

## 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 confused with allergic reactions. The difference between an adverse effect and allergic reaction is that true medication allergy is caused by an immune reaction to the medication. Allergic reactions can be potentially life-threatening.

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 medication that most commonly cause allergic reactions. Women appear to have an increased risk for adverse reactions to medications.



### Facts about Allergies

The tendency to develop allergies may be inherited. If you have allergic tendencies and are exposed to certain things in your environment (allergens), you may develop allergies to some of those things. Common examples of allergens include animal dander, dust mites, pollens and molds. Examples of allergy symptoms and allergic conditions include itchy eyes, runny nose, asthma, eczema (atopic dermatitis) and hives (urticaria). The timing of the allergic response may be immediate or delayed.

### 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 effects whose symptoms closely resemble those of an allergic reaction. The difference is that true drug allergy is caused by a hypersensitive immune system that creates IgE and other antibodies and/or cytotoxic immune cells in response to an otherwise harmless substance in the medication. One characteristic of all drug allergies is that similar symptoms will occur every time soon after the offending medicine is taken.

### 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 and other forms of 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, wheezing and/or difficulty breathing.
- Life-threatening anaphylactic reactions have 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 allergic reactions.

## Who Gets Allergies to Medications/Drugs?

There are two criteria to become allergic to a drug: a genetic predisposition for allergy, and at least two exposures to a given medication. Without the right combination of genes, the immune system will not overreact and make IgE antibodies against the medicine. If the 'right genes' are present for allergy, the immune system must first become sensitized to the medication (first exposure) before it can mount an allergic response (second exposure). Women appear to have an increased risk for adverse drug reactions. Children whose parents are allergic to at least one drug have a greater chance of being allergic to drugs than children whose parents are not allergic to drugs.

## 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 the reaction, such as if the person had taken the medication or a similar medication before, how long the person was on the medication, timing of the dose, onset of symptoms and the nature and evolution of the symptoms. Since the medication allergy may be genetic, expect some questions about other family members who may be allergic.

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.
- 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 a diagnosis is made, avoidance of the implicated medication is discussed, and the treatment of accidental exposures is thoroughly reviewed.

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

- Memorize trade and generic names of the medications that cause a reaction, and check labeling on products you buy.
- Make sure you tell all caregivers about your allergy.
- Wear a medical alert bracelet or necklace describing your allergy, just in case you ever need emergency care.
- If your doctor prescribes an epinephrine shot in case of an anaphylactic reaction, remember to carry it with you.

## What Is the Treatment for Medication/Drug Allergy?

The best way to treat drug allergy is to avoid the medication and other medications in its class, since there is no cure for allergy. Antihistamines and steroids can be used to alleviate symptoms, but once a drug allergy is determined, the medication should be avoided.

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. A person may be pre-treated with steroids or antihistamines in such cases. In addition, if a person requires a drug/medication to which he/she is allergic, drug desensitization can be performed in a hospital setting.

A person is given gradually increasing doses of the medication either by mouth or by IV under constant monitoring until they can tolerate a full dose. It is very important to remember that desensitization works only for that particular course of the medicine, so if it is discontinued, the person once again becomes allergic and needs to be desensitized each time the medicine is administered.

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