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## Patient information: Edema (swelling) (Beyond the Basics)

### Author

Richard H Sterns, MD

### Section Editor

Robert H Fletcher, MD, MSc

### Deputy Editor

John P Forman, MD, MSc

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### EDEMA OVERVIEW

Edema is the medical term for swelling caused by a collection of fluid in the small spaces that surround the body's tissues and organs. Edema can occur nearly anywhere in the body. Some of the most common sites are:

- The lower legs or hands (also called peripheral edema)
- Abdomen (also called ascites)
- Chest (called pulmonary edema if in the lungs and pleural effusion if in the space surrounding the lungs)

Ascites and peripheral edema can be uncomfortable and can be a sign of a more serious condition. Pulmonary edema, which can be life-threatening, is a symptom of heart failure and is discussed in more detail separately. (See "[Patient information: Heart failure \(Beyond the Basics\)](#)".)

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### EDEMA SYMPTOMS

Symptoms of edema depend upon the cause but may include:

- Swelling or puffiness of the skin, causing it to appear stretched and shiny. This typically is worse in the areas of the body that are closest to the ground (because of gravity). Therefore, edema is generally the worst in the lower legs (called peripheral edema) after walking about, standing, sitting in a chair for a period of time, or at the end of the day. It accumulates in the lower back (called sacral edema) after being in bed for a long period. Pushing on the swollen area for a few seconds will leave a dimple in the skin ([picture 1](#)).
- Increased size of the abdomen (with ascites).
- Shortness of breath (with edema in the chest).

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### CONDITIONS ASSOCIATED WITH EDEMA

A number of different problems can cause edema.

**Chronic venous disease** — A common cause of edema in the lower legs is chronic venous disease, a condition in which the veins in the legs cannot pump enough blood back up to the heart because the valves in the veins are damaged. This can lead to fluid collecting in the lower legs, thinning of the skin,

and, in some cases, development of skin sores (ulcers) ([figure 1](#)). (See "[Patient information: Chronic venous disease \(Beyond the Basics\)](#)".)

Edema can also develop as a result of a blood clot in the deep veins of the lower leg (called deep vein thrombosis [DVT]). In this case, the edema is mostly limited to the feet or ankles and usually affects only one side (the left or right); other conditions that cause edema usually cause swelling of both legs. (See "[Patient information: Deep vein thrombosis \(DVT\) \(Beyond the Basics\)](#)".)

**Pregnancy** — Pregnant women retain extra fluid. Swelling commonly develops in the hands, feet, and face, especially near the end of a normal pregnancy. Swelling without other symptoms and findings is not usually a sign that a complication, such as preeclampsia (sometimes called toxemia), has developed. (See "[Patient information: Preeclampsia \(Beyond the Basics\)](#)".)

**Monthly menstrual periods** — Edema in women that occurs in a cyclic pattern (usually once per month) can be the result of hormonal changes related to the menstrual cycle. This type of edema is common but does not require treatment because it resolves on its own.

**Drugs** — Edema can be a side effect of a variety of medications, including some oral diabetes medications, high blood pressure medications, non-prescription pain relievers (such as ibuprofen), and estrogens.

**Kidney disease** — The edema of kidney disease can cause swelling in the lower legs and around the eyes. (See "[Patient information: Chronic kidney disease \(Beyond the Basics\)](#)".)

**Heart failure** — Heart failure, also called congestive heart failure, is due to a weakened heart, which impairs its pumping action. Heart failure can cause swelling in the legs and abdomen, as well as other symptoms. Heart failure can also cause fluid to accumulate in the lungs (pulmonary edema), causing shortness of breath. This can be a very dangerous condition requiring emergency treatment. (See "[Patient information: Heart failure \(Beyond the Basics\)](#)".)

**Cirrhosis** — Cirrhosis is scarring of the liver from various causes, which can obstruct blood flow through the liver. People with cirrhosis can develop pronounced swelling in the abdomen (ascites) or in the lower legs (peripheral edema). (See "[Patient information: Cirrhosis \(Beyond the Basics\)](#)".)

**Travel** — Sitting for prolonged periods, such as during air travel, can cause swelling in the lower legs. This is common and is not usually a sign of a problem. [Table 1](#) provides tips to minimize leg swelling during travel ([table 1](#)).

If your leg(s) remain swollen or you develop leg pain hours or days after the flight, contact your healthcare provider. Continued swelling and pain can be signs of a blood clot (DVT). (See "[Patient information: Deep vein thrombosis \(DVT\) \(Beyond the Basics\)](#)".)

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## DIAGNOSING THE CAUSE OF EDEMA

If you develop new swelling in one or both of your legs, hands, in your abdomen, or around your eyes, you should call your healthcare provider to determine if you need to be evaluated. (See "[Clinical manifestations and diagnosis of edema in adults](#)".)

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## EDEMA TREATMENT

Treatment of edema includes several components: treatment of the underlying cause (if possible), reducing the amount of salt (sodium) in your diet, and, in many cases, use of a medication called a

