



PATIENT & CAREGIVER EDUCATION

# About Penicillin Allergy Testing

This information will tell you what to expect during your penicillin allergy test at Memorial Sloan Kettering (MSK).

## About Penicillin

Penicillin is a common antibiotic used to treat infections. Your doctor may recommend that you take it during your cancer treatment because it can kill many different types of bacteria. It also costs less than some other antibiotics.

### About penicillin allergies

Some people can't take penicillin because they have had allergic reactions to it in the past. Most allergic reactions cause people to have mild symptoms such as itching, hives, or a rash. Other people may have worse reactions to penicillin, such as skin blisters or peeling, joint pain, or trouble breathing.

Many people's allergy to penicillin goes away with time, usually after 5 to 10 years. This is why you may need to be tested for a penicillin allergy again.

Your doctor may recommend that you have a penicillin allergy test to see if you're still allergic to it. Tell your doctor or nurse if you have a history of a serious reaction, such as skin blisters, peeling, joint pain, or trouble breathing, after taking penicillin. You won't be able to have the allergy test if you have had these serious reactions before.

## 3 Days Before Your Penicillin Allergy Test

### Stop taking certain medications

Before your allergy test, you shouldn't take any of the following medications:

Alavert®	Allegra® or Allegra®D	Atarax® or Vistaril®	Benadryl® (diphenhydramine)	Bonine® (meclizine)
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	(fexofenadine)	(hydroxyzine)		hydrochloride)
Bromfed®PD	Brophed	Chlor-Trimeton® (chlorpheniramine maleate)	Clarinex® (desloratidine)	Claritin® or Claritin®D (loratadine)
Contac®	Dimetapp® (brompheniramine)	Elavil® (amitriptyline)	Nyquil™	Ornade®
Pepcid® (famotidine)	Rynatan®	Silenor® (doxepin)	Singulair® (montelukast)	Sinutab®
Sominex®	Tagamet® (cimetidine)	Tavist® or Tavist®D (clemastine)	Teldrin® (chlorpheniramine)	Triaminic®
Tylenol® PM	Zantac® (ranitidine)	Zyrtec® or Zyrtec®D (cetirizine)	Zzzquil™	

Taking these medications before your test may cause false test results, such as a false negative result. If you take medications other than the ones listed in this table, you can keep taking them as instructed by your healthcare provider. If you have any questions about your medications, talk with your healthcare provider.

### Things to remember

- Wear comfortable clothes the day of your allergy test. You will get some injections (shots) under your skin, so wear a short-sleeved shirt if you can.
- You can eat and drink as you normally would before your test.

### What to expect

There are 3 parts to the allergy test that you might need, and they will be done in this order:

1. The skin (scratch) test
2. The intradermal test

### 3. The challenge dose

This resource explains each part in detail. Most people will need to do all 3 parts of the test. Your nurse will tell you which parts you will need to do based on your test results.

A nurse trained in penicillin allergy testing will do your allergy tests.

The testing should take about 1 1/2 to 2 hours.

Before your test starts, your nurse will explain the procedure, its risks and benefits, and go over any questions you might have. Then they will ask you to sign a consent form (a form that says you agree to the procedure and understand the risks).

#### **Delayed reactions**

This type of test won't check for any delayed reactions to penicillin. If you get a negative test result after your testing, you still have a small chance of having a delayed reaction to penicillin. This type of reaction is usually not serious. Signs of a delayed reaction may include itchiness, hives, or a rash. If you have any of these signs after your allergy test, call your healthcare provider.

### **During Your Penicillin Allergy Test**

If you don't have a central venous catheter (CVC), you will need an intravenous (IV, in your vein) line put into your arm or hand. This is so your nurse can give you medication if you have an allergic reaction and for the challenge dose part of the test. If you have a CVC, your nurse will use this.

#### **Skin test (scratch test)**

During the skin test, your nurse will put a small drop of penicillin on your skin, and then look for any signs of an allergic reaction, such as itchiness or a rash.

Your nurse will do the test using a duo-tip (see Figure 1). This is a small plastic needle that will be used to scratch your skin. Your nurse will put a drop of each of the following medications on your forearm:



Figure 1. Duo-tip

- Histamine. This is a substance that your body makes when you're allergic to something. Your nurse will use this to measure your reaction to the penicillin against. The histamine should cause you to have a small bump on your arm and might be itchy. If this doesn't happen, your nurse may need to do the test again.
- Normal saline. This is a sterile fluid. Your nurse will use to measure your reactions to the penicillin. You shouldn't have a reaction to this.
- Benzylpenicillin (Penicillin G). This is a common type of penicillin.
- Benzylpenicilloyl Polylysine Penicillin (Pre-Pen). This is another type of penicillin that's often used for allergy testing.

After dropping the medications onto your forearm, your nurse will gently scratch them into your skin using the duo-tip. They will also label your arm so they know where the medications were put on your skin (see Figure 2).

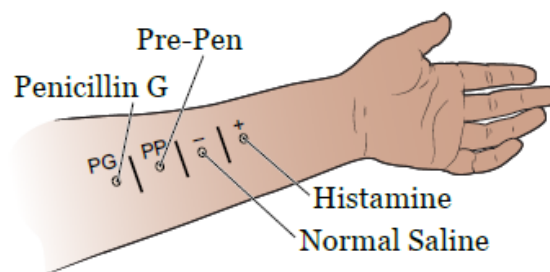


Figure 2. Skin scratch test

After this, you will wait 15 minutes, and then your nurse will check your skin to see if you had a reaction. Signs of a positive reaction can include redness or a raised bump where the penicillin was scratched into your skin. Your nurse will discuss your results with you.

- If you didn't react to the penicillin (negative test result), your nurse will start the intradermal test.

- If you did react to the penicillin (positive test result), you still have a penicillin allergy. Your nurse will document this information in your medical record and your testing will stop here.

### **Intradermal test**

During the intradermal test, your nurse will inject the following medications between the layers of your skin using a syringe:

- Normal saline. This is a sterile fluid. Your nurse will use this to measure your reaction to the penicillin. You shouldn't have a reaction to this.
- Benzylpenicillin (Penicillin G). They will inject this medication under your skin twice, in 2 different places. This is to make sure your test results are clear.
- Benzylpenicilloyl Polylysine Penicillin (Pre-Pen). They will inject this medication under your skin twice, in 2 different places. This is to make sure your test results are clear.

The injections will be made on an area of your body where you didn't have the scratch test, or on 1 of your upper arms.

The medications will cause a bubble of fluid to form under your skin called a bleb (see Figure 3). Your nurse will outline each bleb with a pen (see Figure 4).

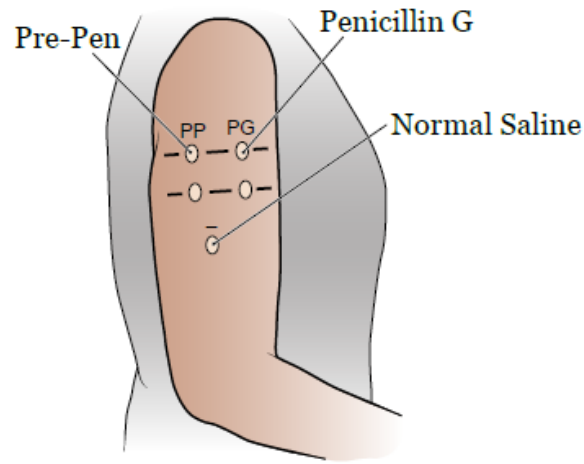
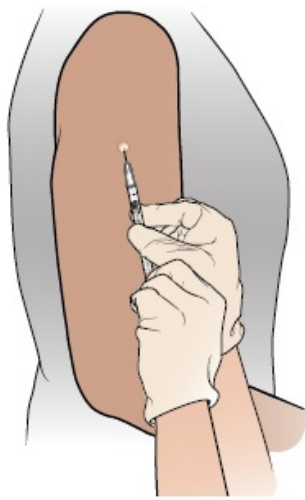


Figure 4. Intradermal labels

After the injections, your nurse will ask you to wait so they can see if the blebs grow. This would mean you had a positive reaction. Then, your nurse will check your skin to see how much the blebs grew.

- If the bleb doesn't go outside the outline, it means you didn't have a reaction to the penicillin (negative test result). Your nurse will then start the challenge dose test.
- Your nurse will look at the bleb to see how much it has grown. If it grows large enough, it means you had a reaction to the penicillin (positive test result). This means you still have a penicillin allergy. Your nurse will document this in your medical record, and your testing will stop here.

### The challenge dose

During this test, your nurse will infuse small amount of penicillin through your IV or CVC. Then your nurse will monitor you for 20 minutes to look for signs of an allergic reaction. If you notice any of these signs, tell your nurse right away:

- Itchiness
- Trouble breathing
- Rash or hives
- Swelling in your face, lips, or tongue

If you start having an allergic reaction, your nurse will give you medication to treat the reaction. This means you're still allergic to penicillin.

If you don't react to the challenge dose of penicillin, you aren't allergic to it anymore. Your nurse may then give you more penicillin if you need it to fight off an infection, or your test may stop here.

## **After Your Penicillin Allergy Test**

Your nurse will give you a wallet card with the result of your allergy test if you no longer have an allergy. You can use this card to show to other health care providers and your pharmacy, outside MSK, that you've had penicillin allergy testing.

If you're a patient at MSK, and you tested negative for a penicillin allergy, your nurse will update your medical record with this information. If you tested positive for a penicillin allergy, your penicillin allergy will stay documented in your medical record.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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