

1 **ETable 1: Index reactions recalled by those reporting a penicillin allergy (n= 1037)**

Reaction	Number (%)
Rash only	510 (49)
"A family member told me; I don't remember"	141 (14)
Anaphylaxis	139 (13)
Swelling	68 (7)
GI Distress	47 (5)
Unknown	34 (3)
Hives	33 (3)
Family history of penicillin allergy	5 (0.5%)
Other	60 (6)

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1 **Online Repository**

2 **EMethods**

3 **REDCap**

4 Study data were collected and managed using REDCap electronic data capture tools hosted at Vanderbilt
5 University Medical Center^{E1,E 2}. REDCap (Research Electronic Data Capture) is a secure, web-based
6 software platform designed to support data capture for research studies, providing 1) an intuitive interface
7 for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3)
8 automated export procedures for seamless data downloads to common statistical packages; and 4)
9 procedures for data integration and interoperability with external sources.

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11 **MyResearch at Vanderbilt**

12 MyResearch at Vanderbilt (MRAV) is a participant repository recruitment tool available to Vanderbilt
13 researchers that reaches over 18,000 My Health at Vanderbilt users that have previously confirmed they
14 would like to be contacted directly for research. This repository provides investigators a forum for
15 advertising for volunteers for a specific study. Email notifications are limited to IRB approved language,
16 describe study specifics and provide contact information. To utilize this initiative, investigators complete
17 a MyResearch Access Request that is reviewed to ensure the recruitment tool and requested number of
18 contacts are appropriate.

19 **References:**

20 E1. Harris P, Taylor R, Thielke R, Payne J, Gonzalez N, Conde J. Research electronic data capture
21 (REDCap)--a metadata-driven methodology and workflow process for providing translational
22 research informatics support. *J Biomed Inform* 2009; 42:377-81.

23 E2. Harris P, Taylor R, Minor B, Elliott V, Fernandez M, O'Neal L, et al. The REDCap consortium:
24 Building an international community of software platform partners. *J Biomed Inform* 2019;
25 95:103208.

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EFigure 1: PENPal Survey Questions

1. **Sole mandatory question:** Do you have a penicillin allergy?
 - a. Yes
 - b. No
 - c. I had a penicillin allergy, but it has since been disproven
2. Age: (list age)
3. Sex
 - a. Male
 - b. Female
 - c. Other
4. Race/ethnicity
 - a. White
 - b. African American
 - c. Latino
 - d. Asian
 - e. Mixed
 - f. Other
 - i. List other Race/Ethnicity
5. Do you recall needing antibiotics for any reason in your lifetime?
 - a. Yes
 - b. No
6. Which antibiotics have you taken without issue in your lifetime? Choose all that apply, only choose if you are confident
 - a. I have confidently taken none of these specifically listed here
 - b. Penicillin
 - c. Amoxicillin (Amoxil)
 - d. Amoxicillin/Clavulanic acid (Augmentin)

- e. Cephalexin (Keflex)
- f. Ceftriaxone (Rocephin)
- g. I have taken an antibiotic not on this list
 - i. Which other antibiotics not listed in the previous question have you taken without issue in your lifetime?
- h. Unsure

7. (Answered by those reporting to be female only) Are you currently or have you ever been pregnant?

- a. Yes
- b. No

8. (Answered by those reporting to be female and penicillin allergic only) Do you perceive your penicillin allergy affected your pregnancy, delivery, or time while nursing/breastfeeding in any way?

- a. Yes
- b. No
- c. I became allergic to penicillin after my last pregnancy
 - i. Please list how you perceive your penicillin allergy affected your pregnancy, delivery, or time while nursing/breastfeeding

9. (Answered by those reporting to be female only) Did you require antibiotics while pregnant, during delivery, or when you were nursing/breastfeeding?

- a. Yes
- b. No
 - i. Please list the antibiotics you confidently remember taking while pregnant, during delivery, or when you may have been nursing/breastfeeding

Remainder of questions answered by those reporting to be currently penicillin allergic only

10. How many years ago did you acquire your penicillin allergy?

- a. Less than one year ago

- b. Greater than one, but less than five years ago
- c. Greater than five, but less than ten years ago
- d. Greater than 10 years ago
- e. I did not personally have a reaction to penicillin
- f. Not sure

11. Around what age did you acquire your penicillin allergy? (List age)

12. What was your reaction to penicillin?

- a. Rash only
- b. Anaphylaxis
- c. Gastrointestinal distress only
- d. My family member told me I'm allergic. I do not remember the reaction
- e. I avoid penicillin because of a family member who did not tolerate penicillin
- f. Unknown
- g. Other
 - i. Please list other reaction

13. During the event leading to your penicillin allergy, what was the most involved level of care you required?

- a. It was stopped without talking to a provider
- b. A health care practitioner recommended stopping it over the phone
- c. Urgent Care/Primary Care doctor visit
- d. Emergency Room
- e. Inpatient hospitalization, not requiring the intensive care unit
- f. Inpatient hospitalization, requiring the intensive care unit
- g. The penicillin allergy label was acquired based on a reaction that occurred with a relative
- h. Do not remember

14. Did your reaction to penicillin require epinephrine (otherwise known as epi, epipen) injection?

- a. Yes
- b. No
15. If you were prescribed penicillin today, how likely would it be for you to have a reaction to it?
- a. Very likely
- b. Likely
- c. Unsure
- d. Unlikely
- e. Very unlikely
16. Do you recall needing antibiotics for any reason SINCE ACQUIRING YOUR PENICILLIN ALLERGY?
- a. Yes
- b. No
17. Did your provider discuss your penicillin allergy prior to prescribing those antibiotics
- a. Yes
- b. No
18. Which antibiotics have you taken without issue SINCE ACQUIRING YOUR PENICILLIN ALLERGY? Choose all that apply, only choose if you are confident.
- a. I have confidently taken none of these specifically listed here
- b. Penicillin
- c. Amoxicillin (Amoxil)
- d. Amoxicillin/Clavulanic acid (Augmentin)
- e. Cephalexin (Keflex)
- f. Ceftriaxone (Rocephin)
- g. I have taken an antibiotic not on this list
- i. Which other antibiotics not listed in the previous question have you taken without issue SINCE ACQUIRING YOUR PENICILLIN ALLERGY?
- h. Unsure

19. Has your primary care provider talked to you about your penicillin allergy?
- Yes
 - No
20. Has your primary care provider offered to refer you for penicillin allergy testing?
- Yes
 - No
21. Has any provider ever reported to you that your penicillin allergy is affecting your medical treatment?
- Yes
 - No
22. Have you had a surgery since acquiring your penicillin allergy?
- Yes
 - No
23. In the time leading up to your surgery, did a health care practitioner ask you about your penicillin allergy?
- Yes
 - No
24. Do you believe that your penicillin allergy is permanent?
- Yes
 - No
25. If your regular healthcare provider wanted to prescribe penicillin, and an allergist tested you and found it to be safe, would you take it?
- Yes
 - No
 - If not, please list why
26. Would you be interested in being referred for penicillin allergy evaluation?
- Yes
 - No