

Premedication with Antibiotics **NO** Longer Advised For Most Joint Replacements

The American Dental Association Council on Scientific Affairs has determined that the use of prophylactic antibiotics (antibiotic premedication) prior to dental procedures in patients with prosthetic joints is **no longer** warranted for most individuals. This is a change over what we have advised you for many years. The research is clear that there are significant risks associated with the use of antibiotics. You may consider reading and discussing the attached article with your surgeon. If you prefer to continue, reach out to your orthopedic surgeon in advance of your treatment.

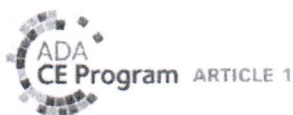
Clinical Recommendations: Updated Guidelines for the Use of Prophylactic Antibiotics for Individuals with Prosthetic Joints

- ❑ In general, for patients with prosthetic joint implants, prophylactic antibiotics are **NOT** recommended prior to dental procedures to prevent joint infection.
- ❑ For patients with a **history of complications** associated with their joint replacement surgery who are undergoing specific types of dental procedures, premedication will be determined after consultation with the orthopedic surgeon.

Clinical Reasoning for the Updated Recommendation:

- ❑ Dental procedures are not associated with prosthetic joint implant infections
 - Research reveals that similar amounts of bacteria enter the bloodstream from daily activities such as chewing food and brushing teeth as from dental procedures like cleanings
- ❑ Further evidence indicates antibiotics provided before oral care do not actually prevent prosthetic joint implant infections
 - Most joint infections are caused by *Staphylococcus* – a common bacteria on skin
 - Most oral bacteria are of the *Streptococcus* variety with very few strains of *Staphylococcus*
- ❑ There are risks associated with the use of **ALL** antibiotics. Those risks include:
 - Anaphylaxis
 - Antibiotic resistance meaning that in a which means that in life-threatening situations the antibiotics would not work to treat the infection
 - Opportunistic infections like *Clostridium difficile*
 - This is a serious bowel infection causing an estimated 500,000 infections; 29,000 of those resulting in death
- ❑ Benefits of antibiotic premedication may not exceed the potential for harm
- ❑ Individual circumstances and preferences will always be considered when prescribing antibiotic premedication

*Sollecito TP et al. *The use of prophylactic antibiotics prior to dental procedures in patients with prosthetic joints.* JADA 2015; 146: 11-16. [http://jada.ada.org/article/S0002-817X\(15\)2814%2900019-1/abstract](http://jada.ada.org/article/S0002-817X(15)2814%2900019-1/abstract)



COVER STORY

The use of prophylactic antibiotics prior to dental procedures in patients with prosthetic joints

Evidence-based clinical practice guideline for dental practitioners—a report of the American Dental Association Council on Scientific Affairs

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ABSTRACT

Background. A panel of experts (the 2014 Panel) convened by the American Dental Association Council on Scientific Affairs developed an evidence-based clinical practice guideline (CPG) on the use of prophylactic antibiotics in patients with prosthetic joints who are undergoing dental procedures. This CPG is intended to clarify the “Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures: Evidence-based Guideline and Evidence Report,” which was developed and published by the American Academy of Orthopaedic Surgeons and the American Dental Association (the 2012 Panel).

Types of Studies Reviewed. The 2014 Panel based the current CPG on literature search results and direct evidence contained in the comprehensive systematic review published by the 2012 Panel, as well as the results from an updated literature search. The 2014 Panel identified 4 case-control studies.

Results. The 2014 Panel judged that the current best evidence failed to demonstrate an association between dental procedures and prosthetic joint infection (PJI). The 2014 Panel also presented information about antibiotic resistance, adverse drug reactions, and costs associated with prescribing antibiotics for PJI prophylaxis.

Practical Implications and Conclusions. The 2014 Panel made the following clinical recommendation: In general, for patients with prosthetic joint implants, prophylactic antibiotics are not recommended prior to dental procedures to prevent prosthetic joint infection. The practitioner and patient should consider possible clinical circumstances that may suggest the presence of a significant medical risk in providing dental care without antibiotic prophylaxis, as well as the known risks of frequent or widespread antibiotic use. As part of the evidence-based approach to care, this clinical recommendation should be integrated with the practitioner’s professional judgment and the patient’s needs and preferences.

Key Words. Antibiotic prophylaxis; evidence-based dentistry; practice guidelines; prostheses; joint replacement.

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In 2012, a panel of experts representing the American Academy of Orthopaedic Surgeons (AAOS) and the American Dental Association (ADA) (the 2012 Panel) published a systematic review and accompanying clinical practice guideline (CPG) entitled “Prevention of Orthopaedic



This article has an accompanying online continuing education activity available at: <http://jada.ada.org/ce/home>.
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