How the Cardiovascular System Works:

• Oxygen-poor blood is pumped from the rest of the body to the heart
• Your heart pumps the oxygen-poor blood to your lungs where it picks up oxygen. The oxygen-rich blood then returns to your heart
• Your heart pumps oxygen-rich blood to your body through blood vessels

Understanding Heart Failure

When you have heart failure, it does not mean your heart has stopped working. It does mean your heart is not pumping as well as it should.

There are two main types of heart failure: systolic and diastolic. Systolic heart failure occurs when the heart pumps with less force. Diastolic heart failure occurs when the heart becomes stiff and can’t fill with blood.

Conditions that cause heart failure include:

• Coronary artery disease (narrowing of the blood vessels that supply blood to the heart)
• Past heart attack
• High blood pressure
• Heart valve disease
• Cardiomyopathy (primary disease of the heart muscle)
• Congenital heart disease (defects in the heart present at birth)
• Infection of the heart valves and/or the heart muscle

Effects of Heart Failure

Lung Congestion

When your heart is not pumping well, blood can back up in your lungs and force fluid into the breathing spaces. The fluid then builds up, causing congestion in the lungs.

Symptoms of lung congestion may include:

• Shortness of breath, wheezing or coughing when you exert yourself
• Problems breathing when lying flat
• Waking up at night coughing or short of breath
• Coughing up sputum (a thick liquid) colored with blood
Fluid Buildup

When your heart is not pumping well, blood can back up in your blood vessels and force fluid into your body tissue. The fluid then builds up, causing congestion throughout the body.

Symptoms of fluid buildup include:
- Rapid weight gain
- Swelling (called edema) in the feet, ankles, legs and abdomen, as well as other parts of the body
- The need to urinate many times during the night

Decreased Blood Flow

If your heart is not pumping well, less blood moves through your body and your tissues and organs don’t get the oxygen they need.

Symptoms include:
- Trouble exerting yourself
- Feeling weak, tired, dizzy
- Confusion and trouble thinking clearly

Kidney Problems

Your kidneys help rid your body of salt (sodium) and excess water. When your heart is not pumping well, your kidneys do not get the blood they need to do their work. Salt and excess water build up and make your body even more congested.

Changes in Your Heart

When your heart is not pumping well, it tries to make up for its loss of power. Your heart may get bigger so it can hold and pump more blood. Your heart may build more muscle mass to increase its pumping power, and it may beat faster. At first, these changes help your heart work normally. In the end, they only make your heart more tired.

Diagnosing Heart Failure

A medical exam and consultation helps your physician diagnose heart failure and develop the best treatment plan for you.

During the exam, your physician may:
- Ask about your medical history
- Look for signs of heart failure, such as shortness of breath, weakness, swollen ankles and feet
- Check for possible causes such as high blood pressure
- Listen to you breathe with a stethoscope

Your physician may also recommend medical tests such as:
- Echocardiograms, which use sound waves to produce images of your heart
- Electrocardiograms, which use a recording device to measure the electrical activity of your heart
- Chest X-rays

Living with Heart Failure

Your heart failure treatment plan may include medications for heart failure and/or for the conditions that may have weakened your heart in the first place. Be sure to take the medication as prescribed. Call your physician if you have any side effects, but keep taking your medication unless your physician tells you to stop. Your physician also may recommend a lifestyle plan that can help you live with heart failure.

This plan may include:
- Eating less salt
- Drinking less fluid
- Exercising moderately
- Keeping track of your weight
- Getting enough rest and relaxation
- Taking care of yourself