

Allergies to Medications/Drugs

Reactions to medications/drugs can cause a wide variety of signs and symptoms that may affect various organs or parts of the body. Medications can cause adverse side effects that are often mistakenly confused for allergic reactions. The difference between a side effect and an allergic reaction is that a true medication allergy is caused by an immune reaction to the medication. Side effects can affect anyone who takes a medication if they take enough of it. On the other hand, allergic reactions to a drug or medication are rare. Only about 5 to 10 percent of drug reactions are caused by allergies.

One characteristic of all medication allergies is that similar symptoms will occur every time after the offending medication is taken. Penicillin and other antibiotics are the medications that most commonly cause allergic reactions, but they can be caused by anti-inflammatory drugs like aspirin or ibuprofen as well. Women and young and middle-aged adults appear to have an increased risk for medication/drug allergies.



Allergic reactions can be mild and cause nothing more than a slight rash, or they potentially be life-threatening.

What Is an Allergy to Medication/Drugs?

Allergies to drugs/medications are complicated, because they can be caused by many different medications, resulting in a wide variety of signs and symptoms that may affect various organs or parts of the body.

Furthermore, some drugs can cause adverse side effects whose symptoms closely resemble those of an allergic reaction. The difference is that true drug allergy occurs when the body's immune system sees the medication as an invader, rather than a beneficial treatment. This hypersensitive immune system creates IgE and other antibodies and/or cytotoxic immune cells in response to an otherwise harmless substance in the medication.

What Are the Symptoms of Medication/Drug Allergy?

The signs and symptoms of medication/drug allergy can involve the skin, lungs, gastrointestinal tract (digestive system) and, rarely, other organs.

- Skin symptoms include itching, flushing, hives, swelling and other forms of drug allergy rash.
- Gastrointestinal (digestive system) symptoms include tingling and burning of the mouth and throat, nausea, vomiting, abdominal pain and diarrhea.
- Respiratory symptoms include nasal congestion, runny nose, sneezing, throat swelling, cough, wheezing and/or difficulty breathing.

- Life-threatening anaphylactic reactions have a combination of the above symptoms and may cause a person to lose consciousness and stop breathing. Call 911 right away if you suspect anaphylaxis.
- Occasionally, allergic-like reactions to drugs may take several days to develop and may include other symptoms such as fever, joint aches and rashes.

Symptoms after medication/drug ingestion can also result from conditions other than a drug allergy. Sometimes the symptoms are caused by the illness for which the drug was taken. Occasionally, symptoms are caused by drug interactions when a person is taking multiple medications at the same time.

Which Medications/Drugs Are Most Commonly at Fault?

Penicillin and other antibiotics are the medicines that most commonly cause drug allergy symptoms. Other medications that often cause allergic reactions include:

- Anticonvulsants
- Aspirin, ibuprofen and other nonsteroidal anti-inflammatory drugs (NSAIDs)
- Chemotherapy drugs

Who Gets Allergies to Medications/Drugs?

Medication allergies can occur at any age. Women appear to have an increased risk for adverse drug reactions. Frequent, repeated exposure to a medication can be a risk factor for developing an allergy to that drug.

Individuals who have other allergies, such as environmental allergies, asthma, or food allergies, are not at higher risk for medication/drug allergies compared with those without allergic.

How Are Medication/Drug Allergies Diagnosed?

Every diagnosis begins with a detailed medical history and physical examination. The doctor will ask lots of questions about the nature of your reaction, such as if you have taken the medication or a similar medication before, how long you were on the medication, timing of the dose, onset of symptoms and the nature and evolution of the symptoms.

Depending upon the findings of the initial evaluation, the following tests may be necessary:

- Allergy skin testing may be performed to check for presence of allergic antibodies to selected drug allergens. Patch skin testing can also be performed. Unfortunately, accurate, validated testing is unavailable for most drugs.
- Blood testing is occasionally indicated.
- Sometimes a challenge to the suspected drug is necessary to confirm the diagnosis. If indicated, drug challenges are coordinated with safety as the highest priority.

How Can I Prevent Medication/Drug Reactions?

Once you are diagnosed with a drug allergy, your doctor will discuss avoiding the medication with you and talk to you about treatment for accidental exposure to the drug.

Here are a few tips to help prevent an allergic reaction to drugs:

- Memorize trade and generic names of the medications that you are allergic too, and check labeling on products you buy. Sometimes drugs that are related may cause similar allergic reactions. Ask your health care provider what other medications you should avoid.

- Make sure you tell all caregivers about your allergy. This includes not only physicians, nurses and medical facilities, but also your pharmacist and family members.
- Wear a medical alert bracelet or necklace describing your allergy, just in case you ever need emergency care.
- If your doctor prescribes an epinephrine auto injector (such as EpiPen®) in case of an anaphylactic reaction, remember to carry it with you at all times, and make sure you know how to use it. If you are uncomfortable with its use, ask your doctor for help. Make sure your family members know how to respond if you have an adverse reaction and where to find your EpiPen. It would be a good idea if your primary family caregiver knows how to use it. Watch out for symptoms. Sometimes you may develop a new allergy or new symptoms. Consult with your doctor right away if you develop symptoms that may indicate that you have an allergy to a newly-prescribed medication or that you have accidentally been exposed to your existing allergy. If the symptoms are serious, such as trouble breathing, use your EpiPen or call 911.

What Is the Treatment for Medication/Drug Allergy?

The best way to treat drug allergy is to avoid the specific medication, since there is no cure for an allergy. Antihistamines and steroids can be used to alleviate symptoms resulting from a drug allergy reaction, but once a drug allergy is determined, the medication should be avoided in the future.

In very rare cases, it may be required to ‘treat through’ a medication allergy. That is, the drug may be required despite the reaction. This can be dangerous and is only used as a last resort. You may be pre-treated with steroids or antihistamines in such cases. In addition, if you require a drug/medication to which you are allergic, drug desensitization can be performed in a hospital setting.

With drug desensitization you will be given gradually increasing doses of the medication either by mouth or by IV under constant monitoring until you can tolerate a full dose. It is very important to remember that desensitization works only for that particular course of the medicine. This means that if the medicine is discontinued, you will once again become allergic. You will need to be desensitized each time the medicine is administered.

Visit our website for more information about support groups, clinical trials and lifestyle information.

PTE. 148 © Copyright 2005, 2016, 2021

NOTE: This information is provided to you as an educational service of National Jewish Health. It is not meant to be a substitute for consulting with your own physician.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit njhealth.org.