

Faculty of Dentistry Position on the Management of Patients with Prosthetic Joints
Updated September 13, 2013

The Canadian Dental Association has recently developed a position paper supplemented by a Q&A document outlining their position on the dental management of patients with prosthetic joints. To understand their position completely, both documents need to be read.

Their recommendations indicate that their position has some differences from the joint AAOS/ADA position statement.

They state, in part, that

"routine antibiotic prophylaxis is NOT indicated for dental patients with total joint replacements..." (see Q&A 1)

"Since dental procedures are believed to be unrelated to prosthetic joint infection, it does not make sense for the presence of a prosthetic joint to be the trigger for this foundational tenet of good dental practice." (Q&A 6)

The CDA documents will be posted on the Faculty of Dentistry web site and posted in the Treatment Planning Clinic.

The Faculty of Dentistry's position is in agreement with the CDA. Each patient with a prosthetic joint is to complete the form titled "**FOR PATIENTS WITH ORTHOPAEDIC IMPLANTS**".

CDA Q&A Re Dental Patients with Total Joint Replacement

Question 1: What are the major clinical differences between the new 2013 CDA Position Statement and the 2012 ADA/AAOS evidence-based guidelines?

Answer 1: The guidance provided by the 2013 CDA position statement is that routine antibiotic prophylaxis is NOT indicated for dental patients with total joint replacement whereas the ADA/AAOS **clinical practice guideline** advises dentists to consider discontinuing the practice of routinely prescribing prophylactic antibiotics for these patients.

Question 2: Why has CDA decided to adopt a position statement that differs from the ADA?

Answer 2: Both the 2013 CDA position statement and the 2012 ADA/AAOS clinical practice guideline are based on the same body of evidence—the ADA/AAOS systematic review completed in 2011. This best available evidence indicates that antibiotics provided before oral care do not prevent infections of orthopedic implants and that routine dental procedures do not cause prosthetic joint infections. CDA believes that Canadian dentists require clarity in this area and to that end reviewed the work of other experts and groups to further understand the evidence and to inform our position.

Question 3: Why are patients who have received a total joint replacement within the last two year not receiving special consideration in the 2013 CDA position statement?

Answer 3: As prosthetic joint infections are unrelated to dental procedures and antibiotic prophylaxis does not reduce the risk for prosthetic joint infections, there is no reason to give special consideration to patients who have had total joint replacement in the past two years.

Question 4: What are the implications of the CDA adopting a position that differs from that of our American colleagues?

Answer 4: The fact that the CDA recommendations differ slightly from our American colleagues may generate discussions amongst dentists, surgeons and the patients that they treat.

Question 5: Which guidelines should a Canadian dentist follow?

Answer 5: The decision as to which guidance to follow should be a mutual decision made with the patient, dentist and in consultation with the orthopedic surgeon. The ADA/AAOS have developed a "**Shared Decision Making Tool**" that engages dental patients in the decision making process and provides information to clarify the risks, benefits and alternatives to treatment.

Question 6: Do immunocompromised patients require special consideration?

Answer 6: All immunocompromised patients should be assessed, in the context of their entire medical history and current status, for risk of infection prior to invasive dental procedures. Since dental procedures are believed to be unrelated to prosthetic joint infection, it does not make sense for the presence of a prosthetic joint to be the trigger for this foundational tenet of good dental practice.

Question 7: What should a Canadian dentist do if/when a patient with joint prosthesis requests antibiotic therapy?

Answer 7: When faced with a request for antibiotic therapy for a patient with a joint prosthesis, a Canadian dentist should provide the patient with the best available evidence on the subject. Decisions with regard to antibiotics for these patients should be made following discussions between patients, dentists and physicians in a context of open communication and informed consent. The ADA/AAOS "**Shared Decision Making Tool**" engages dental patients in the decision making process and provides information to clarify the risks, benefits and alternatives to treatment.

FOR PATIENTS WITH ORTHOPAEDIC IMPLANTS
Revised October 5, 2016

SHOULD I TAKE ANTIBIOTICS BEFORE MY DENTAL PROCEDURE?

Introduction

You have an orthopaedic implant (joint replacement, metal plates or rods, etc.) from a previous orthopaedic surgery.

- One possible complication from your implant is a bacterial infection. This occurs in approximately 1-3% of patients – or less than 3 of every 100 patients with this implant. If you get an infection, you may need another surgery. You may also need to use antibiotics for an extended period of time.
- Implant infections (those that occur after the first year following surgery) were thought to be caused by the spread of the bacteria from the blood stream to the implant. Unfortunately, there is no clear scientific evidence to support this theory. We know that many patients with orthopaedic implants frequently have bacteria in their blood that do not spread to their implants.
 - Dental procedures were thought to be a possible cause of implant infections because they can cause bacteria from the mouth to enter the bloodstream. However, eating and regular mouth care (including toothbrushing and flossing) can also introduce oral bacteria into the blood and there is no evidence that these will cause implant infections.
 - Until recently, antibiotics were given to most patients with orthopaedic implants before any dental work was carried out because it was thought that this would prevent infections of orthopaedic joints.
 - **Current scientific evidence, however, does not show that antibiotics given before dental procedures will prevent infections of orthopaedic implants (1-4).**
 - The routine use of antibiotics has many possible side-effects including, allergic reactions, diarrhea, and even death. As well, taking antibiotics frequently may cause bacterial resistance, meaning the usual antibiotics may not work against the infection. If a bacterium is resistant to many drugs, treating the infection can become difficult or even impossible. In addition, the cost factor associated with frequent antibiotic use should also be considered.
 - There are situations where, based on your medical condition, antibiotics may be recommended prior to dental treatment **regardless of whether or not you have an orthopaedic implant.** These conditions could include (but are not limited to)
 - Severe congenital heart conditions
 - Prosthetic (artificial) heart valve
 - Organ transplants
 - Immunocompromised patients
 - Head-Neck irradiated patients

If you have one of these conditions, the Faculty of Dentistry will make a recommendation on the need for prophylactic antibiotics and will contact your physician as indicated.

To ensure that you understand the risks of developing an implant infection resulting from dental treatment, please answer the following questions.

Questions:

<p>1. Patients with orthopaedic implants have which of the following?</p> <ul style="list-style-type: none">a) 0% chance of infection.b) 0-1% chance of infection.c) 1-3% chance of infection.d) >3% chance of infection.	<p>3. Some dental procedures</p> <ul style="list-style-type: none">A. routinely cause implant infections.B. are the primary source of implant infections.C. never cause implant infections.D. allow bacteria to enter the bloodstream.
<p>2. Most implant infections are</p> <ul style="list-style-type: none">A. related to dental procedures.B. occur around the time of surgery.C. related to skin infections.D. occur long after surgery.	<p>4. Routine pre-dental procedure antibiotics are</p> <ul style="list-style-type: none">A. Not supported by current evidence.B. May be beneficial in certain groups of patients.C. Associated with other unwanted side effects.D. All of the above.

The answers to the questions can be found at the bottom of the next page. Check your answers and then complete the following questions.

Patient to Complete:

- Yes** **No** I have adequate understanding of implant infections associated with dental procedures.
- Yes** **No** My dental student/supervising dentist has discussed my specific risk factors with me.
- I am immunocompromised because I have:

Type of implant: (ex. hip, knee, etc.):

Date placed

Surgeon name:

- Yes** **No** Have you ever had to have a replacement of an orthopaedic implant due to an infection around the joint:

Faculty of Dentistry to complete:

Yes No **Medical consultation from orthopaedic surgeon completed?**

Recommendation from orthopaedic surgeon:	Date of consultation:	Name of orthopaedic surgeon:
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Faculty of Dentistry Recommendations
Based on the current AAOS/ADA and CDA guidelines and a thorough review of your medical history, we recommend the following.

- No prophylactic antibiotic coverage prior to dental appointments.
- Prophylactic antibiotic coverage recommended prior to dental appointments due to risk factors present.
 List Risk Factor(s):
- Medical consultation with your orthopaedic surgeon/physician to assess risk factors.*

Patient to Complete:
 Based on this educational material and discussion.

- I agree to follow the recommendations of the Faculty of Dentistry above.
- I wish to discuss this with my orthopaedic surgeon/physician prior to proceeding with dental treatment.*
- I wish to take antibiotics prior to dental procedures in spite of the recommendations of the Faculty of Dentistry.*

* If antibiotic coverage has **NOT** been recommended by the Faculty of Dentistry, and you wish to take antibiotics prior to dental treatment, the prescription for antibiotics will need to be provided by your physician or orthopaedic surgeon.

If prophylactic antibiotics are going to be taken prior to some or all dental appointments in the student clinics at the Faculty of Dentistry, we may recommend that you seek treatment in private practice or in the General Practice Residency program to reduce the number of appointments required to complete treatment. This recommendation is made to reduce the possibility of adverse effects from the repeated use of antibiotics.

Patient **Name** _____ **Signature** _____

Chart Number _____

Student **Name** _____ **Signature** _____

Faculty Dentist **Name** _____ **Signature** _____

Date _____
 Month/Day/Year

* Completed form is to be scanned and kept in the electronic chart. If a medical consultation is required, a copy of this form is to be sent to the MD with the Medical Referral form.

RETURN COMPLETED FORM TO PATIENT SERVICES (scan into axiUm, copy to Assistant Dean, Clinics)

ANSWERS to questions on previous page 1. C, 2. B, 3. D, 4. D

References

1. American Academy of Orthopaedic Surgeons and the American Dental Association. Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures: Evidence-Based Guideline and Evidence Report; December 18, 2012. AAOS web site 2012:1-305.
2. Canadian Dental Association. CDA Q@A Re Dental Patients with Total Joint Replacements; Accessed from the CDA web site http://www.cda-adc.ca/_files/position_statements/totalJointQA.pdf September 13, 2013.
3. Canadian Dental Association. CDA Position on Dental Patients with Total Joint; Accessed from the CDA web site Replacements http://www.cda-adc.ca/_files/position_statements/totalJointReplacement.pdf September 13, 2013.
4. Young H, Hirsh J, Hammerberg EM, Price CS. Dental disease and periprosthetic joint infection. J Bone Joint Surg Am 2014;96(2):162-168.

The Patient Checklist has been modified from the original Shared Decision Making Tool by Dr. Jevsevar for use at the Faculty of Dentistry.

