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Frequently Asked Questions (and Answers) About Penicillin Allergy

1. Who should be tested for penicillin allergy?

Anyone who has a history of an allergic reaction to a penicillin antibiotic is a candidate for penicillin allergy testing. Unless there is a past history of a previous reaction, however, testing is unnecessary. If you have never reacted to penicillin, or have never taken it, testing is not indicated.

2. Why should I be tested for penicillin now if I do not need to take the antibiotic immediately?

Testing might be done even if you have no need to use the antibiotic immediately. Penicillin is a commonly used antibiotic with a variety of applications. Demonstrating the absence of allergy now could be very helpful to you in the future, when the need might suddenly arise. Having tests done – even if there is no current need – would save you from having to have “emergency testing” if there is a need for penicillin or cephalosporins in the future. Testing may also help prevent the use of broad spectrum alternative antibiotics that may increase the possibility of antibiotic resistant organisms.

3. How is penicillin allergy testing done?

Testing is done with allergy skin tests. These are performed most commonly on either the forearm or back. Tests are done by pricking and injecting the skin. A standard puncture testing device is used for the initial testing, and a syringe and needle is employed if the test using this device is

negative. The technique is the same as the one used for testing allergies to pollens and foods. The tests for penicillin allergy take about an hour and are relatively painless.

More information on penicillin allergy testing can be found on the The American College of Allergy, Asthma, and Immunology (ACAAI) website, www.AllergyAndAsthmaRelief.org.

4. How should I prepare for skin testing to penicillin?

No complicated preparation is needed. You should, however, discontinue antihistamines and other drugs prior to testing as they may affect the test results. If you have any doubt about a drug you are taking, contact your allergist as soon as possible prior to testing to learn what drug(s) should be stopped, and for how long. It is best to avoid all antihistamines for 7 days prior to testing. Your allergist may allow some antihistamines to be taken up until 2-3 days prior to testing if you feel you cannot stop them for one week. The need to discontinue antihistamines applies not only to oral antihistamines but also to antihistamine nasal sprays (e.g., azelastine or olopatadine). If you take medications for depression, anxiety, or migraines, please discuss with your allergist prior to testing, as some of these may need to be discontinued.

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5. Is penicillin allergy testing safe?

Yes. Skin testing to penicillin is a safe procedure. The test, if positive, will cause local itching and redness with swelling at the site where the test is performed. These reactions usually resolve in an hour or so. Systemic reactions such as hives can occur, but are very rare and allergists-immunologists are prepared to treat such reactions. So there is no definite contraindication to these tests and, as noted, they are considered safe and effective.

6. Are there alternative tests that can be done to diagnose penicillin allergy?

There is a blood test for penicillin allergy, but in general, it is not as accurate or as sensitive as the skin test. Skin tests are considered the tests of choice.

7. How accurate and sensitive is penicillin skin testing?

A number of studies have documented the accuracy and sensitivity of skin tests for penicillin allergy. Almost all patients who have negative skin tests are able to take penicillin without experiencing a reaction. It is generally thought that no more than 1 to 2 percent of patients (and perhaps even less) with a negative test will experience a mild reaction to penicillin.

8. If my penicillin allergy tests are negative, can I immediately start taking penicillin at home?

The answer to this question is, in the opinion of most allergists, "no." Because of the very small percentage of patients who do react, most allergists, after penicillin testing is done, perform what is called a "challenge" in their office. As soon as the tests are done, or shortly thereafter, the patient takes penicillin in the physician's office while under observation. The full dose can be given, or small but gradually increasing doses are administered during this period. The test usually takes one or two hours but may take as long as four hours depending on the protocol employed by the allergist performing the challenge. After a negative challenge, you should advise all of your doctors that you are not allergic to penicillin, and that it can be used to treat future infections.

9. If I have a negative test to penicillin, can I automatically take a cephalosporin, if I have never had a reaction to a cephalosporin?

The vast majority of people who have negative tests to penicillin will be able to tolerate a cephalosporin. Without a previous reaction to a cephalosporin, it is not necessary to be tested or challenged to a cephalosporin.

10. Should patients with a history of cephalosporin allergy who have not subsequently taken penicillin or cephalosporin be tested for cephalosporin or penicillin?

Cephalosporin allergy is not as well-studied as penicillin allergy, and skin testing to standardized reagents is not available. This means that all allergists do not necessarily advise the same type of evaluation. Some allergists may recommend skin testing to non-standardized reagents for cephalosporin and/or standardized penicillin testing followed by an oral challenge. Others may suggest an oral challenge only to one or both medications, depending upon your specific history of reaction and the drug to which you reacted. You will need to discuss these issues with your allergist.

11. Are people with hay fever and/or asthma more likely to be allergic to penicillin or cephalosporin?

Most studies have shown that patients who have allergies are not at any increased risk of developing penicillin or cephalosporin allergy.

12. What are the signs and symptoms of penicillin allergy?

People who are allergic to penicillin usually have symptoms consisting of the following:

- Hives (red welts).
- Swelling of parts of the body, usually the lips, eyes, tongue, hands, or feet. Swelling usually occur simultaneously with the hives.

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- Shortness of breath or wheezing.
- In severe reactions, fainting can occur.

These symptoms usually appear shortly after the ingestion of the drug. It is important to note that other reactions such as a measles like rash can occur. These reactions are usually delayed in onset (several days after the initial dose). Skin testing does not predict whether these delayed reactions will occur.

13. How often are penicillin reactions fatal?

We have no definitive information on the exact percentage of fatal reactions, but fatalities have been recorded.

14. If I had a delayed onset, measles-like rash from penicillin, should I take penicillin again?

Delayed reactions are more difficult to assess and they may or may not reoccur on subsequent courses of penicillin. At times the rash may have been caused by the infection (for which the antibiotic was prescribed) and not the antibiotic. It is unlikely that if you were to receive penicillin again that you would have a life-threatening reaction. But it is possible that you could have a delayed-onset rash. Before you take penicillin again, consult an allergist and review your history. Some allergists may suggest different types of testing, or a controlled challenge, but this will depend upon your history.

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