

Causes and signs of oedema

Oedema means swelling. The condition called oedema arises when part of the body becomes swollen because fluid gathers in the tissue. It most commonly affects the arms and legs. That is called peripheral oedema.

Common early signs of peripheral oedema include:

- A full or heavy feeling in an arm or leg
- The arm or leg starts to look swollen
- When you press the swelling, it leaves a dent
- Your clothing or jewellery starts to feel tight and uncomfortable
- A tight or warm feeling in the skin
- Less movement or flexibility in the affected joints
- Tautness or even pain in the affected area

If you have a problem with oedema, your doctor could do a variety of checks to find out what is causing it. This is important because it could be caused by many different things.

Oedema can be:

- a mild and temporary water retention problem that goes away by itself,
- a symptom of a serious disease that needs treatment,
- a condition that could become chronic and severe (like lymphoedema after cancer treatment or leg oedema in one leg following deep vein thrombosis), or
- an adverse effect of medication or an allergic reaction.

General puffiness or swelling caused by water retention

This kind of oedema is temporary and goes away without treatment. It can happen because you have been standing or sitting for too long. Oedema is common after a long flight, for example, or in people who have to stand for long periods at work. Many women experience oedema during their monthly period (menstruation) or during pregnancy. Oedema in pregnancy is usually harmless, although it can be a sign of other problems if blood pressure is also high.

Signs of this kind of oedema include puffiness of the hands, feet and / or face.

Oedema related to circulation (vascular), heart or liver problems

A variety of diseases can cause oedema. The oedema itself is not generally a serious problem, although sometimes the underlying condition can be serious. Examples include:

- Venous insufficiency can cause oedema in the feet and ankles, because the veins are having trouble transporting enough blood all the way to the feet and back to the heart. This means that it gathers in the legs, and fluid is forced out of the blood vessels into the surrounding tissue. Oedema can also be caused by varicose veins.
- Congestive heart failure can cause both peripheral oedema and abdominal oedema (ascites). This is because the heart is too weak to pump blood around the body properly, so the blood gathers in front of the heart. Because of this, and due to the increased blood pressure in the veins, fluid seeps out into the surrounding tissue. This may cause swelling in the legs or a build-up of fluid in the abdomen. If the person spends a lot of time lying down, the oedema might show up on his or her back (called sacral oedema). Congestive heart failure can also cause oedema in the lungs (pulmonary oedema). This is not common, but the condition is life-threatening. It means the lungs are filling with fluid because the left side of the heart is not strong enough to pump the blood returning from the lungs. The blood gathers in the blood vessels of the lung, and fluid seeps out into the lung tissue. The signs are shortness of breath and rapid, shallow breathing or coughing.
- Kidney disease could cause oedema in the legs and around the eyes, because when the kidneys do not remove enough sodium and water from the body, the pressure in the blood vessels starts building up, which can lead to oedema.
- Low protein levels in the blood can also cause oedema. If there is a lack of the protein albumin in the blood, fluid can leak out of blood vessels more easily. Low protein in the blood can be caused by extreme malnutrition, as well as kidney and liver diseases which mean that the body loses too much or produces too little protein.
- Scarring of liver tissue (liver cirrhosis) due to, for instance, long-term alcohol abuse or a liver inflammation, can cause oedema in the abdomen (called ascites). This is because cirrhosis causes a lack of proteins and congestion in the liver, which can lead to increased pressure in the blood vessels. As a result,

fluid seeps out into the abdomen.

- Severe lung conditions like emphysema can also cause oedema in the legs and feet if the pressure in the lungs and heart gets very high.

Lymphoedema

This is caused by damage to the lymphatic system. It usually affects only one part of the body, like an arm. You can read more about lymphoedema here (URL: <http://www.informedhealthonline.org/a-z-list.556.56.en.html>) . The most common cause of lymphoedema in countries like Germany is cancer treatment. It could be temporary after cancer surgery, but it can also develop into a chronic condition that can become severe.

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Glossary

emphysema

In emphysema, air is found in a part of the body where it is not supposed to be, or there is an unusual quantity of air in a particular part of the body. One well-known emphysema is pulmonary emphysema. In pulmonary emphysema, the alveoli are destroyed. Air breathed in cannot be fully exchanged, so it builds up in the lungs.

inflammation

An inflammation is a (defense) reaction of the body to an injury, irritation or infection. More blood is brought to the respective body part to protect the body. This is why this body part feels warmer, becomes swollen and red and is usually more sensitive. If the inflammation affects the mucous membranes, they secrete more fluid than usual. This helps to wash out the germs that have entered.

Sources

The German Institute for Quality and Efficiency in Health Care (IQWiG)

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You can find a list of the evidence and other scientific literature on which this information is based at www.informedhealthonline.org

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