Edema Overview

Edema is the medical term for swelling. Body parts swell from injury or inflammation. It can affect a small area or the entire body. Medications, infections, pregnancy, and many other medical problems can cause edema.

Edema happens when your small blood vessels become "leaky" and release fluid into nearby tissues. That extra fluid builds up, which makes the tissue swell.

Causes of Edema

Things like a twisted ankle, a bee sting, or a skin infection will cause edema. In some cases, like an infection, this may be helpful. More fluid from your blood vessels puts more infection-fighting white blood cells in the swollen area.

Edema can also come from other conditions or from when the balance of substances in your blood is off. For example:

Low albumin: Your doctor may call this hypoalbuminemia. Albumin and other proteins in the blood act like sponges to keep fluid in your blood vessels. Low albumin may contribute to edema, but it's not usually the only cause.

Allergic reactions: Edema is a part of most allergic reactions. In response to the allergen, nearby blood vessels leak fluid into the affected area.

Obstruction of flow: If drainage of fluid from a part of your body is blocked, fluid can back up. A blood clot in the deep veins of your leg can cause leg edema. A tumor blocking the flow of blood or another fluid called lymph can cause edema.

Critical illness: Burns, life-threatening infections, or other critical illnesses can cause a reaction that allows fluid to leak into tissues almost everywhere. This can cause edema all over your body.

Heart disease (congestive heart failure): When the heart weakens and pumps blood less effectively, fluid can slowly build up, creating leg edema. If fluid buildup occurs quickly, fluid in the lungs, known as pulmonary edema, can develop. If your heart failure is on the right side of your heart, edema can develop in the abdomen, as well.

Liver disease: Severe liver disease (such as cirrhosis) causes you to retain fluid. Cirrhosis also leads to low levels of albumin and other proteins in your blood. Fluid leaks into the abdomen and can also cause leg edema.

Kidney disease: A kidney condition called nephrotic syndrome can result in severe leg
Cerebral edema (brain edema): Head trauma, low blood sodium (called hyponatremia), high altitudes, brain tumors, and a block in fluid drainage (known as hydrocephalus) can cause edema. Headaches, confusion, unconsciousness, and coma can be symptoms of cerebral edema.

Medications: Many medicines can cause edema, including:

- NSAIDs (such as ibuprofen and naproxen)
- Calcium channel blockers
- Corticosteroids (like prednisone and methylprednisolone)
- Pioglitazone and rosiglitazone
- Pramipexole

When they cause swelling, usually it's mild leg edema.

Symptoms of Edema

Your symptoms will depend on the amount of edema you have and where you have it.

Edema in a small area from infection or inflammation (like a mosquito bite) may cause no symptoms at all. On the other hand, a large allergic reaction (such as from a bee sting) may cause edema on your entire arm that can bring tense skin, pain, and limited movement.

Food allergies may cause tongue or throat edema. This can be life-threatening if it interferes with your breathing.

Leg edema can make the legs feel heavy. This can affect walking. In edema and heart disease, for example, the legs may easily weigh an extra 5 or 10 pounds each. Severe leg edema can interfere with blood flow, leading to ulcers on the skin.

Pulmonary edema causes shortness of breath and sometimes low oxygen levels in the blood. Some people with pulmonary edema may have a cough.

Treatment of Edema

To treat edema, you often must treat its underlying cause. For example, you might take allergy medications to treat swelling from allergies.

Edema from a block in fluid drainage can sometimes be treated by getting the drainage flowing again. A blood clot in the leg is treated with blood thinners. They break down the clot and get drainage back to normal. A tumor that blocks blood or lymph can sometimes be shrunk or removed with surgery, chemotherapy, or radiation.

Leg edema related to congestive heart failure or liver disease can be treated with a diuretic (sometimes called a "water pill") like furosemide (Lasix). When you can pee more, fluid from the legs can flow back into the blood. Limiting how much sodium you eat can also help.