PATIENTInformation

Understanding Heart Failure

Heart failure may sound like the heart stops working, but actually it means the heart is having trouble working optimally. The heart's job is to pump blood, carrying oxygen and nutrients, throughout the body. When weak or damaged, the heart can't do its job; the blood flow slows down and fluids begin to build up. That excess fluid backs up into the rest of the body. This condition is called *congestive heart failure (CHF)*.

Heart failure is:

- **Serious.** It can lead to congestive heart failure and pulmonary edema (puhl-mon-airy eh-deem-ah), which is fluid buildup in the lungs.
- **Chronic.** Heart failure is a lifetime disease.
- **Progressive.** Without treatment, heart failure can get worse.
- **Treatable.** Heart failure symptoms can improve with a healthy lifestyle and medicines.

How do I know if I'm at risk?

Risk factors for heart failure include:

- Age 65 and older
- African American race
- Family history
- Heart disease or heart defects
- High blood pressure
- Diabetes
- Thyroid problems

What are the warning signs?

Heart failure usually develops slowly, and the body has ways of making do even when the heart is growing weak. That's why some people may not be aware of having a heart problem until years after it started.

Most of the symptoms of heart failure are caused by poor blood flow to digestive organs, legs, and arm muscles (you may lose your appetite or feel tired and run-down) as well as excess fluid buildup in your lungs (you may feel short of breath, have trouble sleeping, or have a persistent cough). Other symptoms include a faster heart rate (the heart beats faster to make up for the loss in pumping ability) and "mental fog" (due to changing levels of important substances in the blood, such as sodium).

How can I avoid the problem?

Your best move is to make healthy choices.

- **If you smoke, stop.** Nicotine steals oxygen from your blood and temporarily raises heart rate and blood pressure.
- **Cut back on caffeine and alcohol**. Caffeine is a stimulant and can cause an increased or irregular heart rate in patients with CHF.
- **Eat a "heart-healthy" diet.** A diet low in fat, cholesterol, and salt are the key ingredients to eating healthy.
- **Exercise.** Physical activity improves your blood flow and strengthens muscle—especially heart muscle.
- **Learn how to manage stress.** Try a calming exercise, such as yoga, and get enough rest.

When do I need medical attention?

Tell your doctor if you have:

- Swelling in the feet, ankles, legs, or abdomen
- Sudden weight gain (3 or more pounds in a day or so)
- Trouble breathing
- Dizziness
- Chest pain

What tests will I need?

To find out whether you have heart failure, your doctor may perform tests such as:

- **Blood tests.** Blood tests show the levels of important substances, such as sodium and potassium. Abnormal levels may indicate a strain on the

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kidney and liver, which can be signs of heart failure.

- **Cardiac catheterization (kath-et-er-eh-zay-shun).** During this procedure, a thin, flexible tube is inserted into a blood vessel in your leg or arm. A special dye injected through the tube is visible by X-ray, which shows any blockages in your blood vessels.
- **Echocardiogram (ek-oh-kar-dee-oh-gram).** This test uses sound waves to create images of the heart.
- **Electrocardiogram (elek-tro-kar-dee-oh-gram), or EKG.** This test shows how well your heart is beating.
- **Radionuclide ventriculography (ray-dee-oh-new-clide ven-trik-you-log-ra-fee).** Substances called radionuclides are injected into your bloodstream, and pictures are taken of your heart. This allows the doctor to check your blood flow.
- **Stress test.** While walking on a treadmill, your heart rate, breathing, and blood pressure are monitored.
- **X-ray.** An X-ray can show whether your heart is larger than normal and whether your lungs are congested.

How is it treated?

Heart failure treatment combines lifestyle changes and medicines, such as:

- **Angiotensin-converting enzyme (ACE) inhibitors.** ACE inhibitors expand blood vessels and help blood flow more easily.
- **Angiotensin II receptor blockers (ARBs).** ARBs improve blood flow and prevent blood pressure from rising.
- **Anticoagulants.** Sometimes called blood thinners, anticoagulants decrease the clotting ability of the blood.
- **Antiplatelet agents.** These drugs keep blood clots from forming by preventing platelets from sticking together.
- **Beta blockers.** Beta blockers slow the heart rate and lower blood pressure.
- **Calcium channel blockers (CCBs).** CCBs help to relax blood vessels and ease the heart's pumping.
- **Digoxin.** Digoxin helps your heart pump better.
- **Diuretics.** Diuretics, or water pills, help your body get rid of extra water.
- **Statins.** Statins are used to lower LDL ("bad") cholesterol, raise HDL ("good") cholesterol, and lower triglyceride levels.
- **Vasodilators (vass-oh-dye-laters).** Drugs in this class lower blood pressure by relaxing blood vessels.

Surgery isn't often used to treat heart failure, but sometimes it's done to correct an underlying problem, such as a defect or blocked artery. Surgeries include:

- **Coronary artery bypass.** In bypass surgery, the blood supply is redirected around a blocked section of the artery.
- **Heart transplant.** When the heart is too damaged for medicine and lifestyle changes to help, a heart transplant may be the best option.
- **Percutaneous (per-kew-tane-eeus) coronary intervention (PCI).** This surgery reopens blocked vessels.
- **Implantable medical devices.** Implant options may include replacement of a bad valve, a defibrillator to correct an abnormal rhythm, or a left ventricular assist device to maintain the heart's pumping ability.

Heart failure can't be cured, but it can be treated and you can have a high quality of life. The key is to get regular medical care, take the medicines your doctor prescribes, and make healthy changes to your lifestyle. For more information on heart failure, visit the American Heart Association's website: http://www.heart.org.

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