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 disorders of the pituitary gland.

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)

Disorders of the pituitary gland

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 disorders of the pituitary gland, 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.

\(^1\) 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 disorders of the pituitary gland.

MAJOR OUTCOMES CONSIDERED

For persons who have disorders of the pituitary gland: 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
- Pituitary Disorders Overview: The Hormone Foundation
- Pituitary Disorders: Pituitary Network Association
- Pituitary tumor: MedLinePlus
- Pituitary tumor: PubMed Health

Terminology varies among centres. Terminology relied on in this Advisory is as follows.

The pituitary gland is the body’s master gland, which
1. is described as occupying the anatomical and functional crossroads of the brain, mind and body, which means that
   a. it exercises influence on and is influenced by numerous body functions
   b. it affects and is affected by numerous body processes
   c. when disordered it produces numerous and complex effects on health
2. produces and secretes various hormones that crucially influence
   a. growth and development
   b. sexuality and reproductive function
3. has the size and shape of a small bean and is located at the base of the brain
4. is divided into the
   a. larger anterior region (adenohypophysis)
   b. smaller posterior region (neurohypophysis)
5. is regulated by the hypothalamus, a region of the brain to which it is connected by the pituitary stalk, a thin vascular structure
6. is located close to important structures, including the
   a. optic nerves and fibres as these
      i. cross in the optic chiasm
      ii. connect to the eyes
   b. cavernous sinus, a venous channel through which runs
      i. the large carotid arteries that carry blood to the brain
      ii. nerves that control eye movements and facial sensation.

Other terminology is as follows.
1. Diabetes insipidus, which
   a. differs from diabetes mellitus, types 1 and 2 (CDHO Advisory)
   b. results in
      i. increased thirst
      ii. frequent urination.
2. Optic chiasm, where the fibres from the
   a. nasal-side halves of each retina cross to the opposite side of the brain
   b. temporal-side halves remain uncrossed.
3. Optic nerve
   a. transmits electrical impulses from the retina to the brain
   b. connects to the back of the eye.
4. Pituitary gland hormones comprise
   a. adrenocorticotropic (ACTH), which stimulates the production of cortisol by the adrenal glands
   b. antidiuretic hormone (ADH), vasopressin, which
      i. regulates water balance
      ii. affects the kidneys, and
      1. if insufficient, induces diabetes insipidus
      2. if excessive, induces the syndrome of inappropriate antidiuretic hormone secretion
   c. follicle-stimulating hormone (FSH), which works with luteinizing hormone for the normal functioning of testes and ovaries by
      i. promoting sperm production
      ii. enabling ovulation
   d. gonadotropin, any one of a group of hormones that
      i. stimulate the growth and activity of the gonads (ovaries and testes)
      ii. are essential for reproduction
      iii. are not essential for life
iv. include
   1. luteinizing hormone
   2. follicle-stimulating hormone
e. growth hormone (GH), which
   i. in childhood stimulates growth
   ii. in adults helps maintain
       1. appropriate utilization and distribution of fat by the body
       2. bone mass
       3. muscle mass
f. luteinizing hormone (LH), which regulates testosterone in men and estrogen in women
g. prolactin, which
   i. stimulates milk production from the breasts after childbirth
   ii. is also produced by the pituitary glands of men and non-pregnant women
      but its physiological functions then are not understood
h. thyroid-stimulating hormone (TSH), which stimulates the thyroid gland and
   which regulates
   i. energy
   ii. growth
   iii. metabolism
   iv. nervous system activity.
5. Cortisol, a so-called “stress hormone”, which helps to maintain
   a. blood pressure
   b. blood glucose levels.
6. Empty sella syndrome, where the pituitary gland shrinks or becomes flattened.
7. Endocrine-inactive tumour, which
   a. is the most common type of pituitary tumour
   b. causes problems because of large size, called the tumour mass effect, where the
      growing tumour interferes with normal functioning by
      i. pressing against the remaining, normal part of the pituitary gland
      ii. destroying some or many of the hormone-producing cells in the pituitary
         causing hypopituitarism
      iii. pressing against the
         1. optic chiasm
         2. brain tissues.
8. Gonadotropin-releasing hormone
   a. is released by the hypothalamus
   b. stimulates the pituitary gland to produce follicle-stimulating hormone and
      luteinizing hormone.
9. Hypopituitarism, a general term that
   a. refers to any under-functioning of the pituitary gland
   b. includes pituitary hyposecretion.
10. Hypophysis, the pituitary gland.
11. Hypothalamus, the part of the brain that controls body temperature, hunger, and thirst,
    and the pituitary gland.
12. Infarction, the formation of an infarct, an area of tissue death resulting from lack of
    oxygen in the tissue.
13. Kallmann’s syndrome, a rare condition in which the hypothalamus malfunctions causing
signs and symptoms such as
   a. **anosmia**
   b. bimanual synkinesis, one hand copying the movements of the other
   c. cleft lip or palate
   d. **cryptorchidism**
   e. failure to go through puberty
   f. **frontonasal dysplasia and dypertelorbitism**
   g. osteoporosis (**CDHO Advisory**)
   h. primary amenorrhea.

14. Pituitary gland disorders, which are classified by
   a. their actions or lack of actions, chiefly
      i. hypersecretion, production of excess hormone
      ii. hyposecretion, production of insufficient hormone
      iii. **endocrine-inactive tumours**, in which problems arise because of their
           large size, called the tumour mass effects, where the growing tumour
           interferes with normal functioning by pressing against the
           1. remaining, normal part of the pituitary gland
           2. **optic chiasm**
           3. brain tissues
   b. their types, chiefly
      i. pituitary tumours, pituitary adenomas, which
         1. are the most frequent cause of pituitary disorders
         2. may interfere with the normal formation and release of
            hormones
         3. are fairly common in adults
         4. are not
            a. classified as brain tumours
            b. a form of cancer
         5. include **endocrine-inactive tumours**
      ii. **hypopituitarism** or pituitary failure which
         1. leads to decreased or absent hormone production
         2. results from
            a. bleeding into a pituitary tumour
            b. head trauma
            c. intracranial surgery
            d. radiation therapy to the pituitary (**CDHO Advisory**)
      iii. pituitary-adjacent abnormalities, which
         1. include tumours that arise near the pituitary gland
         2. may impact pituitary hormonal function
      iv. pituitary cancer, which is rare.

15. Prolactinoma, **prolactin**-producing tumour, the most common type of hormone-secreting **pituitary tumours**, which
   a. exist unrecognized in up to 5 to 10 percent of the adult population
   b. in women, may cause
      i. amenorrhea
      ii. galactorrhea, milky discharge from the breasts
      iii. irregular menstrual periods
      iv. loss of ability to ovulate
v. reduction in libido

c. in men, may cause
   i. headache
   ii. loss of sex hormone production
   iii. visual defects, from compression of the optic nerves or optic chiasm

d. in men and women, may produce pituitary apoplexy.

Overview of disorders of the pituitary gland

Resources consulted
- Generalized hypopituitarism: Merck Manuals
- Hypopituitarism: FamilyDoctor.org
- Hypopituitarism: University of Maryland Medical Center
- Pituitary Disorders Overview: The Hormone Foundation
- Pituitary Disorders: Pituitary Network Association
- Pituitary Lesions: Merck Manuals
- Pituitary tumor: MedLinePlus
- Pituitary tumor: PubMed Health
- Selective Pituitary Hormone Deficiencies: Merck Manuals

Pituitary disorders

1. Development and presentation
   a. generally involves a combination of symptoms, including
      i. headaches
      ii. visual field defects, such as
         1. loss of half of the visual field
         2. images drifting apart
      iii. altered appetite
      iv. thirst
      v. symptoms attributable to pituitary hormone
         1. hypersecretion
         2. hyposecretion
   b. generally is initially slow in onset and unnoticed by the person, but is occasionally sudden or even dramatic
   c. generally involves
      i. first, loss of growth hormone
      ii. next, loss of gonadotropins
      iii. ultimately, loss of
         1. thyroid-stimulating hormone
         2. adrenocorticotropic
   d. may involve
      i. loss of antidiuretic hormone, usually associated with abnormalities of the hypothalamus
      ii. deficiency of all hormones, called panhypopituitarism.

2. Types and occurrence
   a. listed by abnormalities of specific hormones, chiefly
      i. hypersecretion of
         1. adrenocorticotropic
2. growth hormone
3. prolactin

ii. hyposecretion of
1. adrenocorticotropin
2. antidiuretic hormone
3. gonadotropin (luteinizing hormone and follicle-stimulating hormone)
4. growth hormone
5. prolactin
6. thyroid-stimulating hormone

iii. endocrine-inactive tumours

b. listed by type of actions
   i. hypersecretion, including
      1. acromegaly in adults
      2. Cushing syndrome (*CDHO Advisory*)
      3. gigantism in children
      4. hyperthyroidism (*CDHO Advisory*)
      5. nipple discharge
      6. prolactinoma

   ii. hyposecretion, including
      1. Addison's disease (*CDHO Advisory*)
      2. growth hormone deficiency
      3. hypogonadism
      4. hypothyroidism (*CDHO Advisory*)

   iii. endocrine-inactive tumours, including
      1. craniopharyngioma
      2. empty sella syndrome

iv. pituitary-adjacent abnormalities, such as Rathke’s cleft cysts

v. pituitary tumours’ pressure

3. Causes and risk factors
   a. the commonest cause of pituitary hypersecretion and hyposecretion is a pituitary or hypothalamic tumour
   b. the commonest type of pituitary tumours is prolactinoma
   c. hypopituitarism
      i. pituitary tumours
      ii. infarction
         1. pituitary apoplexy
         2. shock in
            a. postpartum (*Sheehan’s syndrome*)
            b. diabetes mellitus (*CDHO Advisory*)
            c. sickle cell anemia (*CDHO Advisory*)
         3. vascular thrombosis or aneurysm, especially of the internal carotid artery
      iii. inflammatory processes
         1. meningitis (tubercular, other bacterial, fungal, malarial)
         2. pituitary abscess
         3. sarcoidosis
iv. infiltrative disorders, such as hemochromatosis which causes iron build-up in the pituitary

v. treatment and trauma
   1. irradiation
   2. surgery
   3. basal skull fracture

vi. causes involving the hypothalamus with effects on the pituitary gland
   1. tumours, such as
      a. craniopharyngioma
      b. metastatic tumour
   2. genetic factors, such as Kallmann’s syndrome

   d. empty sella syndrome, which
      i. typically occurs in women
      ii. may be caused by
         1. congenital factors
         2. injury, such as
            a. head trauma
            b. ischemia after childbirth
            c. radiation therapy
            d. surgery
      iii. may be associated with
         1. obesity
         2. hypertension (CDHO Advisory)
         3. hypopituitarism
         4. headaches
         5. visual field defects

4. Signs and symptoms of pituitary and related disorders
   a. relate to the
      i. specific pituitary hormones that are deficient or absent
         1. luteinizing hormone and follicle-stimulating hormone deficiency
            a. in children leads to delayed puberty
            b. in premenopausal women leads to
               i. amenorrhea
               ii. infertility
               iii. reduced libido
               iv. regression of secondary sexual characteristics
            c. in men leads to
               i. decreased spermatogenesis and consequential infertility
               ii. erectile dysfunction
               iii. reduced libido
               iv. regression of secondary sexual characteristics
               v. testicular atrophy
         2. growth hormone deficiency
            a. in children leads to
               i. growth problems in which
                  1. skeletal maturation, assessed by bone age determination, is two years or more behind the chronologic age
2. normal proportionality is maintained between upper and lower body segments
3. pubertal development fails or is delayed
   b. in adults is usually asymptomatic and clinically undetectable though it may
      i. contribute to decreased energy
      ii. impair psychological well-being
      iii. diminish the quality of life
3. thyroid-stimulating hormone deficiency leads to
   a. bradycardia
   b. cold intolerance
   c. dry skin
   d. dysmenorrhea
   e. facial puffiness
   f. fatigue
   g. hoarse voice
   h. hypothyroidism
   i. memory loss
   j. mood disturbance
   k. weakness
   l. weight gain
4. adrenocorticotropin deficiency leads to
   a. fatigue
   b. hypoadrenalism
   c. hypotension
   d. intolerance to stress and infection
5. antidiuretic hormone deficiency leads to diabetes insipidus
   b. relate to endocrine-inactive tumours’ tumour mass effect on surrounding tissues inducing neurological symptoms such as
      i. headache
      ii. lethargy
      iii. nasal drainage
      iv. nausea and vomiting
      v. problems with the sense of smell
      vi. visual changes
         1. double vision
         2. drooping eyelids
         3. visual field loss
   c. relate to damage to the pituitary which leads to
      i. Sheehan’s syndrome, in which loss of the woman’s blood volume and shock occurring during or immediately after childbirth leads to
         1. failure of lactation to start
         2. fatigue
         3. loss of pubic and axillary hair
      ii. pituitary apoplexy, a serious and potentially emergency condition
         1. caused most commonly by hemorrhagic infarction of a pituitary tumour
         2. manifested by acute symptoms that include
a. severe headache
b. stiff neck
c. fever
d. visual field defects
e. paralysis of the muscles governing eye movement
f. vascular collapse
d. relate to specific pituitary hormones that are excessive
i. antidiuretic hormone excess leads to the syndrome of inappropriate antidiuretic hormone secretion
ii. growth hormone excess leads to
1. acromegaly in adults
2. gigantism in children
iii. prolactin excess leads to galactorrhea
iv. adrenocorticotropicin excess leads to the pituitary type of Cushing’s syndrome
e. relate to hypothalamus lesions, which may
i. result in hypopituitarism
ii. disrupt the centres that control appetite, producing
1. a syndrome resembling anorexia nervosa
2. hyperphagia with massive obesity
f. relate to psychological symptoms, including
i. depression
ii. impairment of quality of life
iii. loss of self-respect
iv. moodiness
v. nervousness.

5. Medical investigation, includes
a. MRI or CT
b. blood tests for
i. free thyroxine, thyroid-stimulating hormone, and prolactin levels
ii. cortisol levels plus provocative testing of the pituitary-adrenal axis
c. provocative testing

6. Treatment
a. medication by hormone replacement
i. growth hormone, deficiency of which is treated with recombinant human growth hormone
ii. gonadotropin (luteinizing hormone and follicle-stimulating hormone), deficiency of is treated in
1. men, with testosterone
2. women, with estrogen and progesterone
iii. adrenocorticotropicin, deficiency of which is treated with hydrocortisone or prednisone
iv. thyroid-stimulating hormone, deficiency of which is treated with levothyroxine
v. prolactin, deficiency of which
1. induces inability to lactate
2. lacks treatment
vi. antidiuretic hormone, deficiency of which is treated with desmopressin
b. interventions for tumours
   i. endocrine-inactive tumours with
      1. surgery to remove the tumour if the pressure effects are serious, such as those on
         a. the optic nerves, which risk causing blindness
         b. important blood vessels
      2. radiation therapy (CDHO Advisory) to shrink the tumour, sometimes in combination with surgery
      3. medications
   ii. endocrine-active tumours, with
      1. surgery
      2. radiation therapy (CDHO Advisory)
      3. hormone replacement
   c. for comorbidities, complications and associated conditions
      i. medications
      ii. other forms of treatment as indicated.

7. Prognosis
   a. if the pituitary tumours can be surgically removed, the outlook is fair to good, depending upon whether the entire tumour is removed
   b. for specific conditions, see the link to the condition.

8. Prevention of pituitary disorders or their further development
   a. involves protection against severe injury or trauma to the head
   b. is of no avail in stopping pituitary gland tumours from forming
   c. emphasizes the importance of
      i. closely complying with medications
         1. hormone therapy
         2. reporting to the treating physician
            a. recurrence of symptoms
            b. emergence of new symptoms
      ii. regular monitoring of the health condition including the oral health condition.

9. Social considerations
   a. support groups
      ▪ BC Children’s Hospital
      ▪ Pituitary Disorders Education & Support
      ▪ The Pituitary Network Association
   b. patient/client information
      ▪ The Hormone Foundation
      ▪ Patient information-Acromegaly: UpToDate
      ▪ Patient information-Cushing’s syndrome: UpToDate
      ▪ Patient information-High prolactin levels and prolactinomas: UpToDate

Multimedia and images

   Pituitary Gland
Comorbidity, complications and associated conditions

Comorbid conditions are those which co-exist with disorders of the pituitary gland 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.

With the pituitary gland’s role as the body’s master gland, it is to be expected that the abnormalities of or that affect the pituitary gland have the potential to produce numerous and influential comorbid conditions, complications and associated conditions. The numerousness creates a further challenge: many are uncommon.

The types of comorbid conditions, complications and associated conditions are classified as follows.

Comorbid conditions, complications and associated conditions

1. arise from the effects of abnormalities
   a. of hormones produced by the pituitary gland, such as primary hypopituitarism
   b. of hormones produced by the pituitary gland where the abnormalities are caused by disorders in other glands and organs
   c. of hormones produced by glands other than the pituitary that are affected by abnormalities of pituitary-gland hormones
   d. produced by the non-secretory effects of pituitary tumours
2. may be associated with
   a. surgery
      i. in which pituitary tumours are removed through the nose and sinuses
      ii. which may result in permanent hormonal imbalances which require correction by administration of hormones or other medications
   b. medications and adverse effects.

Oral health considerations

1. Periodontal changes associated with abnormalities of or related to the pituitary gland are induced by hormonal alterations through
   a. edema
   b. inflammation
   c. demineralization or abnormal periosteal development of the alveolar bones
2. With the pituitary gland’s role as the body’s master gland, it is to be expected that abnormalities of, or that affect the pituitary gland have the potential to produce oral effects which may
   a. affect oral health
   b. signal the need for
      i. reporting of the dental hygienist’s observations to the patient/client’s physician
      ii. obtaining medical advice
         1. prior to initiating the Procedures
         2. for patients/clients undergoing or about to undergo
a. radiation therapy  
b. chemotherapy  
c. surgery  
3. for children with  
   a. abnormal facial appearance  
   b. dental malformation  
4. for adults, with oral conditions such as malocclusion in association with acromegaly  
5. about medications and their adverse effects.  
3. With the wide range of comorbidity, complications and associated conditions as well as the primary disorders of the pituitary gland, the medical and medications history requires close attention.  

**MEDICATIONS SUMMARY**

**Sourcing medications information**

1. Adverse effect database  
   - [Health Canada’s Marketed Health Products Directorate](https://www.canada.ca/)
toll-free 1-866-234-2345  
   - [Health Canada’s Drug Product Database](https://www.canada.ca/)  
2. Specialized organizations  
   - [WebMD](https://www.webmd.com/)  
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  
5. Complementary and alternative medicine  
   - [National Center for Complementary and Alternative Medicine](https://nccam.nih.gov/)  

**Types of medications**

Treatment is replacement of the hormones of the hyposecreting target glands. Benefits of treatment may include improved energy and quality of life.  

1. acromegaly and gigantism  
   - octreotide injection (Sandostatin®)  
2. adrenocorticotropic deficiency  
   - hydrocortisone injection (A-hydroCort®, Solu-Cortef®)  
   - prednisone (Prednisone Intensol®, Sterapred®)
<table>
<thead>
<tr>
<th>3.</th>
<th>antidiuretic hormone deficiency</th>
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<tr>
<td></td>
<td>▪ desmopressin (DDAVP®)</td>
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<td>4.</td>
<td>growth hormone deficiency</td>
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<td></td>
<td>▪ recombinant human growth hormone (rhGH)</td>
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<td>5.</td>
<td>hyperprolactinemia, prolactinoma</td>
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<td></td>
<td>▪ bromocriptine (Cycloset®, Parlodel®)</td>
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<td>6.</td>
<td>hypogonadism</td>
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<tr>
<td></td>
<td>▪ testosterone buccal (Striant®)</td>
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<td></td>
<td>▪ estrogen (Cenestin®, Estratab®, Premarin®, Enjugia® Menest®)</td>
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<td>▪ progesterone (Prometrium®)</td>
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<td>7.</td>
<td>luteinizing hormone and follicle-stimulating hormone deficiency</td>
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<td></td>
<td>▪ Gonadotropin treatment for infertility: WebMD</td>
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<td>8.</td>
<td>thyroid-stimulating hormone deficiency</td>
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<td>▪ levothyroxine (Levothroid®, Synthroid®, Levoxyl®, Unithroid®)</td>
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**Side effects of medications**

See the links above to the specific medications.

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**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. pointers in the history of significance to disorders of the pituitary gland, such as the combination of
      i. headaches
      ii. altered appetite
      iii. thirst
      iv. visual field defects
   b. the patient/client’s understanding and acceptance of the need for oral healthcare
   c. medications considerations, including over-the-counter medications, herbals and supplements
   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  
iii. 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

The dental hygienist  
1. should not implement the Procedures without prior consultation with the appropriate primary or specialist care provider(s)  
a. if the patient/client has recently received or is about to receive  
   i. chemotherapy  
   ii. radiation therapy  
   iii. surgery in connection with a pituitary disorder  
b. if the dental hygienist is uncertain about  
   i. the stability of the medical condition of the patient/client  
   ii. the patient/client’s propensity to shock  
   iii. medication considerations  
2. may postpone the Procedures pending medical advice if the patient/client  
a. appears debilitated  
b. is unable to provide the dental hygienist with sufficient information about  
   i. medications
ii. the medical history
   c. recently changed medications, under medical advice or otherwise
   d. has symptoms or signs of
      i. exacerbation of the medical condition
      ii. comorbidity, complication or an associated condition of disorders of the pituitary gland
   e. not recently or ever sought and received medical advice relative to oral healthcare procedures
   f. recently changed significant medications, under medical advice or otherwise
   g. recently experienced changes in his/her medical condition such as medication or other side effects of treatment
   h. 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 disorders of the pituitary gland, 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 that he or she
   a. has a history of disorders of the pituitary gland
   b. is taking hormone-related medication
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  
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  
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 disorders of the pituitary gland, comorbidities, complications or associated conditions, medications or diet  
i. pain management.

**BENEFITS/HARMS OF IMPLEMENTING THE RECOMMENDATIONS**

**POTENTIAL BENEFITS**

1. Promoting health through oral hygiene for persons who have disorders of the pituitary gland.
2. Reducing the adverse effects, such as a the adverse effects on the patient/client of psychological symptoms of a pituitary disorder, by  
   a. taking an appropriate medical history  
   b. generally increasing the comfort level of persons in the course of dental hygiene interventions  
   c. using appropriate techniques of communication  
   d. providing advice on scheduling and duration of appointments.  
3. Reducing the risk that oral health needs are unmet.

**POTENTIAL HARS**

1. Causing or failing to recognize shock.  
2. Performing the Procedures at an inappropriate time, such as  
   a. in the presence of complications or risk factors for which prior medical advice is required  
   b. in the presence of acute oral infection without prior medical advice.  
3. Disturbing the normal dietary and medications routine of a person with disorders of the pituitary gland.  
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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