

Clarifying penicillin allergy: PEN-FAST

- Although fewer than 10% of patients with a labeled penicillin allergy are truly allergic (e.g., hives, anaphylaxis), it is the most commonly reported drug allergy, reported by 5%-10% of outpatient and 11%-15% of hospitalized patients.¹
- Penicillin sensitization decreases drastically over 10 years; after 20 years, fewer than 1% of patients with an allergic reaction maintain their sensitivity.¹
- Nausea, vomiting, rash, and a family history of penicillin allergy are not reasons to avoid treatment of syphilis with penicillin.²

PEN-FAST can be used for adult patients (age ≥ 18) with a documented penicillin allergy who need syphilis treatment. **It is not appropriate for pregnant patients.**

Scoring using PEN-FAST³

| Component | Description | Score |
|------------|--|-------|
| PEN | Penicillin allergy reported by the patient | Yes |
| F | Five years or less since reaction | 2 |
| A | Anaphylaxis or angioedema | 2 |
| S | Severe cutaneous adverse reaction | 2 |
| T | Treatment required for reaction | 1 |

Using the PEN-FAST score³

| Score | Risk of positive penicillin allergy test | Recommendation |
|------------|--|---|
| 0 | Very low risk (< 1%) | Prescribe first-line penicillin therapy |
| 1-2 | Low risk (5%) | Give an oral penicillin challenge |
| 3 | Moderate risk (20%) | Prescribe alternate therapy* |
| 4-5 | High risk (50%) | |

*Pregnant patients may require desensitization; consult with allergy or infectious disease.

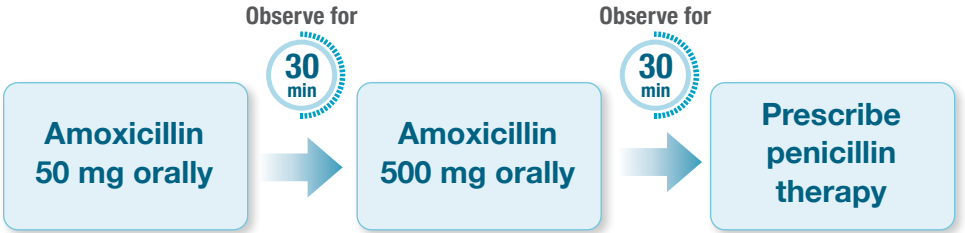
A **Penicillin Allergy Verification Consult**, available at some sites, uses PEN-FAST to guide prescribing. If not available, consider creating a template and establishing a process and protocol for oral penicillin challenge in the clinic.



These are general recommendations only; specific clinical decisions should be made by the treating clinician based on an individual patient's clinical condition.

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Oral challenge with amoxicillin



Remove the penicillin allergy from the patient record.

Treatment in patients with a true penicillin allergy^{4,5}

| Patient category | Recommended treatment | Duration of treatment |
|--|--|-----------------------|
| Adults with <i>early syphilis</i> | Doxycycline 100 mg orally twice daily | 14 days |
| | Tetracycline 500 mg orally four times daily | 14 days |
| Adults with <i>late syphilis</i> | Doxycycline 100 mg orally twice daily | 28 days |
| Pregnant patients | Desensitization (best option) | |
| <i>If desensitization is unavailable in early syphilis</i> | Erythromycin 500 mg orally four times daily | 14 days |
| | OR Ceftriaxone 1000 mg IM once daily | 10-14 days |
| | OR Azithromycin 2000 mg orally (if susceptible) | Once |
| <i>If desensitization is unavailable in late syphilis*</i> | Erythromycin 500 mg orally four times daily | 28 days |

*Requires treatment of infant with parenteral penicillin for 10 to 15 days.

(1) Broyles AD, et al. Practical Guidance for the Evaluation and Management of Drug Hypersensitivity: Specific Drugs. *J Allergy Clin Immunol Pract.* 2020;8(9s):S16-s116. (2) Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guidelines, 2021: Managing Persons Who Have a History of Penicillin Allergy. <https://www.cdc.gov/std/treatment-guidelines/penicillin-allergy.htm>. Accessed Aug 29, 2024. (3) Copaescu AM, et al. Efficacy of a Clinical Decision Rule to Enable Direct Oral Challenge in Patients With Low-Risk Penicillin Allergy: The PALACE Randomized Clinical Trial. *JAMA Intern Med.* 2023;183(9):944-952. (4) World Health Organization. *WHO Guidelines for the Treatment of Treponema pallidum (Syphilis)*. Geneva: World Health Organization; 2016. (5) Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guidelines, 2021: Syphilis. Jan 16, 2024; www.cdc.gov/std/treatment-guidelines/syphilis.htm. Accessed Aug 15, 2024.