

## **Anaphylaxis**

Also listed as: Allergic reaction - anaphylaxis

Anaphylaxis is a sudden, serious allergic reaction that can be life-threatening. Symptoms may begin mildly but quickly become severe in minutes or even seconds. Occasionally, though, the symptoms develop gradually over a 24-hour period. The more quickly the symptoms begin, the more severe they generally are. Many people who are susceptible to anaphylaxis carry emergency medicine with them. Anaphylaxis is a medical emergency, and you should seek help right away. Although rare, it is estimated to be responsible for 500 deaths each year.

## **Signs and Symptoms**

- Itching (often the first symptom), redness, hives, swelling, sweating
- Swelling in the nose or throat, hoarseness, wheezing, difficulty speaking, trouble breathing, chest tightness
- Abnormal heart rate or rhythm, shock, heart attack
- Stomach cramps, nausea, vomiting, diarrhea
- Dizziness, fainting

## **What Causes It?**

Anaphylaxis occurs when your immune system overreacts to an allergen. Your body releases substances meant to protect you from the allergen, but instead cause your blood pressure to drop suddenly and your airways to constrict so that you have trouble breathing.

Many substances can cause anaphylaxis; sometimes the cause isn't known. Some of the more common triggers include:

- Antibiotics (especially penicillin)
- Aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs, such as ibuprofen), and prescription opiate pain medications (such as codeine)
- Foods, such as nuts, shellfish, milk, eggs, and berries
- Insect bites or stings
- Egg-based vaccines
- Latex (as in condoms, rubber gloves)
- Food coloring and preservatives (such as tartrazine, also known as FDC yellow dye No. 5)

## Who's Most At Risk?

Anaphylaxis is rare. The following factors may increase your risk for anaphylaxis:

- Known allergies
- Asthma
- Initial exposure to the allergen by injection (intravenous medication)
- Frequent exposure to the allergen, particularly if frequent exposure is followed by a long delay and then a re-exposure

## What to Expect at Your Provider's Office

Your health care provider will perform an exam, ask about any contact you may have had with possible allergens (food, drugs, insect stings), and may conduct blood or urine tests, allergy tests, or other tests.

## Treatment Options

### Prevention

- Avoid any substances that have triggered a previous allergic response.
- If you have allergies or suspect you do, see a specialist to be tested.
- Take medicines by mouth instead of by injection whenever possible.
- If you have a history of anaphylaxis, carry a syringe loaded with adrenaline (epinephrine) to inject immediately after exposure to a known allergen or at the first sign of a reaction. Health care providers can suggest a kit and teach you to administer the shot. Close family, friends, and caregivers should be taught to use the kit, too. Also, wear a Medic Alert bracelet to alert others that you have a history of this condition.

### Treatment Plan

Get emergency medical care right away to maintain breathing, blood pressure, and heart function and to reverse the reaction.

### Drug Therapies

Adrenaline (epinephrine) should be given right away. Once at the hospital, additional drugs, including antihistamines and corticosteroids, may be used to control symptoms and prevent delayed relapse.

## Surgical and Other Procedures

For breathing trouble, health care providers may need to open the airway with an endotracheal tube and possibly connect a ventilator. Other procedures may be needed to stabilize blood pressure.

## Complementary and Alternative Therapies

Anaphylaxis always requires conventional emergency medical care and should not be treated with CAM therapies. However, some CAM therapies may be helpful in preventing allergic responses, including anaphylaxis, or in lessening the severity of any allergic reaction. Keep in mind, though, that some herbs and supplements -- just like prescription drugs -- can cause allergic reactions, including anaphylaxis. If you have allergies, talk to your health care provider before taking any herbs or supplements.

## Nutrition and Supplements

The following nutrients may help support your immune system and reduce or prevent allergic reactions, though there is no scientific evidence that they will help prevent anaphylaxis:

- Quercetin (400 - 500 mg per day in divided doses) -- a flavonoid and antioxidant found in many plants that may help reduce allergic reactions. Some people may get more benefit from the water-soluble form of quercetin, called quercetin chalcone.
- Vitamin C (1,000 mg two to six times per day for a short period) -- Supports immune system function and also enhances the effect of quercetin. Lower the dose if diarrhea develops.
- Zinc (30 mg per day) -- Animal studies suggest that zinc may help protect against gastrointestinal symptoms (stomach cramps, nausea, vomiting, or diarrhea) that sometimes accompany anaphylaxis.

## Herbs

Some herbs may help support your immune system and reduce the frequency or severity of allergic reactions, although there is no evidence they can prevent anaphylaxis. Anaphylaxis is a medical emergency and should never be treated with herbs.

- *Alpinia galanga* (2 to 4 g per day) -- One of several plants commonly called galangal used as a spice in Thai food, *Alpinia galanga* is a member of the ginger family. Preliminary animal studies suggest it may have some antihistamine properties. Take capsules or drink tea. To make tea, steep 1 g in 1 cup boiling water for 10 minutes, strain, and cool.

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- Ashwagandha (*Withania somnifera*, 1 to 6 g per day) -- An antioxidant that supports immune system function and may have antihistamine properties. Ashwagandha can interact with other herbs and prescription medications, so take it only under your doctor's supervision. Do not take ashwagandha if you are pregnant or trying to become pregnant, or if you take thyroid medication or corticosteroids (prednisone).
- Chinese skullcap (*Scutellaria baicalensis*, 1 to 2 g per day) -- May have antihistamine properties
- Licorice (*Glycyrrhiza glabra*, 100 - 300 mg per day) -- Has been used traditionally to support the immune system and may have antihistamine properties. Do not take licorice if you have high blood pressure or heart disease.
- Stinging nettle (*Urtica dioica*, 300 mg four times per day) --Has anti-inflammatory and antihistamine properties. Look for freeze-dried encapsulated nettles, which are believed to retain most of the antihistamine effects of the plant.

Several studies suggest that medicinal plants traditionally used in Asia to prevent or treat allergic reactions may help prevent anaphylaxis. These herbal remedies include:

- Sweet chestnut tree ( *Castanea crenata*) -- contains quercetin, and reduced skin and blood vessels reactions related to anaphylaxis in animal studies.
- Spreading sneezeweed ( *Centipeda minima*) -- contains flavonoids, and is used in Traditional Chinese Medicine for its anti-inflammatory and antihistamine effects.
- Asian rose (*Rosa davurica*) -- traditionally used to support immune system. It inhibited anaphylaxis in an animal study.
- Hardy orange ( *Poncirus trifoliata*) -- used traditionally for treatment of allergies. Animal studies have shown inhibition of anaphylaxis.

Other therapies that are combinations of specific herbs have been tested in animals and show some signs of preventing anaphylaxis. You should consult a licensed, qualified herbalist for more information about these combinations.

## ***Herbs to avoid***

You can also have an allergic reaction to herbs. There have been reports of allergic reactions to the following herbs:

- Arnica flower (*Arnica montana*)
- Artichoke leaf (*Cynara scolymus*) -- in those with an allergy to artichokes
- Blessed thistle herb (*Cnicus benedictus*)
- Cayenne pepper (*Capsicum spp.*)
- Cinnamon bark (*Cinnamomum verum*)
- Dandelion root or herb (*Taraxacum officinale*) -- may trigger a reaction in those with latex allergy
- Echinacea (*Echinacea purpurea*)
- Fennel oil and fennel seed ( *Foeniculum vulgare*)
- Feverfew (*Tanacetum parthenium/Chrysanthemum parthenium*)

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- *Ginkgo biloba* leaf extract
- Poplar bud (*Populus* spp.) -- may trigger a reaction in those with salicylate (aspirin) sensitivity
- Psyllium seed (*Plantago* spp.) -- allergic response more common with powder or liquid form
- St. John's wort (*Hypericum perforatum*)
- Yarrow (*Achillea millefolium*)

## **Homeopathy**

Anaphylaxis requires immediate emergency medical attention. While the following homeopathic remedies have been used for allergic reactions including symptoms of anaphylaxis, they should be administered only under the guidance of a certified, trained homeopath in the appropriate circumstances. Before prescribing a remedy, homeopaths take into account a person's constitutional type-- your physical, emotional, and psychological makeup. An experienced homeopath assesses all of these factors when determining the most appropriate treatment for each individual.

- *Aconitum* --helps alleviate the tremendous anxiety and fear of dying that may occur during or immediately following an anaphylactic reaction
- *Arnica montana* --may be used in the case of shock or following a traumatic experience
- *Apis mellifica* -- for puffy, rapidly swelling skin following an insect bite or sting.

## **Acupuncture**

Acupuncture has been used to support immune system function and to relieve symptoms of seasonal allergies, as well as to lessen chronic allergies and sensitivities. One animal study found that electroacupuncture (applying an electrical charge to acupuncture needles) seemed to help animals survive allergic shock, compared to no treatment at all. While you should never delay conventional treatment of anaphylaxis, this study suggests acupuncture may be a useful supportive therapy. More research is needed.

## **Prognosis/Possible Complications**

Without proper treatment, anaphylaxis can be fatal. Most people who receive proper treatment do well, however. Once you have anaphylaxis, you will not necessarily have it again even with exposure to the same allergen. But the risk is high, so do your best to avoid any substances that caused the reaction. Drugs classified as beta-blockers, monoamine oxidase inhibitors, ACE inhibitors, and ARBs may make anaphylaxis worse or interfere with treatment. If you have a history of anaphylaxis, check with your doctor or pharmacist to find out if you take one of these medications.

## Following Up

You may need to stay in the hospital for 24 hours to make sure no new symptoms will occur. For a severe reaction, your doctor may monitor heart function or admit you to the intensive care unit.

## Supporting Research

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