

**Beta-lactam Allergy Pearls:1-2**

* Approximately 10% of patients report a penicillin allergy, of these 80-90% will not have a positive skin test (<1 % of all patients are truly allergic). Patients may state they have a penicillin allergy, but they may be describing an adverse drug reaction or symptom of disease. Additionally, 80% of patients will “outgrow” their penicillin allergy after 10 years from previous reaction.
* Obtaining an accurate patient history is key, including asking exposure to commonly prescribed names of beta-lactam antimicrobials, and type and timing of reactions. Beta-lactams belong to an important antimicrobial class, and the inability to use them could lead to less efficacious, broader-spectrum, and/or more toxic agents being used.
* Cross-reactivity between penicillin or amoxicillin and cephalexin is low (<5%). Cephalexin can be prescribed safety in penicillin allergic patients with mild-moderate reactions (example: rash), but should be avoided with a penicillin allergy history of severe or IgE-mediated Type 1 reactions (example: shortness of breath or anaphylaxis).
* Dentists should have a low threshold to add metronidazole to cephalexin therapy in patients with a delayed response to antibiotics.
* In true history of anaphylaxis, azithromycin can be prescribed at the risk of higher resistance. Alternatively, **clindamycin can be prescribed at the substantial increased risk of developing *Clostridioides difficile* infection (odds ratio 17-20 even after a single dose!)**3

**Counseling Pearls for Antibiotics & Classes Commonly Used by Dentists:**

Beta-lactams (such as penicillin V potassium, amoxicillin, amoxicillin-clavulanate, and cephalexin)

* May be taken with or without food.
* Allergic reaction may rarely occur, and is most commonly a mild rash.
* In general, beta-lactams are considered safe with minimal risk of side effects.
* Diarrhea can occur, but more likely after prolonged courses. Non-infectious, antibiotic-associated diarrhea is typically mild. However, if 3 or more loose stools/day for 1-2 days develops while on antibiotics, the patient should contact their primary care provider to be evaluated for antibiotic-associated *Clostridioides difficile* infection.

Azithromycin

* Commonly referred to as a “Z-pak”.
* Take with or without food, but food may reduce stomach upset.
* Side effects in some patients include nausea, vomiting or diarrhea.
* There is a small (<1%) risk of cardiotoxicity, and use caution in patients that are administered concomitant medications that can prolong the QTc interval.

Clindamycin

* Can take with or without food.
* Diarrhea can occur, even after a single dose. If 3 or more loose stools/day for 1-2 days develops while on antibiotics, the patient should contact their primary care provider to be evaluated for antibiotic-associated *Clostridioides difficile* infection.

Metronidazole

* Administer with food to minimize stomach upset.
* Metallic taste can occur for some patients.
* Do not consume alcohol with taking this medication.