

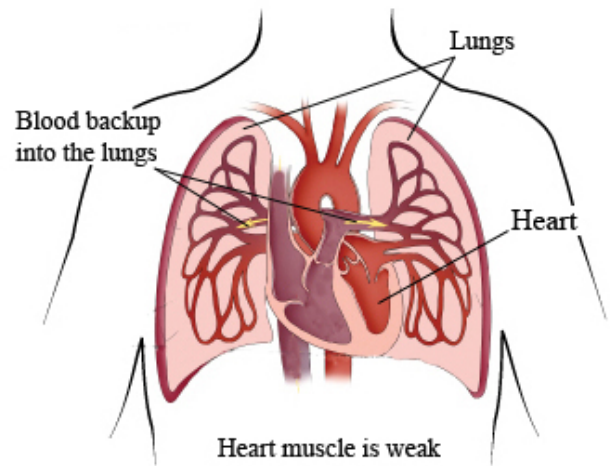
# Heart Failure

Heart failure (HF) is a condition in which the heart has trouble pumping blood. This means your heart does not pump blood efficiently for your body to work well. In some cases of heart failure, fluid may back up into your lungs or you may have swelling (*edema*) in your lower legs. Heart failure is a long-term (*chronic*) condition. It is important for you to take good care of yourself and follow your caregivers treatment plan.

## CAUSES:

Heart failure can result from different health conditions and unhealthy lifestyle choices.

- Some of the health conditions include:
  - **High blood pressure (*Hypertension*)** causes the heart muscle to work harder than normal. When pressure in the blood vessels is high, the heart has to pump (*contract*) with more force in order to circulate blood throughout the body. High blood pressure eventually causes the heart to become weak and stiff.
  - **Coronary artery disease (CAD)** is the build up of cholesterol and fat in the arteries of the heart. The blockage in the arteries deprives the heart muscle of oxygen and blood. This can cause chest pain and may lead to a heart attack. CAD can also cause high blood pressure.
  - **Heart Attack (*Myocardial Infarction*)** occurs when the arteries in the heart become blocked. The loss of oxygen damages the muscle tissue of the heart. When this happens, part of the heart muscle dies. The injured tissue does not contract as well and weakens the heart's ability to pump blood.
  - **Abnormal heart valves** can cause heart failure when the heart valves do not open and close properly. This makes the heart muscle pump harder to keep the blood moving.
  - **Heart muscle disease (*cardiomyopathy or myocarditis*)** is damage to the heart muscle from a variety of causes. These can include drug or alcohol abuse, infections, or unknown reasons. These can increase the risk of heart failure.
  - **Lung disease** makes the heart work harder when the lungs do not work properly. This can cause the heart to beat faster so oxygen can be delivered throughout the body.
  - **Diabetes** increases the risk of heart failure. High blood sugar contributes to high fat (*lipid*) levels in the blood. Diabetes can also cause slow damage to tiny blood vessels that carry important nutrients to the heart muscle. When the heart does not get enough oxygen and food, it can cause the heart to become weak and stiff. This leads to a heart that does not contract efficiently.
  - **Thyroid disease** can make the heart beat at a fast pace. This can overwork and eventually weaken the heart.
- Unhealthy lifestyle habits can lead to heart failure. These can include:
  - **Obesity.**
  - **Smoking.**
  - **Eating foods high in fat and cholesterol.**
  - **Eating or drinking foods high in salt.**
  - **Drug or alcohol abuse.**
  - **Lack of exercise.**



## SYMPTOMS

Heart failure symptoms may vary and can be hard to detect. Symptoms may include:

- Shortness of breath with activity, such as climbing stairs.
- Persistent cough.

- Swelling of the feet, ankles, legs or abdomen.
- Unexplained weight gain.
- Difficulty with lying flat because it is hard to breathe.
- Waking from sleep because of the need to sit up and get more air.
- Rapid heartbeat.
- Fatigue and loss of energy.
- Feeling light-headed or close to fainting.

### DIAGNOSIS:

A diagnosis of heart failure is based on your history, symptoms, physical examination, and diagnostic tests.

- Diagnostic tests for heart failure may include:
  - EKG.
  - Chest X-ray.
  - Blood tests.
  - Exercise stress test.
  - Blood oxygen test (*arterial blood gas*).
  - Evaluation by a heart doctor (*cardiologist*).
  - Ultrasound evaluation of the heart (*echocardiogram*).
  - Heart artery test to look for blockages (*angiogram*).
  - Radioactive imaging to look at the heart (*radionuclide ventriculography*).

### TREATMENT:

Treatment is aimed at managing the symptoms of heart failure. Medications, lifestyle changes or surgical intervention may be necessary to treat heart failure.

- Medications to help treat heart failure may include:
  - **Angiotensin-converting-enzyme (ACE) inhibitors** block the effects of a special blood protein called angiotensin-converting enzyme (ACE). ACE causes blood vessels to narrow (*constrict*) and raises blood pressure. ACE inhibitors relax (*dilate*) the blood vessels and help lower blood pressure. This decreases the workload of the heart and slows the progression of heart failure.
  - **Diuretics** are also known as “water pills.” Diuretics cause the kidneys to remove salt and water from the blood. The extra fluid is excreted by urination. By removing extra fluid from the body, this lowers blood pressure and helps the heart pump better. Diuretics also help prevent fluid in the lungs so breathing is easier.
  - **Vasodilators** help the blood vessels to relax and allow the blood to flow more easily. This also helps lower blood pressure. People who cannot tolerate an ACE inhibitor may be prescribed a vasodilator.
  - **Beta blockers** prevent the heart from beating too fast. Beta blockers help maintain a normal heart rate and lowers blood pressure.
  - **Digitalis** increases the force of the heartbeat and may be helpful to people with heart failure.
  - **Calcium channel blockers** block the amount of calcium used by the heart. By slowing the amount of calcium used by the heart, calcium channel blockers improves blood circulation and lowers blood pressure.
  - **Cholesterol-Lowering Drugs** work to reduce the amount of fat (*plaque*) in the blood. The reduction of plaque on artery walls can decrease the risk of clots. A clot that breaks off from the artery wall can result in a heart attack or stroke.
- Healthy lifestyle changes include:
  - Stop smoking.
  - Eat a healthy diet. Avoid food high in fat. Avoid foods fried in oil or made with fat. A dietician can help with healthy food choices.
  - Limit how much salt you eat.
  - Limiting alcohol intake to 1 or 2 drinks a day.
  - Exercise as told by your caregiver.
- Surgical treatment for heart failure may include:
  - Procedures to open blocked arteries, repair damaged heart valves, or removal of damaged heart muscle tissue.
  - A pacemaker to help the heart pump better.

## HOME CARE INSTRUCTIONS:

- **Activity Level**-Your caregiver can help you determine what type of exercise program may be helpful. It is important to maintain your strength. Pace your physical activity to avoid shortness of breath or chest pain. Rest for an hour before and after meals. A cardiac rehabilitation program may be helpful to some people with heart failure.
- **Diet**-Eat a heart healthy diet. Food choices should be low in saturated fat and cholesterol. Talk to a dietician to learn about heart healthy foods.
- **Salt Intake**-When you have heart failure, you will need to limit the amount of salt you eat. Lessen your salt intake as directed by your caregiver. Talk to a dietician to learn about low salt foods.
- **Weight Monitoring**-Weigh yourself everyday. You should weigh yourself in the morning after you urinate and before you eat breakfast. Wear the same amount of clothing when you weigh yourself. Record your weight daily. Bring your recorded weights to you clinic visits. Any change of more than misc320 pounds in a day should be discussed with your caregiver.
- **Blood pressure monitoring** should be done as directed by your caregiver. A home blood pressure cuff can be purchased at a drugstore. Record your blood pressure numbers and bring them to your clinic visits. Tell your caregiver if you become dizzy or lightheaded upon standing up.
- If you are currently a **smoker**, it is time to quit. Nicotine makes your heart work harder by causing your blood vessels to constrict. Do not use nicotine gum or patches before talking to your caregiver.
- Be sure to schedule a follow-up visit with your caregiver. **Keep all your appointments!**

## SEEK MEDICAL CARE IF:

- Your weight increases by misc320 or more pounds in a day.
- You notice increasing shortness of breath that is unusual for you. This may happen during rest, sleep or with activity.
- You cough more than normal, especially with physical activity.
- You notice more swelling in your hands, feet, ankles or abdomen.
- You are unable to sleep because it is hard to breathe.
- You cough up bloody mucus (*sputum*).
- You begin to feel a “jumping” or “fluttering” sensations (*palpitations*) in your chest.

## SEEK IMMEDIATE MEDICAL CARE IF:

- You have **severe** chest pain or pressure which may include symptoms such as:
  - Pain or pressure in the arms, neck, jaw or back.
  - Feeling sweaty.
  - Feeling sick to your stomach (*nauseated*).
  - Feeling short of breath.
  - Have a fast or irregular heart beat.
- You experience stroke symptoms. These symptoms include:
  - Facial weakness or numbness.
  - Weakness or numbness in an arm, leg or on one side of your body.
  - Blurred vision.
  - Difficulty talking or thinking.
  - Dizziness or fainting.
  - Severe headache.

**THESE ARE MEDICAL EMERGENCIES. DO NOT WAIT** to see if the symptoms go away. Get immediate medical help at once. Call your local emergency department for help. **DO NOT** drive yourself to the hospital.

## IMPORTANT:

- Make a list of every medicine, vitamin, or herbal supplement you are taking. Keep the list with you at all times. Show it to your caregiver at every visit. Keep the list up to date.
- Ask your caregiver or pharmacist to write an explanation of each medicine you are taking. This should

include:

- Why you are taking it.
- The possible side effects.
- The best time of day to take it.
- Foods to take with it or what foods you should avoid.
- When to stop taking it.

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