

UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

HIVES (Urticaria)

WHAT ARE HIVES?

Hives are raised, red, intensely itchy areas of the skin (sometimes called “wheals” or “welts”) typically caused by an exposure to a specific trigger. The medical term for hives is “urticaria”. Hives vary in size and shape and are usually painless. They can appear anywhere on the body. Common sites include the arms, legs, and trunk. Individual lesions often enlarge over minutes to hours and disappear within 24 hours. However, new lesions may appear as old ones resolve.

Hives can be classified as acute or chronic:

- ❖ **Acute hives** are the most common type. They usually appear suddenly and disappear within a few hours. However, symptoms can last anywhere from a few minutes to 2 weeks.
- ❖ **Chronic hives** occur daily or almost daily for at least 6 weeks. Symptoms may come and go intermittently for years. However, almost 50% of people are symptom-free within one year. Though chronic hives can be frustrating, the condition is not contagious or life-threatening.

WHAT CAUSES HIVES?

Hives are the result of the immune system’s activation of mast cells in the skin, which results in the release of a chemical called histamine. Histamine causes the redness, swelling, and itching associated with hives. Any number of allergens, irritants, or triggers can activate this immune response. Often, no specific cause can be identified.

- ❖ **Acute hives** are often caused by a known trigger. Hives due to an allergic response usually appear within minutes to 2 hours after exposure to the triggering substance. Non-allergic triggers of mast cell activation, such as infections and other medical conditions, can also lead to hives. Common triggers include:
 - Food allergies: Symptoms usually appear within 30 minutes of eating the offending agent. Foods most likely to cause hives in adults include fish, shellfish, and nuts; in children, milk, eggs, nuts, soy and wheat are the most common triggers.
 - Medications: Antibiotics (eg. penicillin, cephalosporins, sulfa drugs, etc) and NSAIDs (eg. aspirin, ibuprofen, naproxen, etc) are common allergy triggers. Narcotics, muscle relaxants used in anesthesia, and IV contrast dye can trigger hives via a different activation pathway.
 - Insect stings: Hives around the site of the sting are common. However, hives that appear all over the body after an insect sting could be a sign of a serious allergic reaction and require immediate medical intervention.
 - Touching certain substances: Examples include animal fur/saliva, plants, raw fruits or vegetables, latex, ingredients in soaps/skin products/cosmetics, etc.
 - Infections: Viral, bacterial, or parasitic infections can trigger hives during or after the infection. Viral triggers are most common. Hives often appear as the immune system begins to clear the virus, sometimes a week or more after the onset of illness; these hives usually resolve on their own in 1-2 weeks.
- ❖ **Chronic hives** are usually not caused by allergies. Most of the time, the cause is unknown. Changes in the immune system may contribute to symptoms. Some known causes include:
 - Inducible hives, a subset of chronic hives triggered by physical factors. Examples include:
 - Exposure to heat or cold: Hives can appear as cold skin warms. Sweating or heat may result in numerous tiny red hives.
 - Vibration: The palms of the hands may become red and itchy after driving a car.
 - Pressure: Hives (or redness/swelling without obvious hives) can appear on the palms or soles of the feet after carrying heavy objects or walking long distances.
 - Exercise: Hives that appear during or immediately after exercise are rare but may progress to a life-threatening allergic reaction. Often eating a certain food prior to exercise triggers the reaction.
 - Exposure to sun or water (rare causes of hives).
 - Chronic hives may also be a sign of an underlying medication condition (such as lupus, thyroid disease, liver disease, etc); however, other symptoms are usually present.

WHAT IS ANGIOEDEMA?

Angioedema is similar to hives but occurs in deeper layers of the skin. Up to one half of people with hives develop angioedema. Symptoms include:

- Swelling of the face, eyelids, lips, tongue, mouth, throat, hands, feet, and/or genitals (this swelling is often assymetric in distribution).
- Swelling of the bowels, which can cause colicky abdominal pain with/without nausea, vomiting, and/or diarrhea.

Angioedema is typically benign and transient, but can become **life-threatening** if swelling of the throat or tongue blocks the airway and impairs breathing. Concerning symptoms include throat tightness, difficulty swallowing, a hoarse voice, and trouble breathing.

HOW ARE HIVES DIAGNOSED?

Hives are diagnosed based upon their appearance. Your medical provider will also take a detailed history about possible exposures to identify a cause. If the cause is not clear, you may be asked to keep a diary of everything you eat, drink, take, and are exposed to for 2-4 weeks. In some cases, you may be referred to an allergist for further testing.

If symptoms last beyond 6 weeks, blood tests may sometimes be recommended to determine if an underlying medical condition is causing the hives.

HOW ARE HIVES TREATED?

The first treatment is to avoid any known triggers. In most cases, hives will resolve without specific treatment, but medications are used to help symptoms resolve faster.

❖ GENTLE SKIN CARE

- Soak in a lukewarm bath, or use cool compresses for symptom relief.
- Avoid heat or rubbing the skin, which can release more histamines and worsen symptoms.
- Wear loose cotton clothing. Avoid rough, tight, or scratchy material.

❖ MEDICATIONS

- **Oral antihistamines**, the mainstay of treatment, are used to decrease itching and hives.
 - Many patients take a non-sedating H1 antihistamine, such as cetirizine (Zyrtec), loratadine (Claritin), or fexofenadine (Allegra), once daily in the morning to control daytime symptoms and a sedating H1 antihistamine, such as diphenhydramine (Benadryl), at bedtime, especially if symptoms are affecting sleep.
 - An H2 antihistamine, typically used to treat heartburn, may also be prescribed at the same time to control symptoms. Famotidine (Pepcid) 20mg twice daily is commonly used.
 - Patients with chronic hives may require daily use of antihistamines until symptoms are controlled for at least 3 months. They may also consider avoiding NSAIDs, which do not cause but can worsen symptoms.
- **Corticosteroid creams** prescribed twice daily help reduce inflammation and itching. Only a thin layer of the medication is needed to be effective. Excessive or long-term use can cause thinning and whitening of the skin. Higher-dose creams should not be used on the face or neck unless specifically directed by your healthcare provider.
- **Oral corticosteroids**, such as prednisone, may be prescribed for a few days if the rash is severe or not responding to high-dose antihistamine use. These medications should be taken with food to avoid an upset stomach. They can cause insomnia if taken later in the day. Prolonged use of oral steroids should be avoided due to potential health risks.

❖ CALL 911 if you have sudden onset of hives or angioedema PLUS any of the following: trouble breathing, throat tightness, nausea/vomiting, abdominal cramps, or passing out.

- These may be symptoms of a severe allergic reaction, known as anaphylaxis, which should be treated immediately with **epinephrine**, an injection given to prevent or treat life-threatening airway obstruction and/or very low blood pressure. Epinephrine is most effective when given before symptoms become severe. Patients treated with epinephrine in clinic must be monitored closely in the emergency room.
- After being diagnosed with a severe allergy, such as to bee stings or peanuts, your medical provider will prescribe an **EpiPen** to carry on your person. The EpiPen is a single-dose injection of epinephrine that you can give yourself to counteract a severe allergic reaction until medical help arrives. **You should always call 911 after using your EpiPen.**