Disease/Medical Condition

RHEUMATOID ARTHRITIS
(also referred to as “RA”)

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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 rheumatoid arthritis and does not have cervical spine instability)

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

- Is medical consult advised? No (assuming patient/client is already under medical care for rheumatoid arthritis, is being appropriately monitored, and does not have cervical spine instability)
- Is medical clearance required? Possibly, if patient/client is being treated with medications associated with immunosuppression (e.g., corticosteroids, biologic response modifier drugs [including biosimilars], cyclosporine, methotrexate, etc.)
- Is antibiotic prophylaxis required? No (although extended use of corticosteroids and other immunosuppressive drugs may warrant consideration of antibiotic prophylaxis)
- Is postponing treatment advised? No (assuming ability to open mouth is not excessively compromised by temporomandibular joint involvement and there is no cervical spine instability)

Oral management implications

- Because patients/clients may have multiple joint involvement with associated immobility and pain, 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 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 deformed joints, limbs, or neck.
- Patients/clients with RA 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.
- RA often affects the wrist joints and the proximal finger joints; this may limit a patient/client’s ability to perform oral self-care measures. To reduce pain and swelling, patients/clients may use splints on wrists and hands to support the affected joints and let them rest. An occupational therapist can assist with splint and other assistive devices selection.
- 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 by using U-shaped flossers as an alternative to dental string.
- Patient/client education is indicated regarding the risk of temporomandibular (TMJ) joint involvement. Regular panoramic radiographs may be employed to assess mandibular condylar wear and TMJs. (Radiographically, involved TMJs show a flattened condylar head with irregular surface features, irregularity of the temporal fossa surface, and anterior displacement of the condyle.) Premedication may be indicated before dental services.
- A potential long-term consequence of chronic rheumatoid arthritis is the destruction of joint structures to the extent that joint replacement with synthetic materials may be indicated. Patients/clients with prosthetic joint replacements (most commonly hip and knee, followed by shoulder, elbow, wrist, and ankle) commonly present in dental practice; for the vast majority of such patients/clients, antibiotic prophylaxis is not recommended or required).
- Cervical spine instability may result from longstanding RA. In affected patients/clients, appropriate precautions should be taken to ensure safe dental hygiene practice (e.g., neck brace to minimize C-spine movement).
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Oral manifestations

- RA is associated with xerostomia (dry mouth), which increases the risk of dental caries.
- As with other autoimmune diseases, compromise of the immune system (be it from the disease or the treatment) elevates the risk of periodontal disease.
- Up to 75% of RA patients/clients eventually develop involvement of the temporomandibular joint (TMJ), which, while usually clinically insignificant, may be associated with pain and reduced range of motion. Movement of the jaw, as during talking and mastication, may be limited because of stiffness and pain. Clicking and snapping of the TMJ are not common, but may result from alterations in the articular cartilage and meniscus.
- Rheumatoid arthritis in children (i.e., Still’s disease variant of Juvenile Rheumatoid Arthritis), when it involves the TMJ, may cause malocclusion with protrusion of maxillary incisors and an anterior open bite. There may also be deformation of the mandible, with shortening of the body and reduction in the height of the ramus.
- The use of corticosteroids (such as prednisone) in the treatment of RA can lead to oral candidiasis (yeast infection) and other oral infections as a result of immunosuppression.
- Some disease-modifying anti-rheumatic drugs (DMARDs), such as cyclosporine and gold compounds, have side-effects which include gingival bleeding, oral ulcerations, stomatitis, and tender or swollen gums. Gold can also lead to redness and soreness of the tongue. Methotrexate can cause mouth sores, in addition to sore throat.
- Some biologic response modifier drugs (i.e., tumour necrosis factor [TNF] inhibitors [e.g., etanercept, infliximab, adalimumab, and golimumab] and non-TNF targeted biologic agents [e.g., tocilizumab, rituximab, and abatacept]), can cause sore throat and/or nasal congestion. The side-effect profile of anakinra (interleukin-1 inhibitor) includes runny nose, while sore throat and cough are associated with the use of abatacept (selective co-stimulation modulator).

Related signs and symptoms

- Rheumatoid arthritis is an autoimmune inflammatory disease that causes pain, swelling, stiffness (particularly in the morning), and loss of function of multiple (i.e., at least five) joints. The arthritis is typically symmetrical; i.e., if one hand or knee is affected, the other one also is. Females are more likely to develop RA than males. The usual age at onset is 30 to 60 years, although RA may begin at any age; prevalence in the general population is 0.5% to 1.0%, equating to about 300,000 Canadians. Juvenile rheumatoid arthritis (JRA; also known as juvenile idiopathic arthritis, or JIA) onsets before the age of 17 years.
- In RA, the synovium (the tissue which lines the joint capsule) becomes inflamed, resulting in warmth, redness, swelling and pain. As the disease progresses, the inflamed synovium damages the cartilage and bone of the joint. Surrounding muscles, ligaments, and tendons may become weakened. Generalized bone loss may also occur, which can lead to osteoporosis (fragile bones which may lead to fracture).
- RA can also involve parts of the body other than the joints. These extra-articular effects include anemia, dry eyes and mouth, and neck pain, and, less commonly, vasculitis (inflammation of the lining of the blood vessels), pleurisy (inflammation of the lining of the lungs), and pericarditis (inflammation of the sac enclosing the heart). As well, persons with RA may suffer from fatigue, fevers, and general malaise.
- The course of rheumatoid arthritis ranges from mild to severe. In most affected persons, the disease is a chronic, lifelong condition. For some patients/clients, periods of relatively mild disease are punctuated by flare-ups, whereas in others, signs/symptoms are relatively constant.
- Although rheumatoid arthritis is primarily a disease of the joints, its effects are not just physical. Many people with RA also experience issues related to depression, anxiety, and low self-esteem.
- Early diagnosis of RA (i.e., within 6 months of symptom onset) is important in order for treatment to begin as soon as possible to slow or halt disease progression. However, early diagnosis is challenging because the symptoms of early RA can be non-specific (e.g., malaise, weakness, fatigue, muscle soreness, low-grade fever, weight loss).

1 Newer DMARDs include the JAK inhibitors baricitinib and tofacitinib. Older DMARDs include azathioprine, cyclosporine, sulfasalazine, and hydroxychloroquine (the latter being an antimalarial drug).
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References and sources of more detailed information

- College of Dental Hygienists of Ontario  
  [http://www.cdho.org/Advisories/CDHO_Advisory_Rheumatoid_Arthritis.pdf](http://www.cdho.org/Advisories/CDHO_Advisory_Rheumatoid_Arthritis.pdf)
  [https://www.bmj.com/content/364/bmj.l67](https://www.bmj.com/content/364/bmj.l67)
- Public Health Agency of Canada  
- Canadian Agency for Drugs and Technology in Health  
  [https://www.cadth.ca/drugs-management-rheumatoid-arthritis](https://www.cadth.ca/drugs-management-rheumatoid-arthritis)
- Arthritis Society  
  [http://www.arthritis.ca/](http://www.arthritis.ca/)
- Centers for Disease Control and Prevention  
  [https://www.cdc.gov/arthritis/basics/rheumatoid-arthritis.html](https://www.cdc.gov/arthritis/basics/rheumatoid-arthritis.html)
- National Institutes of Health  
- Arthritis Foundation  
  [http://www.arthritis.org](http://www.arthritis.org)
- American College of Rheumatology  
  [http://www.rheumatology.org](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.

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