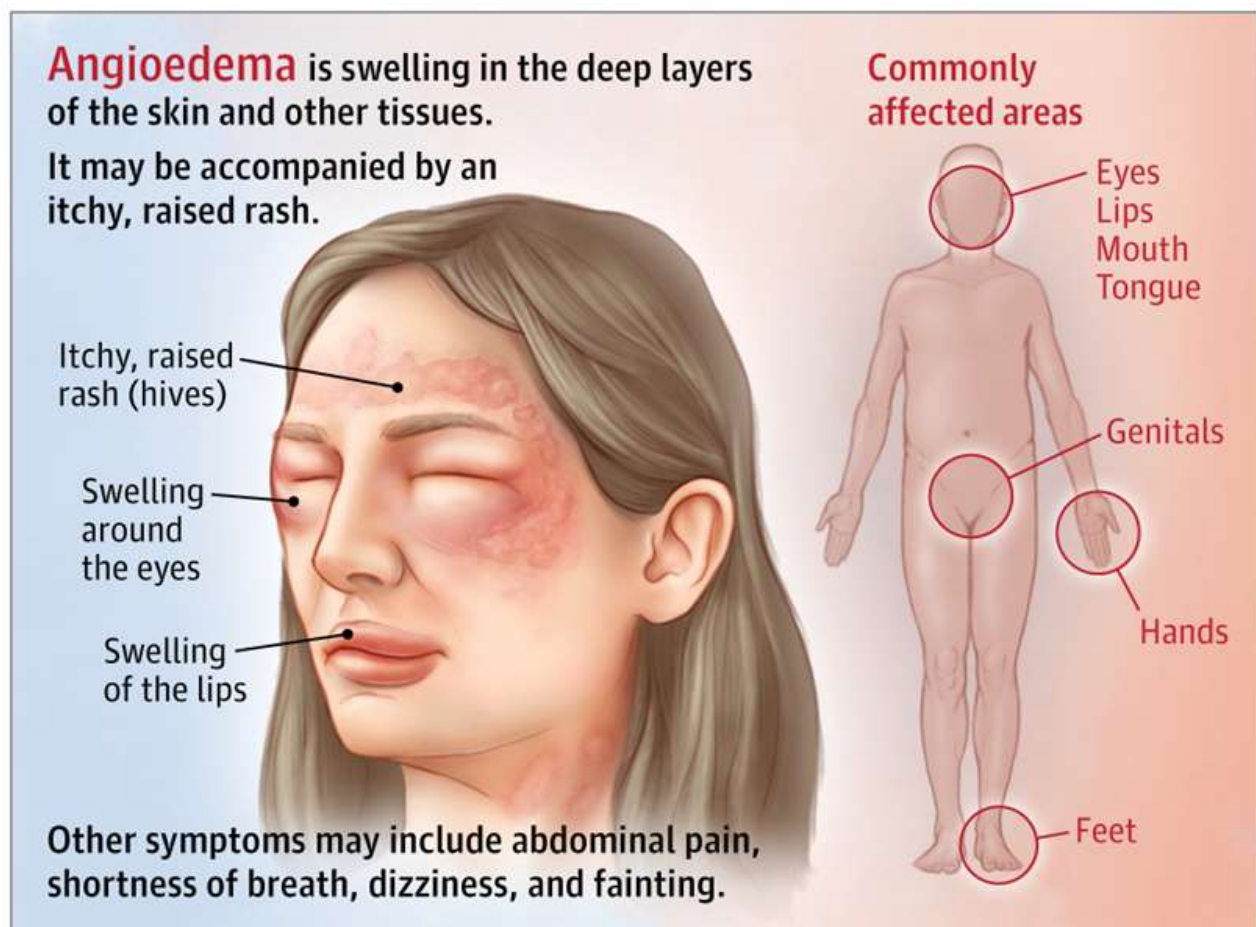




Angioedema

Angioedema is swelling caused by fluid leakage from blood vessels into the surrounding skin and tissue.

Angioedema can involve any part of the body but is usually more pronounced around the eyes, lips, mouth, tongue, extremities, and genitalia. The swelling may be accompanied by hives, which are more superficial, while angioedema affects the deeper layers of skin.



Causes and Types of Angioedema

There are multiple causes of angioedema. **Allergic** angioedema is the most common type and includes reactions to foods such as peanuts and shellfish, medications including antibiotics, insect bites and stings, and latex. **Nonallergic, drug-induced** angioedema is caused by certain medicines including a commonly prescribed blood pressure drug class, **angiotensin-converting**



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enzyme inhibitors (such as lisinopril). This type occurs without an allergic component and is not associated with itching or hives. The relatively rare **hereditary** angioedema is caused by lack of or dysfunction in an enzyme in the **complement pathway**, which is part of the immune system. **Acquired** angioedema is related to infections, autoimmune diseases, and, rarely, malignancies such as lymphoma. **Idiopathic** angioedema means there is no clear cause.

Symptoms

Symptoms of angioedema include swelling, often around the eyes, lips, and tongue but possibly in any part of the body, including hands, feet, and genitalia. Shortness of breath, dizziness, and fainting may also occur, and angioedema may be accompanied by abdominal pain from swelling of the intestinal tract. An itchy raised rash called **urticaria** (hives) can occur with allergic angioedema. In nonallergic angioedema, symptoms tend to occur later—hours to days after exposure.

Occasionally, more severe reactions may occur, including swelling of the airway and changes in blood pressure. This can be a medical emergency and calling 911 is recommended. Injectable epinephrine or other medication should be administered if appropriate. Potential warning signs are voice changes; a harsh vibrating noise when breathing (**stridor**); tongue or throat swelling; sudden, severe difficulty breathing; and a fainting sensation or collapse.

Prevention and Treatment

In many cases, angioedema occurs over minutes to hours and then resolves spontaneously. For allergic angioedema, avoid triggers such as allergens or medications. Treatment may not be required, but certain medications such as antihistamines and steroids may help symptoms resolve faster. In some severe cases, use of injectable epinephrine may be needed. An allergy/immunology clinic can provide detailed testing and optimal treatment.

For nonallergic, drug-induced angioedema, avoid the drug and ask your doctor to prescribe a suitable alternative. Resolution may take several days without appropriate therapeutic medication. For hereditary, idiopathic, or recurrent angioedema, seek testing and treatment by an allergy/immunology specialist.

Despite treatment, recurrence of angioedema is high, and patients and their families should be counseled about avoidance of triggers as well as signs of an emergency and appropriate responses.