NEW PREMEDICATION GUIDELINES
American Heart Association

In April 2007 the American Heart Association published new guidelines that are available in detail on their website, **www.americanheart.org**. Type in "infective endocarditis" to bring up the guidelines. This article is intended to summarize the twenty page article that spells out the new recommendations as a service to PIE members.

The major changes in the updated recommendations include the position that only a small number of cases of infective endocarditis might be prevented by antibiotic prophylaxis for dental procedures even if such antibiotic prophylactic therapy was 100% effective. Pre-treatment antibiotics should only be recommended for patients with underlying cardiac conditions associated with the highest risk of adverse outcome from infective endocarditis. For patients with the specific cardiac conditions in question, pre-treatment antibiotics are recommended for any dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa.

The article available online is twenty pages long but the highlights include the following:

1. Reasons for revisions of the 1997 Guidelines include:
   A. Infective Endocarditis is much more likely to result from frequent exposure to random bacteremias associated with daily activities than from bacteremia caused by a dental, GI tract or GU tract procedure.
   B. Prophylaxis may prevent an exceedingly small number of cases of infective endocarditis (IE), in individuals who undergo a dental, GI or GU tract procedure.
   C. The risk of antibiotic-associated adverse events exceeds the benefit, if any, from prophylactic antibiotic therapy.
   D. Maintenance of optimum oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of IE.

2. Cardiac conditions associated with the highest risk of adverse outcome from endocarditis, and those which still carry a recommendation of antibiotic prophylaxis for dental procedures include the following:
   A. Prosthetic heart valves
   B. Previous history of infective endocarditis
   C. Congenital heart disease with the following conditions:
      1. Unrepaired cyanotic congenital defects, including palliative shunts and conduits.
      2. Completely repaired congenital heart defects with prosthetic material or devices, whether placed by surgery or through catheter, during the first six months following the procedure.
      3. Repaired congenital heart disease with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device which inhibits endothelialization.

4. Heart transplant recipients who develop cardiac valvulopathy.

3. There is no longer any recommendation of antibiotic prophylaxis based solely on an increased lifetime risk of acquisition of IE. In other words, the only indications now are the high risk patients described above. Mitral valve regurgitation and a history of rheumatic fever alone are no longer indications for antibiotic premedication.

4. The following dental procedures do not require antibiotic prophylaxis under any conditions:

a. routine anesthetic injections through non-infected tissue;
b. taking radiographs
c. placement of removable prosthodontic or orthodontic appliances;
d. adjustment of orthodontic appliances;
e. placement of orthodontic brackets;
f. shedding of deciduous teeth;
g. bleeding from trauma to the lips or oral mucosa.

5. Dosages remain the same as before:

A. 2 grams of Amoxicillin 30 to 60 min. before the planned procedure.
B. Patients able to take cephalosporins but not amoxicillin:
2 g Cephalexin 30 to 60 min before the procedure.
C. Patients allergic to penicillin and cephalosporins:
600 mg 30 to 60 min. before the procedure.
D. Dosages for children remain the same as before.

6. If a patient is already on long term antibiotic therapy but is a candidate for premedication and the planned procedure involves gingival manipulation as described, you should premedicate with an antibiotic from a different class; eg. if a patient is currently on penicillin, you should use clindamycin if there are no contradictions to its use.

Articles summarizing the guidelines will appear in most dental publications soon. We encourage you to read the articles, create a table as a reminder of which conditions and procedures require antibiotic prophylaxis, and begin to follow these guidelines at once. Keep in mind the premise that overuse of antibiotics may cause more harm than good.