## Penicillin Allergies Could Be Inaccurate

"My doctor told me 40 years ago that if I took penicillin again I would die!" "I was told not to take penicillin because my mother was allergic to penicillin." "I was told I cannot take cephalosporin antibiotics like Keflex because I am allergic to penicillin."

In practice, I have encountered many inaccurate, outdated, and old wives' tales about allergies to medications, especially penicillin. Penicillin is the most commonly claimed drug allergy by patients. According to Dr. David Khan at the University of Texas Southwestern Medical School in Dallas, 10% of the population claims to be allergic. Over 95% of those who claim to have a penicillin allergy do not have an allergy and can be "de-labeled" as being allergic to penicillin. Most people labeled as allergic to penicillin were never allergic to begin with, especially those labeled in childhood. So, to celebrate the 95th anniversary of the discovery of penicillin by Sir Alexander Fleming, the world's first antibiotic, let's clear the air about penicillin allergy.

Long-term studies have shown two interesting facts: even if one truly had a penicillin allergic reaction, 50% of people lose that allergy in five years, and 80% lose it in 10 years. However, in our era of electronic medical records, this inaccurate allergy will be flagged in the chart forever unless someone takes the initiative to confirm or deny it. And who has time for that?

Actually, allergy-immunology specialists do. It is important to remove inaccurate medication allergies because this can unnecessarily restrict patients from using basic and standard-of-care medications they need. This also means they may get an inferior and more expensive substitute. In the case of penicillin, using new medications may not be as effective as our 95-year-old friend penicillin. Here are a few examples of the harms of the fake penicillin allergy.

In obstetrics, Massachusetts General Hospital found that women with a reported penicillin allergy were less likely to receive appropriate antibiotics and instead received clindamycin and vancomycin more often. These "big gun" antibiotics have more side effects and are less effective for premature rupture of membranes, leading to a tripling of the risk of endometritis. There was also a 10% higher rate of C-sections. Penicillins are the preferred antibiotic for Group B Strep (GBS), a common gynecological bacteria.

Regardless of the specialty, patients with penicillin allergy labels are more likely to be treated with suboptimal alternative antibiotics, incur more costly healthcare, have extended hospital stays, and are more likely to develop side effects and complications from the "big gun" antibiotics used, such as MRSA and Clostridium difficile.

So how do we in allergy-immunology remove a penicillin allergy label? Typically, we take a history and try to remember what occurred all those years ago. If it has been many years and the reaction was mild, we would have you take amoxicillin in the office and be observed for one and a half to two hours. If there is more concern and a more severe reaction, we can do a penicillin skin test and then do the amoxicillin test. Either way, years of misunderstanding can be cleared up in two to three hours. If you are allergic, we can also list medications that are cross-reactive and safe to take, as well as those that are not safe today based on molecular structure. The best way to find a fellowship-trained allergist is to check the American College of Allergy, Asthma, and Immunology's website at www.acaai.org/find-an-allergist.

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