

# UPDATE ON ANTIBIOTIC PROPHYLAXIS FOR DENTAL PATIENTS FOLLOWING TOTAL KNEE OR HIP ARTHROPLASTY

**A**N ARTICLE published in 2012 in the *Journal of the Canadian Dental Association* raised questions about the recommendations that dentists are to follow when treating patients who have undergone a total knee or hip arthroplasty.

Remember that in 2003, the American Dental Association (ADA) collaborated with the American Academy of Orthopaedic Surgeons (AAOS) to publish a joint information statement, which was endorsed by the Canadian Dental Association (CDA). The statement recommended antibiotic prophylaxis for patients following a total knee or hip arthroplasty, in the two years following the surgery, when

high-risk dental procedures are necessary. However, in 2009, the AAOS altered its position to include all patients who had undergone a total joint arthroplasty, without exception.

In view of the new recommendations published by the AAOS and the ADA in December 2012, it would be prudent to consider the most recent information statement presented at the end of the following summary, which casts doubt on the use of antibiotic prophylaxis prior to dental procedures.

At all times, the dentist must exercise good judgment in properly evaluating the situation and consult the orthopedist in each case in order to assure appropriate and safe dental treatment for the patient.

## HISTORY OF RECOMMENDATIONS CONCERNING ANTIBIOTIC PROPHYLAXIS FOR PATIENTS FOLLOWING TOTAL KNEE OR HIP ARTHROPLASTY

Year and organization	Indications	Recommendations	Antibiotic therapy
<b>1997</b> <b>ADA and AAOS<sup>1</sup></b>	Two years following total arthroplasty*	Only high-risk patients** and high-risk dental procedures***	Cephalexin or amoxicillin 2 g orally 1 hour before the dental procedure or clindamycin 600 mg orally 1 hour before the dental procedure, for cases of confirmed penicillin allergy
<b>2003</b> <b>ADA, CDA and AAOS<sup>2</sup></b>	Same	Same	Same
<b>2009</b> <b>AAOS<sup>3</sup></b>	Lifetime, following total arthroplasty*	All patients who have had total arthroplasty	Same
<b>2010</b> <b>AAOS<sup>4</sup></b>	Same	Same	Same
<b>2012</b> <b>ODO, CDA<sup>5</sup></b>	Two years following total arthroplasty*	Only high-risk patients** and high-risk dental procedures***	Same
<b>DECEMBER 2012</b> <b>AAOS and ADA<sup>6</sup></b>	Dentists must consider the possibility of changing their way of prescribing prophylactic antibiotics for patients who have undergone total arthroplasty and require dental procedures.	There is limited evidence showing no cause and effect linkage between dental procedures and prosthetic joint infections.	There is no evidence that the application of topical antimicrobials (topical antibiotics applied by the dentist) prior to a dental procedure prevents prosthetic joint infection. Given the lack of reliable evidence establishing a link between deficient oral hygiene and prosthetic joint infection, experts concur on the recommendation that patients with prosthetic joints must maintain good dental hygiene. Dentists choosing to use antibiotic prophylaxis should follow the 2003 recommendations.

\* Not including patients with orthopedic pins, plates or screws.

\*\* The types of patients concerned include:

- all patients in the two years following arthroplasty;
- immunodepressed patients;
- patients with co-morbidities (haemophilia, including previous prosthetic joint infections, AIDS, type I diabetes, cancer).

\*\*\* The following dental procedures may cause bleeding or high levels of bacteria in the blood:

- dental extractions;
- periodontal procedures including surgery, scaling, root planing and probing;
- dental implant placement or replantation of avulsed teeth;
- pivot for endodontic posts and apical surgery;
- subgingival placement of antibiotic fibres or strips;
- initial placement of orthodontic bands;
- intraligamentary injections of local anesthetic;
- prophylactic cleaning of teeth or implants, if bleeding is expected.

## REFERENCES

- American Dental Association and American Academy of Orthopaedic Surgeons. Advisory statement: antibiotic prophylaxis for dental patients with total joint replacements. *JADA* 1997; 128 (7): 1004-1008.
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- American Dental Association. Press release. Evidence Insufficient to Recommend Routine Antibiotics for Joint Replacement Patients Who Undergo Dental Procedures. Lydia Hall, Manager, Media Relations. December 18, 2012.