



## PIC QUESTION OF THE WEEK: 07/18/05

**Q:** Is antimicrobial prophylaxis recommended for a patient undergoing periodontal surgery who has previously received a total knee replacement?

**A:** As in the case of dental patients with prosthetic heart valves or other cardiac risk factors (requiring endocarditis prophylaxis), transient bacteremia can result in the hematogenous seeding of total joint implants. This can occur in the early postoperative period or many years after the procedure. The American Dental Association (ADA) and the American Academy of Orthopedic Surgeons (AAOS) have provided some general guidelines for antibiotic prophylaxis for dental patients with total joint replacements. Antibiotic prophylaxis is not considered necessary for patients with plates, pins, or screws. There are only a small number of patients who should receive antibiotics in this setting. They include:

- All patients during the first two years after prosthetic joint replacement
- Immunocompromised /immunosuppressed patients (drug or radiation-induced as well as those with inflammatory arthropathies)
- Patients with co-morbidities (e.g. previous prosthetic joint infections, HIV infection, type 1 diabetes, hemophilia, etc.)

As with endocarditis prophylaxis, some dental procedures are associated with a *higher* risk of bacterial seeding and antimicrobials are only recommended for those undergoing dental extraction, periodontal procedures, dental implant placement, endodontic (root canal) instrumentation or surgery, etc. A complete list of procedures with a *higher* and *lower* risk of bacteremia is included in both of the supplementary references. Antibiotic prophylaxis regimens include 2 g of amoxicillin (or cephalexin or cephadrine) one hour prior to the procedure. Oral clindamycin (600 mg) may be used in those allergic to penicillin. Repeat doses are not considered necessary. Although there is little data to support these recommendations, patients at *higher* risk for hematogenous seeding should probably receive prophylactic antibiotics if they have had a total joint replacement.

### **References:**

- Advisory Statement (ADA/AAOS): Antibiotic prophylaxis for dental patients with total joint replacements. [www.aaos.org/wordhtml/papers/advistmt/1014/htm](http://www.aaos.org/wordhtml/papers/advistmt/1014/htm) (accessed 7/05)
- ADA Advisory Statement: Antibiotic prophylaxis for dental patients with total joint replacements. ADA guide to dental therapeutics (3rd ed), 2003;618-22.

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