**OSTEOARTHRITIS**
(also known as “degenerative joint disease” or “OA”)

**Date of Publication:** June 14, 2013

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

- **Is medical consult advised?** No (assuming patient/client does not have significant temporomandibular joint involvement)

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

- **Is medical consult advised?** No (assuming patient/client does not have significant temporomandibular joint involvement)
- **Is medical clearance required?** No (unless clinically significant increased risk of bleeding from the use of aspirin or nonsteroidal anti-inflammatory drugs – NSAIDs – is suspected, which would be unusual)
- **Is antibiotic prophylaxis required?** No (although the presence of prosthetic joints may warrant antibiotic consideration)
- **Is postponing treatment advised?** No (assuming ability to open mouth is not excessively compromised by temporomandibular joint involvement)

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**Oral management implications**

- Because patients/clients may have multiple joint involvement (e.g., hips and knees) with associated pain, stiffness, and immobility, dental hygiene appointments should be kept as short as possible. The patient/client should be allowed to make frequent position changes as required. The semi-supine chair position may be more comfortable than the supine position. Physical aids, such as a rolled towel or pillow, may be used to provide support for involved joints and limbs.

- Patients/clients with OA often take aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs), which can increase the risk of bleeding with scaling and root planing. However, the prolonged bleeding is usually not of clinical significance.

- OA is often associated with bony growths of the lateral and medial aspects of the proximal and distal finger joints. This may limit a patient/client’s ability to perform oral self-care measures.

- Brushing can be made easier for patients/clients by using an electric toothbrush (which has a larger handle and requires fewer motor skills), enlarging the handle of a standard toothbrush with a bike handlebar grip or tennis ball, or by using large-handled toothbrushes.

- Flossing can be made easier for patients/clients by using floss holders (e.g., U-shaped flossers) as an alternative to dental string.

- In patients/clients with temporomandibular (TMJ) osteoarthritis which results in restricted range of motion and inflammation, dental hygienists should not open the mouth too wide or for too long a period of time, according to the patient’s level of tolerance.

- Treatment of OA of the TMJ includes acetaminophen, aspirin, NSAIDs, muscle relaxants, physical therapy (i.e., heat, ice, ultrasound, controlled exercise), approaches to limit jaw motion, and occlusal splints to reduce joint loading. Rarely, TMJ surgery may be necessary to reduce pain and dysfunction.

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**Oral management implications (cont’d)**

- A potential long-term consequence of osteoarthritis is the destruction of joint structures to the extent that joint replacement with synthetic materials may be indicated. Patients/clients with prosthetic joints (most commonly hip and knee in the case of OA) commonly present in dental practice; this raises questions regarding the need – or lack thereof – for antibiotic prophylaxis to prevent infection of the prosthesis.

**Oral manifestations**

- The temporomandibular joint (TMJ) may be affected by osteoarthritis. While most persons aged older than 40 years show some radiographic and histologic change in the TMJ, most have no symptoms. Occasionally, there may be associated pain. Typically, this pain is insidious in onset, unilateral and pre-auricular in location, aching in character, and associated with stiffness after a period of inactivity, which then decreases with mild activity. Severe pain may occur with wide opening of the mouth, and such pain occurs with normal function and worsens as the day progresses. There may be adjacent muscle splinting and spasm, in addition to crepitus, clicking, or snapping in the TMJ.

- In most cases, OA pain in the TMJ resolves within a year of onset. X-rays may show decreased joint space, sclerosis, remodelling, and osteophytes. No correlation exists between TMJ symptoms and histologic or radiographic findings. Since the TMJ is not a weight-bearing joint, changes here may be insignificant even though arthropathy may be present in other joints; changes that do occur may result from a disturbed balance of the joint due to loss of teeth or to external injury.

- TMJ disk displacement is associated with OA. About half of such affected patients/clients have reducing anterior disk displacement, which will not progress. The other half is at risk of progression to nonreducing disk displacement or dislocation (i.e., closed lock). These latter patients/clients may experience variable pain and dysfunction, which tend to be self-limiting. Most patients with TMJ disk displacement, whether reducing or non-reducing, are treated successfully with conservative, reversible therapies.

**Related signs and symptoms**

- Osteoarthritis is a disease characterized by degeneration of cartilage and underlying bone within a joint, in addition to bony overgrowth. Classically thought of as normal “wear and tear” on joints over time, factors such as pre-existing joint abnormalities, metabolic conditions, genetic predisposition, obesity, intrinsic aging, and macrotrauma or microtrauma are also considered causative or contributory factors to OA. The breakdown of joint tissues eventually leads to pain, swelling, and stiffness.

- OA usually affects weight-bearing joints such as the hips, knees, feet, and spine, as well as the hands. Disease onset is gradual and usually begins after 40 years of age.

- Compared with rheumatoid arthritis, OA has a more favourable prognosis and less serious complications, depending on the specific joint(s) involved.
Disease/Medical Condition

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References and sources of more detailed information

- US Centers for Disease Control and Prevention  [http://www.cdc.gov/arthritis/basics/osteoarthritis.htm]
- National Institutes of Health  [http://www.niams.nih.gov/Health_Info/Arthritis/default.asp]
- The Arthritis Society  [http://www.arthritis.ca/]
- Arthritis Foundation  [http://www.arthritis.org]
- American College of Rheumatology  [http://www.rheumatology.org]

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

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

Date: May 24, 2013