

Antibiotic Awareness Week

Penicillin Allergies

How Common Are Penicillin Allergies?¹

Penicillin allergies are reported by approximately 10% of all US patients. Many of these patients, however, do not have true-IgE-mediated reactions. When evaluated, fewer than 1% of the population are truly allergic to penicillins.

Why Should I Be Concerned About Penicillin Allergies?

There are data showing that penicillin and other beta-lactam allergies are associated with the following unwanted effects:

- * 23% increased odds of *C. difficile* infection²
- * 14% increased odds of methicillin-resistant *Staphylococcus aureus* colonization or infection²
- * 30% increased odds of vancomycin-resistant *Enterococcus* (VRE) colonization or infection²
- * 50% increased odds of surgical site infections²
- * Longer median lengths of stay, higher mortality, higher readmission rates, and increased costs in certain patient populations³

References:

1. Hong M, Blumenthal K. Evaluation and Diagnosis of Penicillin Allergy for Healthcare Professionals | Antibiotic Use | CDC [Internet]. Antibiotic Prescribing and Use. Centers for Disease Control and Prevention; 2017 [cited 2022 Oct 27]. Available from: <https://www.cdc.gov/antibiotic-use/clinicians/penicillin-allergy.html>
2. Blumenthal KG, Ryan EE, Li Y, Lee H, Kuhlen JL, Shenoy ES. The Impact of a Reported Penicillin Allergy on Surgical Site Infection Risk. *Clinical Infectious Diseases* [Internet]. 2018 Feb 1 [cited 2022 Oct 27];66(3):329–36. Available from: <https://academic.oup.com/cid/article/66/3/329/4372047?searchresult=1>
3. Huang K-HG, Cluzet V, Hamilton K, Fadugba O. The Impact of Reported Beta-Lactam Allergy in Hospitalized Patients With Hematologic Malignancies Requiring Antibiotics. *Clinical Infectious Diseases* [Internet]. 2018 Jul 1 [cited 2022 Oct 27];67(1):27–33. Available from: <https://academic.oup.com/cid/article/67/1/27/4810659?searchresult=1>

What Can We Do For Patients/Residents Who Report A Penicillin Allergy?

Clarify any reported penicillin or beta-lactam allergy with the patient and consider if a beta-lactam allergy delabeling protocol is right for your facility. Some resources that are available online to assist you include the following:

Evaluation and Diagnosis:

[CDC: Evaluation and Diagnosis of Penicillin Allergy for Healthcare Professionals](#)

Quick Risk Assessment:

[QxMD: PEN-FAST Calculator](#)

Practice Guideline:

[AAAAI: Drug Allergy](#)

Implementation Tools for Hospitals:

[PACE: Beta-Lactam Allergy Delabeling Guideline and Toolkit](#)

Implementation Tools for Long-Term Care:

[AHRQ: Penicillin Allergies](#)

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