HARMS OF IMPLEMENTING THE RECOMMENDATIONS

#### POTENTIAL BENEFITS

1. Promoting health through oral hygiene for persons who have fetal alcohol spectrum disorder.
2. Reducing the adverse effects, such as stress, by
   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 that oral health needs are unmet.

#### POTENTIAL HARMs

1. Causing medical or physical harm because of failure to consider and take appropriate steps relative to the possibility of
   a. behavioural, emotional, and other mental health problems
   b. heart defect
   c. seizures in the course of oral healthcare.
2. Performing the Procedures at an inappropriate time, for example
   a. without first checking on the need for premedication
   b. in the absence of explanations that are comprehensible to the patient/client.
3. Disturbing the normal dietary and medications routine of a person with fetal alcohol spectrum disorder.
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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