

## **Re: antibiotic susceptibility of bacteria associated with endodontic abscesses**

Most susceptibility testing of endodontic pathogens is outdated. There is increased concern that bacteria have increased resistance to the currently recommended antibiotics. A recent study conducted at the University of Oregon evaluated a panel of 89 species of anaerobic and aerobic bacteria isolated from endodontic infections. The antibiotics tested were: Penicillin, Amoxicillin, Amoxicillin & Clavulanic Acid (Augmentin), Clindamycin (Cleocin), Metronidazole (Flagyl), and Clarithromycin (Biaxin). The results are listed below in order of most effective to least effective, with percentages of susceptible bacteria shown:

1. Amoxicillin & Clavulanic acid (Augmentin) 99%
2. Clindamycin (Cleocin) 95%
3. Clarithromycin (Biaxin) 86%
4. Amoxicillin 83%
5. Penicillin 76%
6. Metronidazole (Flagyl) 42%

### Remarks:

It should be emphasized that antibiotic coverage is not indicated in the majority of cases where conventional endodontic treatment has been provided. However, it is useful to know what works most effectively when we deem it necessary to prescribe antibiotics for endodontic infections.

Metronidazole (Flagyl) has been recommended to be used in combined therapy with penicillin, but interestingly has the greatest amount of bacterial resistance in this study. Augmentin is currently the most effective drug in our endodontic arsenal according to these results. It is not an inexpensive drug (In March, 2001: CVS Pharmacy \$3.88 per tablet, Sam's Club Pharmacy \$3.70 per tablet).

Patient compliance with Augmentin should be better than with q.i.d. antibiotics. Augmentin dosage is recommended as 500 mg taken twice daily.