A Guide to Improving Your Heart Health

Living Well With

Heart Failure







Living Well With

Heart Failure

CardioSmart is the patient education and empowerment initiative brought to you by the American College of Cardiology. Our mission is to help individuals prevent, treat and manage cardiovascular disease. Today, nearly 6 million adults in the U.S. have heart failure. If you or a loved one is managing the condition, this guide is for you.

In the guide, you'll find information about what heart failure is and how to treat it. We also provide resources to help you live well with the condition. The included worksheets make it easier to keep track of your activity, weight and medications. Know your symptoms and watch for signs you are getting worse. If you feel worse, talk to your health care provider right away. Following these steps can help avoid a trip to the hospital.

CardioSmart is here to help you. For more information on heart failure and other conditions, visit *CardioSmart.org*.



Martha Gulati MD, MS, FACC, FAHA, FASPC Editor-in-Chief of CardioSmart

Contents

What is Heart Failure?3
About Heart Failure3
What Causes Heart Failure?4
Signs and Symptoms of Heart Failure5
Diagnosing Heart Failure6
Living With Heart Failure8
Treating Heart Failure15
Questions to Ask Your Health Care Provider
Resources

MEDICAL REVIEWERS:

Martha Gulati, MD, MS, FACC, FAHA, FASPC, Editor-in-Chief of CardioSmart Michelle M. Kittleson, MD, PhD, FACC R. Kannan Mutharasan, MD, FACC

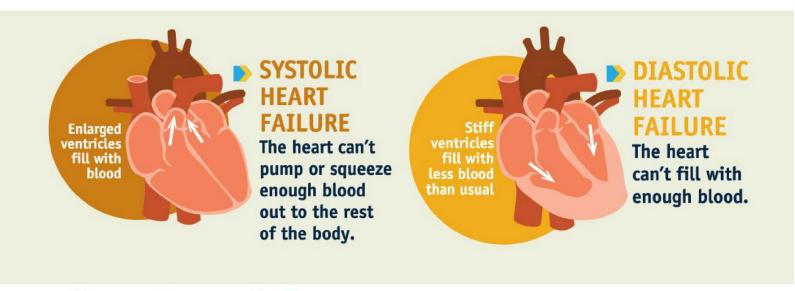
CardioSmart is sponsored in part by Novartis.



What is Heart Failure?

Your heart is a pump that moves blood and oxygen-rich nutrients throughout your body. When healthy, the heart does this very effectively.

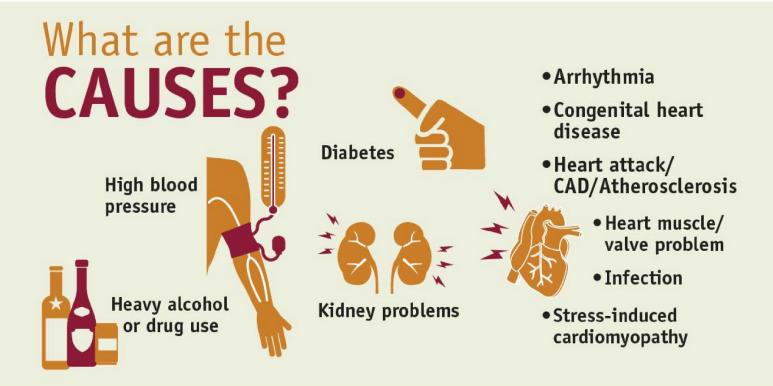
But for some people, the heart doesn't pump as well as it should. Because of this, fluid can build up in the lungs and legs, as well as other parts of the body. In addition, the heart isn't able to pump enough blood to meet the body's needs for blood and oxygen. This condition is called heart failure.



About Heart Failure

Heart failure does not mean that the heart has stopped working. It simply means that the heart isn't working as well as it should. It is a very serious, lifelong (chronic) condition that must be treated and requires careful management. But many people with heart failure lead full, active lives by managing their condition. By doing so, they're able to stay out of the hospital and enjoy a good quality of life.

Heart failure is actually a very common condition. Nearly 6 million Americans have it, and 500,000 new cases are diagnosed each year. Heart failure is the main reason for hospital admissions for people 65 and older. But heart failure can affect people of all ages.



What Causes Heart Failure?

The most common causes of heart failure include high blood pressure (hypertension), heart attack and coronary artery disease. But other conditions and factors can lead to heart failure, as well. These include:

- Diabetes
- Age: The older you are, the higher your risk for getting heart failure
- Heart valve problems
- Atrial fibrillation and other types of heart rhythm problems
- Some congenital heart defects or other heart conditions that have damaged or strained the heart
- A family history of heart failure

- Damage to the heart muscle (cardiomyopathy), some thyroid conditions and heavy alcohol or drug use
- Race: Being African American increases your risk
- Gender: Women tend to develop more severe symptoms
- Disease of the sac around the heart (pericardial disease), such as pericarditis

Signs and Symptoms of Heart Failure

Heart failure has well-defined symptoms. In the earlier stages, these can include shortness of breath (even when doing simple tasks, such as dressing or taking a flight of stairs); extreme tiredness (fatigue); feelings of weakness or dizziness; and rapid heartbeat (palpitations) or irregular heartbeat.

As heart failure progresses your symptoms will worsen as fluid starts to build up in your lungs and other parts of your body, causing:

- Swelling (edema) of the ankles, feet or legs
- Shortness of breath while resting
- Rapid weight gain, or rapid changes in weight
- Need to urinate more at night
- Coughing or wheezing when lying flat
- Pressure or heaviness in the chest while lying flat

As the disease progresses, people with heart failure may notice a lack of appetite or feeling full more quickly, as well as weight changes.



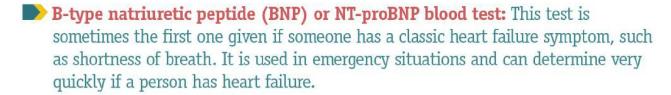
Diagnosing Heart Failure

Your health care provider will conduct a complete physical exam and review your family

history during your office visit. A complete review of blood and/or cardiac imaging tests will also be conducted. But many heart failure patients first learn that they have the condition after a visit to the emergency room or hospital with symptoms—often shortness of breath (with or without swelling).

The blood and imaging tests can include:





- Electrocardiogram (ECG/EKG): This cardiac test records your heart's electrical activity through electrodes that are attached to your skin. The impulses your heart generates show up as waves on a monitor or printed on paper. It's a painless test. Your health care provider can detect problems with your heart's rhythm or damage from a heart attack that could be the underlying cause of heart failure.
- **Echocardiogram (Ultrasound):** Using sound waves, this test creates a video image of your heart. This can help your health care provider see how well your left ventricle is pumping or how stiff your heart is. It can also show problems with heart valves and damage from previous heart attacks.



Chest X-ray: Heart failure can cause fluid to build up in your lungs, and a chest X-ray can help your health care provider see if there is fluid buildup and rule out other possible reasons for your symptoms.

Stress test: You may be attached to an ECG machine during this procedure, in which you simply walk on a treadmill or pedal a stationary bike. Your health care provider will measure how your heart responds to physical exertion, which can help determine if you have coronary artery disease. If you are unable to exercise, this test can be performed with medications that simulate the body's response to physical activity. Your provider may image your

heart at the same time, using an

Cardiac catheterization: This procedure uses a thin, flexible tube called a catheter that is inserted into your groin or arm. The catheter is guided through your aorta and into your coronary arteries. Then a dye is injected through the catheter, which helps your coronary arteries show up on an X-ray. Your health care provider will examine the X-ray to see if there are blockages in the coronary arteries that may be contributing to heart failure. The X-ray also can show how well the heart valves are functioning and how well the heart is pumping blood.

echocardiogram or other imaging methods.

Almost
6 million
Americans
have heart
failure

500,000 new cases are diagnosed each year

It is the leading cause of hospitalization for people 65+

Living With Heart Failure

Thanks to effective medications and other therapies, as well as healthy lifestyle habits, living a full life with heart failure is now more possible than ever before. It's important to come up with a lifestyle plan to help you maintain your health, and talking with your health care provider is the right step to take to make that happen.

Diet

Making positive lifestyle changes is almost always necessary for people with heart failure. Eating a healthy diet is a vital part of the treatment plan.

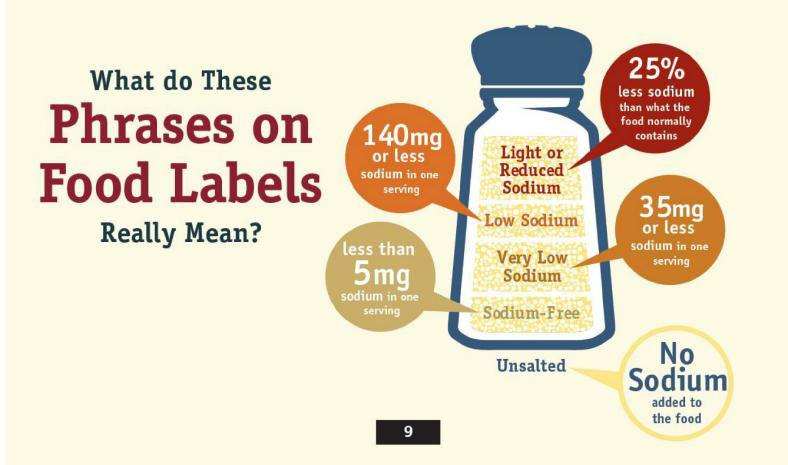
Your health care provider will work with you to help you understand what you need to do to adopt a healthier diet. These tips are usually prescribed:

- **Eat less salt (sodium).** Sodium retains water in the body, which can cause your heart to work harder and contribute to edema and shortness of breath.
 - Generally, sodium intake is limited to 2,300 mg per day, but some experts recommend eating less than 1,500 mg per day. Your health care provider will recommend an upper limit to your sodium intake, and it's important that you stick with that number.
 - Be on the lookout for "hidden" salt in processed and prepared foods, which often have salt added to them.
 - Food labels can help you determine how much salt you're eating on a daily basis.
 - When eating out, ask your server for nutritional information on the dishes you're considering ordering and request little or no salt be added to the dish.
 - At home, herbs, lemon juice and spices can add lots of flavor to dishes and help you limit salt.
- Limit fats and cholesterol. Many people with heart failure also have coronary artery disease, and eating a low-fat diet is essential for these people. Limit saturated fat and cholesterol (again, those food labels can be very helpful in figuring out how much you're eating), and avoid trans fats altogether. Choose baked or steamed dishes, when possible, over fried options.

- Limit alcohol and fluids if instructed to do so. Alcohol can weaken the heart muscle and increases the likelihood of heart rhythm problems. Your health care provider will advise you how much water or fluid you should drink each day.
- **Eat lean meats and poultry without skin.** Avoid adding salt, saturated fat or cholesterol to the recipe, and watch your portion sizes. Generally, you want to keep the serving at 4 to 6 ounces—about the size of your fist.
- **Eat oily fish (salmon, trout, herring) at least twice a** week. These contain omega-3 fatty acids, which can help reduce the risk of coronary artery disease.
- Avoid processed and prepared foods. These are often high in sodium and tend to have saturated or trans fats in them. These include tub margarines and many baked goods.



How to Read a Food Label Download/print this PDF



Exercise

Physical activity is great for you, regardless of your health condition. It helps you manage your weight, reduce stress and lower risk for serious health conditions, among other benefits. It's also great for the heart to help it get stronger. If you haven't been exercising, talk with your health care provider first about coming up with an exercise plan. Generally speaking, you want to try to get at least 30 minutes of physical activity per day most days of the week. It's even better for you to be physically active every day! Even when you are living with heart failure.

Exercise is critical for people with heart failure. However, talk with your health care provider about how often and when to exercise. Ask whether you would be a candidate for cardiac rehabilitation to help you exercise. Your provider may recommend you avoid physical activity on days when fluid has built up and you don't feel well. Your health care provider can help you determine when and how often you should get physical activity. Pace yourself, pay attention to how you feel and rest when you get tired.

Keep in mind that you don't have to get all 30 minutes at once. It's just as good for you to break exercise into 10-minute segments. Plus, there are other ways to add physical activity to your day.



My Activity Log
Download/print
this PDF



CardioSmart

Registered users can track their activity online. Join to find out more.

CardioSmart.org/Join

Consider:

- Going out for a brisk walk. Take the dog with you, and invite friends and family members to join you.
- Walking instead of driving, when feasible.
- Parking your car farther from your destination and taking a walk to get you there.
- Getting off the bus or subway a stop or two earlier than you usually do and walking the rest of the way.



Physical activity & stress reduction can help prevent or manage heart disease.

- **Supports** a stronger heart **Decreases the need** for
 - Improves circulation
- Lifts mood & self-esteem
- Promotes sleep
- Lowers blood cholesterol, pressure & sugar
- Decreases the need for medications in some cases
- Helps manage weight
- Reduces stress

you should get moving...

MODERATE EXERCISE

can be as simple as



How you can **REDUCE STRESS**



Meditation (









You're making progress!

Take a short quiz on what you've learned so far.

Managing Your Weight

Fluid or water retention is a key sign of heart failure. Swelling in the waist, legs or feet is a sign of water retention.

Weigh yourself at the same time every day and document your weight each time. Be sure to wear the same or similar clothes when you weigh yourself. The best time to weigh yourself is in the morning. It may be a good idea to keep a worksheet close to your scale. Bring the worksheet with you each time you visit your health care provider.

If you gain more than 2 pounds in any 24-hour period or more than 3 pounds in a week, be sure to contact your health care provider.

Monitoring your weight daily will help you to manage your heart failure and will show if your treatment plan is working.



My Weight Tracker Download/print this PDF



CardioSmart

Registered users can track their weight online. Join to find out more:

CardioSmart.org/Join



If you gain more than 2 pounds in any 24-hour period or more than 3 pounds in a week, be sure to contact your health care provider.

Blood Pressure

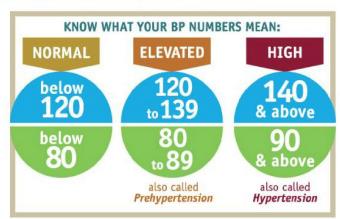
Many people with heart failure have high blood pressure (BP). For some, their blood pressure may be normal or low. If you have high blood pressure, lowering it will decrease the amount of work your heart must do and keep you healthier.

A small fraction of patients with heart failure experience blood pressure that is too low. Make sure to work with your health care provider to establish your ideal range. By monitoring your blood pressure you are helping manage your heart failure.



Blood pressure is the force of your blood moving against the walls of your arteries. It's expressed as TWO NUMBERS:





Over time, elevated and high blood pressure can weaken your heart, blood vessels and kidneys, and makes a stroke or heart attack much more likely.





CardioSmart

Registered users can track their BP levels online. Join to find out more:

CardioSmart.org/Join

Smoking

It's true: Smoking is terrible for your health no matter what your condition is. Smoking has been directly linked to heart disease, cancer, stroke and other serious conditions. It's not easy to quit smoking, but it can be done. There are many tools to help you do just that. Talk with your health care provider about treatments and support groups that are available to you to help you quit.

Many people who are quitting smoking find that support is a huge help. Talk with your family and friends about helping you quit. And don't forget to call the Quit Line: **1-800-QUIT-NOW**.

If you smoke, set a plan to quit and follow it!

Top 5 Self-Care Tips

Keep these in mind every day:

- Take your medications as prescribed.
 That will help control your heart failure symptoms and avoid a trip to the hospital.
- 2. Watch for signs that you're getting worse. Talk to your health care provider if you are struggling with tasks you could do before.
- 3. Find out what your triggers are, and learn to avoid them (for example: eating too much salt, missing a dose of your medicine, or exercising too hard).
- 4. Limit salt (sodium).
- 5. Get regular physical activity.

Treating Heart Failure

Heart failure can be treated and managed effectively. A combination of therapies is usually used to manage the condition.

Medications

Medication is vital to treating heart failure. In addition to heart failure medications, sometimes others are added to treat more cardiovascular conditions. In fact, many people with heart failure take multiple medications from the following list:

- Aldosterone antagonists (spironolactone, eplerenone): These medications are diuretics (see next page) that don't reduce the amount of potassium in your body. They can reverse some of the heart damage caused by heart failure. People who have high levels of potassium will need to speak with their health care providers if they are prescribed this medication.
- Angiotensin-converting enzyme (ACE) inhibitors (enalapril, lisinopril, captopril, fosinopril, perindopril, quinapril, ramipril, trandolapril): These drugs typically are prescribed for people with systolic heart failure, a condition in which the left ventricle doesn't contract the way it should. They're called vasodilators because they widen blood vessels and thus lower blood pressure, which decreases the amount of work the heart has to do to pump blood.
- Angiotensin II receptor blockers (ARBs) (losartan, valsartan, candesartan): For people who can't tolerate ACE inhibitors well, this type of medication is often prescribed instead. It's another type of vasodilator.
- Angiotensin receptor-neprilysin inhibitor (sacubitril/valsartan): This new drug is a combination of an angiotensin II receptor blocker (ARB) and a medicine that inhibits the production of neprilysin, an enzyme that breaks down natural substances in the body that widen blood vessels and reduce sodium retention. The effect is to lower blood pressure and decrease strain on the heart. This combination should not be taken by patients who are using angiotensin-converting enzyme (ACE) inhibitors or in patients who have or had angioedema (serious allergic reactions with hives).

- Beta blockers (carvedilol, carvedilol CR, metoprolol, bisoprolol): These medications help slow the heart rate and reduce blood pressure, and can sometimes reverse some of the heart damage caused by systolic heart failure. They can help reduce the risk of abnormal heart rhythms and the symptoms of heart failure, and improve heart function, too.
- **Digitalis** (digoxin): Another medication used to treat systolic heart failure, digitalis strengthens your heart's muscle contractions and slows the heartbeat.
- Diuretics (furosemide, bumetanide, torsemide, chlorothiazide, amiloride, hydrochlorothiazide, indapamide, metolazone, triamterene): Also known as water pills, these medications cause you to urinate more often, helping to decrease the fluid buildup in your body. Health care providers sometimes prescribe mineral supplements along with diuretics because these medications can reduce the levels of potassium and magnesium in your body. Your health care provider may order blood tests for you while you're on this medication to see if your levels of these minerals are where they should be, and to ensure your kidney function remains stable.
- Sinoatrial node modulator (ivabradine): This new drug is used with beta blockers when they cannot lower your heart rate sufficiently. It helps reduce the amount of oxygen your heart needs and the amount of work your heart has to do to pump blood through the body.



Regardless of what medications you're prescribed, it's vitally important that you take your medications exactly as your health care provider directs. Otherwise, your medications can't help you. It's best to take the right dose at the right time of day, with or without food (as directed), and with water or whatever beverage is specified in the instructions. Follow the directions and heed the warnings on the bottle to the letter.

If you experience side effects or have any questions about your medications, talk with your health care provider. He or she may have you adjust your dosage or try a different medication altogether.

Also, talk with your health care provider before taking any over-the-counter medications or dietary supplements. Some of these (such as ibuprofen and naproxen, frequently used for aches and pains) can make your heart failure worse.



My Medication List
Download/print
this PDF



CardioSmart

Registered users can track their medications online. Join to find out more.

CardioSmart.org/Join

CardioSmart Med Reminder App

Download FREE App at CardioSmart.org/Tools/Med-Reminder



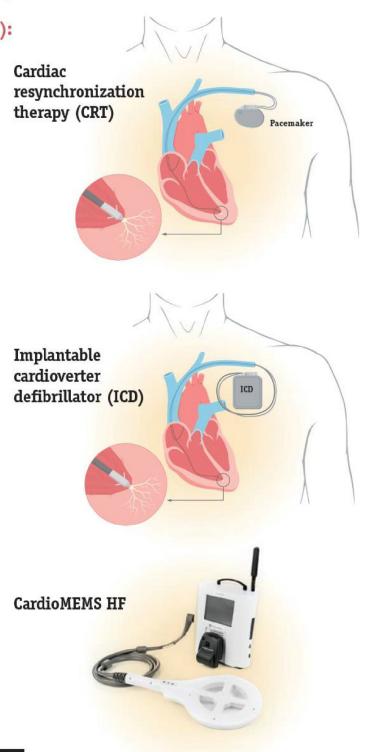
Devices

Sometimes additional help is needed to address some of the symptoms of heart failure, particularly when problems with the ways the heart beats (arrhythmias) are an issue. In many of these cases, an implanted surgical device may be the answer. Most common are:

This small device is implanted just below the collarbone. It helps the heart pump better by sending electrical signals to the heart's lower chambers, so they beat

together in a more synchronized way.

- defibrillator (ICD): An ICD is similar to a pacemaker but is implanted just under the skin in your chest and has wires that connect through your veins into your heart. ICDs can speed up the heart rate if it's beating too slow, and can correct dangerous heart rhythms by shocking the heart back to normal.
- CardioMEMS HF system: This device measures and monitors the pressure in the pulmonary artery and heart rate in certain heart failure patients. It uses an implantable sensor, delivery system, and patient electronics system. Together, the components of the patient electronics system read the pulmonary artery pressure measurements from the sensor wirelessly and then transmit the information to the doctor.



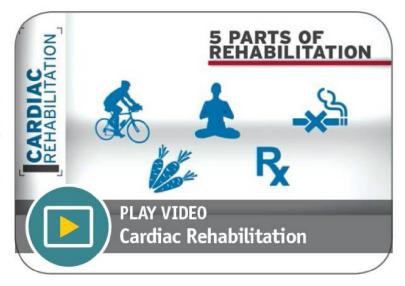
Procedures and Surgeries

Some people with heart failure require surgery to correct some underlying problems that may have led to heart failure. Surgery does not necessarily reverse the effects of heart failure or cure the condition. Common surgical interventions include:

- **Coronary stents:** When atherosclerosis—the process in which fatty deposits, called plaque, build up inside the arteries, eventually choking off the flow of blood to the heart—is an issue, a stent can be placed during a cardiac catheterization procedure to open the blockage and improve blood flow.
- Coronary bypass surgery (CABG): When the plaque buildup (atherosclerosis) is an issue, and the blockages are too complex for stents to be placed, open heart surgery may be necessary. In this procedure, blood vessels from your leg, arm or chest are removed and then surgically implanted near the site of the blockage in order to bypass the blocked area of the artery. This way, blood can move more effectively to your heart.
- Heart valve surgery: Heart failure is sometimes caused by a faulty heart valve. In these cases, surgery to correct the faulty valve (through repair or replacement) may be recommended. Repair isn't always possible, and in those cases complete replacement of the valve with an artificial valve is the procedure of choice.

Cardiac Rehabilitation

Cardiac rehab was recently approved for patients living with heart failure. Many people with heart failure find that cardiac rehab provides both a supervised fitness program and a support system that helps them adopt healthy behaviors for managing their condition. Talk with your health care provider about the availability of a cardiac rehab program where you live.



What is **CARDIAC REHABILITATION?**

1 Regular Exercise

From supervised activities, to a daily walk in the park, the idea is to get moving.



Adopt a Heart
Healthy Diet

This includes meals that are low in salt and rich in whole grains, fruits, vegetables, low-fat meats and fish.



Cardiac
Rehabilitation
Programs Typically
Consist Of The
Following

Components

Reduce Stress

Learn to control your daily stress through relaxation techniques, recreation, music and other various methods.



TALK TO YOUR HEALTH CARE PROVIDER about enrolling in a cardiac rehab program TODAY!

5 Stop Smoking

Most cardiac rehab programs offer methods to help you kick this harmful habit.



4 Medical Therapy

Follow your doctor's instructions carefully and take your medications as directed.



CARDIAC REHAB can:



Control risk factors such as high blood pressure & cholesterd







Help with weight loss

Questions to Ask Your Health Care Provider

When you go to an office visit with your health care provider, it's a good idea to ask questions if you're not clear about what your provider is telling you. Here are some good ones to ask:

- 1. What type of heart failure do I have?
- 2. How will I know if my heart failure is getting worse? When should I call 911?
- 3. Are there any health checks (weight, blood pressure, pulse) I should be doing? Which and how often?
- 4. Do I need to lose weight? If so, what weight should I be targeting?
- 5. If I notice a weight gain, at what point should I call you?
- 6. Which physical activities are best for me? Can I exercise safely on my own? How much exercise do I need?
- 7. How much salt should I consume daily?
- 8. How much water and fluids should I drink each day?
- 9. Which medications will I be taking for my condition, and what does each one do?
- 10. Should I enroll in cardiac rehabilitation?
- 11. How often should I have my heart checked?
- 12. Am I a candidate for an ICD?
- 13. Am I a candidate for CRT?
- 14. Am I a candidate for CardioMEMS?



Questions to Ask Your Health Care Provider Download/print

this PDF



Resources

- Learn more about heart failure at CardioSmart.org/HeartFailure.
- Register FREE at CardioSmart.org/Join to receive access to a wealth of heart-healthy benefits, including:
 - Personalized newsletters and email alerts
 - Trackers for key health indicators and physical activity
 - Bookmarks for articles, fact sheets and questions to discuss with your doctor
 - Quizzes to improve health and earn prizes
 - Heart Failure: Checking Your Weight
 - Heart Failure: Activity and Exercise
 - Quick Tips: Self-Care for Heart Failure
- Print out this booklet and the worksheets to help you manage your condition.
- Learn more about managing heart failure at *TogetherinHF.com*.





Nutrition Facts Serving Size 1 cup (240g) Servings Per Container 2 **Amount Per Serving** Calories from Fat 20 Calories 100 % Daily Value* Total Fat 2g 3% 0% Saturated Fat Og Trans Fat Og Cholesterol Omg 0% Sodium 70mg -3% **Total Carbohydrate 17g** 6% 12% Dietary Fiber 3g Sugars 5g Protein 4g Vitamin C 20% Vitamin A 70% Calcium 15% Iron 8% *Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher

or lower depending on your calorie needs.

Serving size

This tells you how much of the food makes up one serving. If you eat more than one serving, all the other values increase.

Fat

This is the total amount of fat in each serving. Limit saturated fats and avoid *trans* fats. Both are bad for your heart.

Cholesterol

This tells you how much cholesterol is in a serving. It's wise to limit your daily cholesterol intake.

Sodium (salt)

This is the total amount of sodium in each serving given in milligrams (mg). Try to eat less than 1,500 mg of sodium per day, but even consuming less than 2,300 mg per day has benefits.

Total carbohydrate (starches)

This tells you how many grams of carbohydrate are in one serving.

Sugars

By July 2018, nutrition labels will be updated to list "added sugars," which should account for less than 10% of daily calories.





Use this chart to keep track of the minutes of activity you do each day.

Date	What I Did	Total Minutes of Activity	Total Steps per Day			
My Activity Goals:minutes per daysteps per day						





Weigh yourself at the same time every day and document your weight each time. Be sure to wear the same or similar clothes when you weigh yourself. The best time to weigh yourself is in the morning. Bring this worksheet with you each time you visit your health care professional.

Name

Month	Sun	Mon	Tues	Wed	Thur	Fri	Sat
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						
	Date:						
	Wt:						





stop one or changes a dosage, record the change here. Share this list with any new health care provider you visit. Keep a copy Use this chart to keep track of all your medications. Any time your health care provider prescribes a medication, tells you to

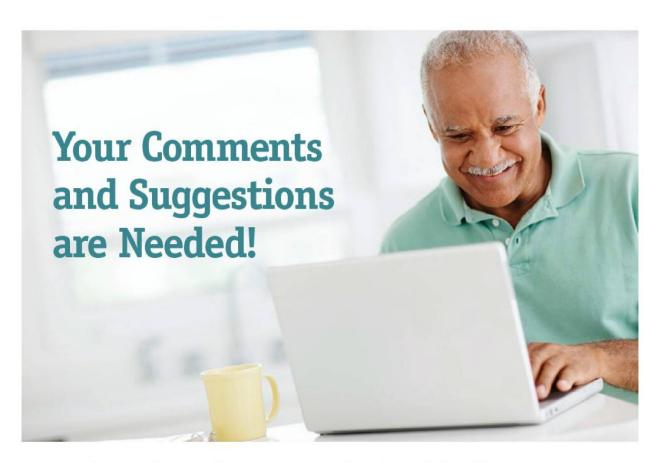
	Notes/Date							
	Purpose							
	How Often to Take							ou take:
	Quantity per Dose							nd supplements y
	Strength (dose)							minerals, herbs an
or purse.	Brand Name (if any)			31				List all over-the-counter medications, vitamins, minerals, herbs and supplements you take:
in your wallet or purse.	Generic Name							List all over-the-counte





When you go to an office visit with your health care provider, it's a good idea to ask questions if you're not clear about what your provider is telling you. Here are some good ones to ask:

What type of heart failure do I have?
How will I know if my heart failure is getting worse? When should I call 911?
Are there any health checks (weight, blood pressure, pulse) I should be doing? Which and how often?
Do I need to lose weight? If so, what weight should I be targeting?
If I notice a weight gain, at what point should I call you?
Which physical activities are best for me? Can I exercise safely on my own? How much exercise do I need?
How much salt should I consume daily?
How much water and fluids should I drink each day?
Which medications will I be taking for my condition, and what does each one do?
Should I enroll in cardiac rehabilitation?
How often should I have my heart checked?
Am I a candidate for an ICD? CRT? Or CardioMEMS?



And now, please tell us what you think about this guide! We need your suggestions to make sure that this has everything you need to know about heart failure. Go to our **online survey** and answer just a few questions. It will only take a few minutes of your time. Thank you for your help!

For more information, visit CardioSmart.org/HeartFailure



Your Prescription for a Healthy Heart

Information provided for educational purposes only. Please consult your health care provider regarding your specific health needs.

©2016 American College of Cardiology

