Dementia

(The most common type is Alzheimer’s disease, followed by vascular dementia; there are a variety of less common irreversible and reversible causes. Unless otherwise indicated, this Fact Sheet focuses on Alzheimer’s disease.)

Is the initiation of non-invasive dental hygiene procedures* contra-indicated? No

- Is medical consult advised? No (assuming patient/client is already under medical care for dementia, which is optimally controlled).

Is the initiation of invasive dental hygiene procedures contra-indicated?*** Possibly, dependent on the level of dementia control

- Is medical consult advised? …………………………. Possibly (depends on severity and level of control of the dementia). The dental hygienist should direct an undiagnosed patient/client with findings suggestive of dementia to an appropriate healthcare provider for definitive diagnosis (typically a primary care physician, who in turn can refer to a specialist, as required). As well, a medical consult may be indicated if the level of dementia control appears suboptimal.
- Is medical clearance required? …………………………. Possibly (e.g., if there are behavioural manifestations that may affect safety of procedures). Sedatives may be indicated in patients/clients with advanced dementia who are uncooperative. Medical clearance is required if excessive bleeding or immunosuppression (both of which rarely may occur with use of antipsychotics) is suspected.
- Is antibiotic prophylaxis required? …………………………. No
- Is postponing treatment advised? …………………………. Possibly, but not typically (depends on severity and level of control of the dementia, including if there is a need for sedation for behavioural problems, as well as whether there is a need for medical clearance for patients/clients on medications associated with thrombocytopenia, leukopenia, or agranulocytosis).

Oral management implications

- Dementia impairs memory, judgment, and abstract thinking. Consequently, the oral health team should determine whether the patient/client is able to make rational decisions regarding care and, if indicated, who the substitute decision-maker is. Treatment planning may often involve input and permission from a family member.
- Patients/clients with dementia should be managed with an understanding and empathetic approach (e.g., calm, soothing voice). They can misinterpret the dental hygienist’s actions; thus, establishment of a good relationship with non-verbal communication (e.g., direct eye contact and smiling) is desirable.
- All treatment should be provided in the context of these patients/clients having memory loss, slowed thinking, and decreased drive. Communication with the patient/client should involve short words and sentences, with ample time for comprehension, as well as repetition of instructions and explanations. The patient/client should be asked to follow one instruction at a time.
- Appointments should be scheduled early in the day, and preferably when the dental hygiene office is free as possible from unnecessary noise, people, and clutter. The caregiver should accompany the patient/client.
- Chair position may need to be adjusted to address the patient/client’s anxiety.
- Patients/clients with advanced dementia may be anxious, hostile, and uncooperative in the dental hygiene office. Therefore, short appointments are indicated. As well, such patients/clients may be distracted by changing the activity, or by taking advantage of their forgetfulness by leaving the room for a few minutes and then returning to try the same activity again. Sedative medication may be considered in consultation with the patient/client’s physician.
- The dental hygienist should be alert for oral signs/symptoms of dietary deficiencies.
- Medications used to treat Alzheimer’s disease include cholinesterase inhibitors (such as donepezil, galantamine, and rivastigmine) for management of symptoms in mild to moderate disease, and N-methyl-D-aspartate (NDMA) antagonists (e.g., memantine) for symptom management in moderate to severe disease. Side-effects of cholinesterase inhibitors include nausea, vomiting, and decreased appetite, whereas memantine use can lead to dizziness, headache, and confusion.

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Disease/Medical Condition

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Oral management implications (cont’d)

- Antipsychotic agents sometimes taken by persons with Alzheimer’s can cause thrombocytopenia, leukopenia, and agranulocytosis. Therefore, the dental hygienist should be alert for signs of infection and excessive bleeding. These medications can also lead to sedation, drowsiness, fatigue, confusion, slow mentation, and dizziness.
- Some medications (e.g., antipsychotics) may cause hypotension, and thus blood pressure should be checked, and position changes be made slowly.
- Patients/clients with Alzheimer’s should be placed on a proactive preventive oral health program, with frequent recall, oral examination and oral hygiene education.
- In the early stages of dementia, the patient/client should be encouraged to be self-sufficient. As dementia progresses, the patient/client’s ability to maintain ongoing daily oral hygiene becomes severely compromised. Thus, education and engagement of family members or other caregivers are important.
- To reduce the risk of dental caries, gingivitis, and periodontal disease in dentate persons with dementia, foods rich in fermentable carbohydrate should be restricted, and sugary intake limited to mealtimes. Syrup-based medications (e.g., lactulose for constipation treatment) pose an increased risk of tooth decay; a physician may be able to prescribe a sugar-free alternative.
- While an electric toothbrush may be easier for a caregiver to use on the patient/client, electrical appliances may disturb, or be a safety concern with, some persons with dementia.
- Mouth rinses should not be routinely recommended, because the patient/client may not understand that the liquid is not to be swallowed.
- A significant number of older patients/clients with dementia have partial or full dentures. If partial dentures are worn, oral hygiene should be well maintained to reduce plaque accumulation and consequent gum disease and tooth decay. The dental hygienist can assist with denture marking (with patient/client’s name) to facilitate the return of misplaced dentures to their owner. The dental hygienist may also detect ulcerations caused by rubbing of a partial denture against the soft tissues; denture-associated ulcers should be referred to a dentist for evaluation.

Oral manifestations

- Dementia, per se, does not cause disease in the oral cavity. However, patients/clients with dementia have more gingival disease and caries than the normal elderly population. As dementia worsens, self-care diminishes, oral hygiene worsens, and oral health problems increase.
- Patients/clients with Alzheimer’s disease have increased incidence of candidiasis, mucosal lesions, calculus and plaque build-up, periodontal disease, root and coronal caries, and aspiration pneumonia.
- Many of the medications (e.g., antidepressants and antipsychotics) used to treat psychiatric manifestations of Alzheimer’s result in xerostomia. Antipsychotics can also result in muscular problems in the oral and facial areas, including involuntary repetitive tongue and jaw movements.
- Medications used to control seizures (e.g., phenytoin) may cause gingival enlargement.
- Ulcerations of the tongue, cheeks, and alveolar mucosa result from mishaps with eating utensils or with mastication.
- Oral injuries from falls are common, contributing to tooth abrasion, attrition, and migration.

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**Related signs and symptoms**

- Dementia is a progressive, neurodegenerative disorder of cognition that interferes with activities of daily living and leads to loss of independence. There are a number of types of both reversible and irreversible dementia.

- The reversible or treatable dementias are due to drugs (e.g., alcohol), emotions (and depression), metabolic factors (e.g., pernicious anaemia, uremia of kidney disease, and encephalopathy of liver disease), endocrine conditions (e.g., hypo- and hyperthyroidism), nutritional deficiencies (e.g., folic acid deficiency), tumours and trauma of the brain, infections (e.g., tuberculosis, syphilis, and HIV), and arteriosclerosis of cerebral vessels.

- The irreversible dementias include Alzheimer’s disease (which accounts for 60% of all dementias); vascular disease/stroke (which accounts for 20% of cases, and which is related to hypoxia or infarct); frontotemporal dementia (including Pick’s disease) and Lewy body disease (which lead to destruction of brain cells); Parkinson’s disease; multiple sclerosis; Huntington’s disease (particularly in the latter stage); diseases such as AIDS and Creutzfeldt Jakob disease (which account for a very small proportion of cases); and brain tumours and other causes of increased intra-cerebral pressure.

- Dementia is primarily a disease of aging. Among Canadians aged older than 60 years, prevalence is about 7%, rising to nearly 50% by age 90. About half a million Canadians currently live with dementia.

- In addition to aging, other risk factors for Alzheimer’s disease include genetics (less than 10% of cases, often characterized by early onset), smoking, alcohol use, atherosclerosis, and Down syndrome.

- Alzheimer’s disease (and most other forms of dementia) typically onsets gradually, with the first sign often being loss of recent memory, orientation, or language, or a change in behaviour or personality. Over time, cognitive decline increasingly interferes with activities of daily living. Some patients/clients are oblivious to their evolving problems, whereas others are aware of them and become frustrated. At the middle stage of the disease, the patient/client is unable to work, becomes easily lost and confused, and requires continual supervision. Motor skills (e.g., eating and dressing) are eventually lost. As the disease progresses, loss of inhibitions and belligerence may occur, as well as increasing anxiety and depression. In the late stage of Alzheimer’s, patients/clients may become apathetic, mute, rigid, incontinent, and bed-ridden. Seizures may occur.

- The typical duration of Alzheimer’s disease is 5 to 15 years (range from 1 to 20 years), with death usually resulting from malnutrition, heart disease, or secondary infection (particularly pneumonia and urinary tract infection). Some patients/clients exhibit a steady downhill course, while others may have prolonged plateaus. Nursing home care is common during the latter stages of the disease.

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Disease/Medical Condition

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References and sources of more detailed information

- American Dental Association
- North West Dementia Centre
- Alzheimer’s Society of Canada
  [http://www.alzheimer.ca/-/-/media/Files/national/Advocacy/ASC_Rising_Tide_Full_Report_e.pdf](http://www.alzheimer.ca/-/-/media/Files/national/Advocacy/ASC_Rising_Tide_Full_Report_e.pdf)
- Alzheimer’s Society (UK)
- Alzheimer’s Association (USA)
- Gerodontology 2006; 23 (Suppl. 1): 3-32 Blackwell Munksgaard Ltd.

* Includes oral hygiene instruction, fitting a mouth guard, taking an impression, etc.

** Ontario Regulation 501/07 made under the Dental Hygiene Act, 1991. Invasive dental hygiene procedures are scaling teeth and root planing, including curetting surrounding tissue.

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