Living with Heart Disease
Strategies for Optimal Health

A HANDBOOK FOR PATIENTS WITH CONGESTIVE HEART FAILURE (CHF)

VNA of Middlesex-East
Home Health and Hospice
Hello!

The VNA of Middlesex-East is pleased to help you manage your cardiac rehabilitation and hopes this booklet will further assist you in reaching your optimal health.

CHF is a serious condition but many people lead a full, enjoyable life when the condition is managed with medications and healthy lifestyle changes. We are here to help you incorporate these changes in your life.

While you are being cared for by us, you will learn about your disease and receive recommendations on how to manage your lifestyle. Advice will be given on appropriate medication management, diet tips, breathing techniques and exercise plan. The habits you learn from our CHF program can help alleviate your symptoms, slow the disease’s progress and improve everyday life for you.

Please do not hesitate to call your nurse or rehabilitation therapist at any time.

Good luck on taking control of your life!

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Congestive Heart Failure

Understanding your condition will help you better manage your health. The following information will give you an overview of heart disease.

What is it?

Congestive heart failure occurs when the heart is unable to pump as it should to supply normal blood flow within the body.

When this pumping is not as strong as it should be, there can be inadequate emptying of one or more chambers of the heart. Weak pumping can lead to a decrease in the blood circulating throughout your body.

Your Body Gets Less Blood

When your weakened heart moves less blood with each pump, fluid backs up in the lungs.

Less blood moving through your body also means less oxygen is delivered to organs like your kidneys. Your kidneys help your body get rid of extra water therefore excess water may settle in different parts of your body.

As a result, your body becomes congested with fluid, which is why this condition is called congestive heart failure.

How Does Congestive Heart Failure Feel?

You may have several of these common symptoms or only one. We will instruct you and your family on how to manage symptoms at home. This will enable you to maintain optimum health at home to prevent hospitalizations.

- Shortness of breath, wheezing, or coughing on exertion
- Weakness or fatigue
- Problems breathing when you are lying down
- The need to go to the bathroom many times during the day or night
- Swollen ankles or feet
- Dizzy Spells
- Waking up at night coughing or short of breath
- Periods of high anxiety
How Your Heart Works

Your heart is a muscle that pumps blood throughout your body. The right side of the heart pumps blood to the lungs. In the lungs, blood receives oxygen. The oxygen-rich blood travels back to the left side of the heart, where it is pumped to your organs, limbs, brain, and all the other parts of your body. After your body uses up the oxygen in the blood, it sends the blood back to the right side of the heart and the process starts again.

How Your Heart Pumps Blood

Four chambers hold the blood as it moves through the heart. The upper chambers are called atria and the lower chambers are called ventricles. The heart muscle pumps blood from chamber to chamber.

Coronary arteries are blood vessels that wrap around the surface of your heart. They supply the heart muscle with blood and oxygen.

Four valves act like one-way doors, separating the chambers and keeping the blood moving forward. Valves open to let blood through and close to keep it from moving backward.

The pulmonary artery carries oxygen-poor blood from the heart to the lungs. The pulmonary veins carry oxygen-rich blood from the lungs to the heart.
Why Your Heart Weakens

When congestive heart failure occurs, there is usually an underlying cause. Many conditions can weaken the heart and cause congestive heart failure. Some conditions damage the heart muscle. Others make the heart work harder, weakening the heart by tiring it out.

Coronary Artery Disease
When you have coronary artery disease, the blood vessels that supply blood and oxygen to the heart are narrowed. Oxygen-rich blood has a hard time moving through the narrow part of the artery. As a result, some areas of the heart muscle don’t get enough oxygen. The oxygen-deprived portion of the heart muscle is too weak to pump blood like it should. Because of this, the rest of the heart muscle has to work harder to pump the blood. If too much muscle is damaged, the heart can’t pump the necessary amount of blood.

Heart Attack
A heart attack happens when a coronary artery is completely blocked, stopping blood flow to part of the heart muscle. Without oxygen-rich blood, this area of the heart is permanently damaged. The damaged portion of the heart muscle loses its ability to pump, and the rest of the heart muscle has to work harder. The strained heart muscle eventually tires out and may pump less blood to the rest of the body.

High Blood Pressure
Blood pressure is the force pushing blood through the blood vessels. When your blood pressure is high, your heart has to work harder. After a while, the heart’s muscle walls thicken and some of the chambers may enlarge. These changes put extra strain on the heart, and the heart muscle eventually stretches and weakens.
Valve Disease
The valves between the chambers of your heart keep blood moving forward. If a valve doesn’t open fully, your heart has to work harder to push blood through the smaller opening. If the valve doesn’t close tightly, blood may leak back into the chamber, making the heart pump the same blood through the valve over and over again. Over time, this extra work can weaken the heart.

Cardiomyopathy
Damage to the heart muscle from causes other than artery or blood flow problems is known as cardiomyopathy. Causes of cardiomyopathy include infections (myocarditis), alcohol abuse, the toxic effects of certain drugs (such as cocaine or some anti-cancer drugs), or rarely, muscle degeneration. These things cause the chambers to enlarge and the heart muscle to stretch and weaken. The stretched, weakened muscle can’t pump correctly.

Related Conditions
Certain conditions can strain the heart and make it weaken more easily. Diabetes makes coronary artery disease and congestive heart failure more likely to occur. Chronic kidney problems can cause water retention, which means the heart has to pump more fluid and do more work. A rapid or irregular heartbeat may occur along with congestive heart failure and, over time, may weaken the heart further.
Healthy Eating

Diet is an important factor in heart disease. A diet low in salt, saturated fat and cholesterol will help you feel better and obtain optimal health. We offer the following tips to help you establish a heart-healthy diet.

- A healthy eating program is made up of carbohydrates, protein and fats.
- A diet with less than 2000 mg. of sodium a day helps control blood pressure and decreases fluid in your lungs and extremities.
- Eat fresh fruits, vegetables and meats, poultry and fish; processed, cured, canned, pickled or instant foods are usually high in sodium.
- Put away your saltshaker! Cook with and add spices, garlic, lemon and onions to your foods to enhance flavor.
- Fresh herbs and spices along with different vinegars make tasty alternatives to salt!
- When dining out, request your food to be prepared without salt, have dressings and sauces served on the side; avoid bacon bits, prepared pasta and potato salads, cheeses and croutons.
- Salt is an acquired taste! Your taste buds can be retrained in less than 2-3 weeks.

An excellent source of information about healthy diets is the United States Department of Agriculture’s website MyPyramid.gov. Visit this website to help you choose the foods and amounts that are right for you.
This section of the handbook will give you suggestions and tools on how to take control of your CHF; this includes understanding different shortness of breath levels as well as breathing exercises to diminish that shortness of breath. Your therapist will work with you on what positions and exercises are best for you. Remember, you are an individual and your symptoms will respond to a specific plan of care.

Action Guidelines for Levels of Shortness of Breath

**Level 1**

NO SHORTNESS OF BREATH

Symptoms:
- Slight awareness of the need to breathe.
- Able to carry on a conversation without shortness of breath.
- Count to ten in one breath.

Action to take:
- None

**Level 2**

MILD SHORTNESS OF BREATH

Symptoms:
- Only able to converse in short sentences.
- Must breathe after each sentence.
- Needs an additional breath when counting to ten.

Actions to take:
- Stop all activity (you don’t need to sit) and do deep breathing.
- Resume activity when you return to Level 1.

**Level 3**

VERY SHORT OF BREATH

Symptoms:
- Breathing is rapid.
- Only able to speak in very short phrases of three to four words.
- Two or more breaths required to count to ten.

Actions to take:
- Stop activity and sit down, do deep breathing.
- Do not resume any activity until you return to Level 1.
Coping Strategies for Shortness of Breath

The following strategies from the American Lung Association can help you regain a comfortable breathing pattern. Choose the positions that work for you.

**Sitting**... Sit with your back against the back of a chair. Your head and shoulder should be rolled forward and relaxed downwards. Rest your hands and forearms on your thighs, palms turned upwards. Do not lean on your hands. Your feet should be on the floor, knees rolled slightly outwards. Maintain this position until breathing is normal.

**Sitting**... Lean back into the chair in a slouched position, your head rolled forward, shoulders relaxed downward. Rest your hands gently on your stomach. Keep your feet on the floor, knees rolled outward. Maintain this position until breathing is normal.

**Sitting**... Place a pillow on a table and sit down, arms folded and resting on a pillow. Keep your feet on the floor or a stool, and rest your head on your arms. Maintain this position until breathing is normal.

**Standing**... Lean with your back to the wall, or pole, etc. Place your feet slightly apart and at a comfortable distance from the wall, with your head and shoulders relaxed. Maintain this position until breathing is normal.

**Standing**... Place your arms on a kitchen counter or back of chair, etc. and rest your head on your arms. Do not lean on your arms. Bend knees slightly, with one foot in front of the other. Maintain this position until breathing is normal.
How to Control Your Breathing

Knowing how to control your breathing will help you to remain calm when you are short of breath. Try these techniques:

**Pursed-lip Breathing**

One of the simplest ways to control your breathing is **pursed-lip breathing** – a technique which helps to keep the airways and air sacs open and slows down your breathing. By using this technique, any used air trapped within the lungs can get out, allowing fresh air to replace it.

- Breathe in slowly through your nose for 1 count
- Purse your lips as if you were going to whistle and breathe out gently through pursed lips for 2 slow counts (exhale twice as slowly as you inhale) – let the air escape naturally and don’t force the air out of your lungs.
- Keep doing pursed lip breathing until you are not short of breath.

That’s all there is to it! After practicing this technique regularly, you’ll see that it will become a natural way of breathing when you are doing any physical activity or when you are short of breath.

**Diaphragmatic Breathing**

Individuals with CHF often have a weakened and flattened diaphragm (the major muscle of breathing). It is weakened because other less efficient muscles in the neck and chest are used to breathe. It is flattened because the air trapped in the lungs pushes down on the diaphragm and, in time, flattens it. Diaphragmatic breathing (or belly breathing) involves training and strengthening your diaphragm to ease the work required for each breath.

- Put one hand on your upper chest, and the other on your abdomen just above your waist.
- Breathe in slowly through your nose – you should be able to feel the hand on your abdomen moving out (the hand on your chest should not move).
- Breathe out slowly through your pursed lips – you should be able to feel the hand on your abdomen moving in as you exhale.

**Inhalation phase**

**Exhalation phase**
Using Breathing Equipment and Aides

If your lungs are damaged and not properly carrying oxygen to your blood, your doctor may prescribe oxygen. Oxygen is a medicine that is commonly delivered as a gas from an oxygen cylinder and/or concentrator through a facemask or nasal cannula.

Decreased oxygen to the blood also increases the stress on your heart by causing it to work harder such as shortness of breath, fatigue, irritability, or headaches. The oxygen prescribed by your doctor will increase oxygen in your blood thereby decreasing shortness of breath and other symptoms.

The amount of oxygen needed varies from person to person so your doctor will prescribe the amount that is best for you. It is important to treat your oxygen as any other medicine. Don’t hesitate to use it if your doctor says you need it but don’t use more than your doctor prescribes. Oxygen is supplied by medical equipment companies. Your nurse will contact the company and provide them with your doctor’s order for the oxygen. A respiratory therapist will then deliver the oxygen and instruct you and your family on the proper use and maintenance of the equipment. Your nurse will also provide instruction.

Oxygen Cylinder and Concentrator

Oxygen at home is usually supplied as compressed oxygen and/or through an oxygen concentrator. It is inhaled through a face mask or nasal cannula. A facemask is generally about the size of a cupped hand and covers the nose and mouth. A nasal cannula is a lightweight tube with two hollow prongs which rest inside your nose. The tubing of the nasal cannula is held in place by resting over your ears.

Nebulizer

Your doctor may also prescribe a nebulizer. A nebulizer is a sprayer that delivers a mist of medicine for you to breathe deeply into your lungs. It plugs into the wall and operates with compressed air or oxygen. Your medicine goes into a special cup in a liquid form. The compressed air then turns the medicine into a mist. When the mist is inhaled properly, medicine enters your lungs and helps to open your airways, making it easier to breathe. Follow these steps when using a hand-held nebulizer:

- Assemble your devise for use.
- Empty your lungs by breathing out slowly through pursed lips.
- Put the end of the nebulizer just in front of your mouth.
- Keep your mouth open so that you can breathe in extra air. That helps carry the medicine deep into your airways.
- Inhale deeply, closing your lips around the mouthpiece of the nebulizer.
- Hold your breath for at least a few seconds in order for your medicine to settle.
- Breathe out slowly through pursed lips.
- Stop to cough up mucus.
- Repeat as often as your doctor directs.
- Rinse your mouth with water or mouthwash as swallowing the medicine could upset your stomach.
Exercise

These exercise regimes are specifically developed for people managing their CHF. The therapist and/or nurse will assist you in learning the exercises, instruct you on how often to perform them, and how many repetitions to do. Remember, the exercise program is tailored by your clinician to specifically meet your individual needs based upon your condition.

**Arm raising**
Raise one arm above head as you breathe out. Hold and slowly lower your elbow to waist level again, while breathing in. Repeat with the same arm, then swap to the opposite arm. (In time, consider adding a weight (such as a can of beans.)

**Arm extension**
Begin with arms by sides. While breathing out, lift right arm up to shoulder level keeping arm straight (like a bird flying). Return arm to side while breathing in. Repeat with other arm.

**Elbow circles**
Sit or stand with your feet slightly apart. Place hands on shoulders, with elbows at shoulder level. Circle elbows forward, up and out. Breathe out as elbows move forward and up and breathe in when returning to starting position.

**Elbow breathing**
Sit with feet slightly apart. Lift elbows to shoulder level with fingertips touching at front of chest. Pull elbows back while breathing in, so finger tips come apart. Breathe out and return finger tips to starting position.

Arm raising  Arm extension  Elbow circles  Elbow breathing
**Side bend**
Place right arm across body with right hand on left lower ribs. While breathing in slowly through your nose bend over to your left, dropping left hand towards the floor. Breathe out through pursed lips as you return to upright position. Repeat this exercise with left arm.

**Hand behind head**
Stretch right arm above head, then bend right elbow and lower right hand to back of neck. Then straighten elbow and stretch hand upward to return to starting position. Repeat 3 times and then repeat with left arm above head.

**Knee extensions**
Sit with feet slightly apart. Straighten one knee as you breathe out. Breathe in as your foot returns to the starting position.

**Leg lifts**
Sit with feet slightly apart. Lift one knee up towards your shoulder as you breathe out. Breathe in as you return your knee to the starting position.

**Step ups**
Find a small step near something you can hold on to. Breathe out as you step up onto the step. Breathe in as you step down. Change to other leg and repeat.
How to Take Your Pulse

It is important that you take your pulse in order to assess the work your heart is doing. This will help you monitor and maintain control of your condition. Another reason is your physician may have prescribed medication that could lower or raise your heart rate and you will want to know your pulse rate and to call your doctor if necessary. Your nurse will discuss the parameters and actions to take in accordance with your condition.

1. **Your radial pulse can be taken on either wrist**
2. With your palm up, locate the area on your wrist behind your thumb, between your wrist bone and tendon.
3. Use the tips of your index finger and third finger to feel the pulse in your radial artery.
4. Apply just enough pressure to feel your pulse. Do not push too hard or you will cut off blood flow. Once you have found your pulse, hold for a few seconds.
5. Count the radial pulse for ONE FULL MINUTE. Use the second hand on your watch or clock.
6. Record your pulse.

**General Reminders:**
1. Take your pulse at the same time each day.
2. Sit down and rest several minutes before taking your pulse unless otherwise instructed.
3. Remember to count your pulse for one full minute.
4. Write your pulse rate down on a calendar or record sheet. Your doctor may need this information.
5. Check with your doctor about the appropriate range for your heart rate.

It is important that you understand each of these steps so that you can take your pulse correctly. If you have any questions or concerns about taking your pulse, please let us know so that we can help.
Maintaining Your Cardiac Health

Living with heart disease presents challenges; however there are many things you can do to improve your quality of life.

Daily Activities
It is very important to do the following daily:

Weigh yourself
• Weigh yourself first thing each morning.
• If you have a weight gain of 2 to 3 pounds in a normal day of eating – or rapid weight gain within a few days, it could be due to excess fluid in your body.
• Follow the diuretic (water pill) procedure described by your nurse and notify the nurse of the weight gain.

Take your medications as prescribed
• Never stop taking your medication or change the dose of your medication unless instructed to do otherwise by your nurse or doctor.
• If you have problems keeping up with your medications, your nurse can help you choose a system that works well for you.

Report any medication side effects
• Medications may have undesired side effects.
• Check your medication profile to be certain of dosage and side effects.
• Notify your nurse if you experience any of the side effects listed on your medication profile.

Telemonitoring
• Use the telemonitoring system at the predetermined time.
• If you are experiencing problems with your unit, call us.

Healthy Lifestyle Tips

Plan rest periods with activity
It may be difficult for you to do things that may have been easy in the past. Take your time and plan frequent rest periods.

Don’t smoke
Smoking narrows blood vessels and makes breathing difficult; avoid secondhand smoke.

Avoid alcohol
Drinking can make congestive heart failure worse.

Wear loose clothing
 Tight clothing can restrict blood flow and lead to clots.

Avoid people with colds and flu
The less stress you put on your respiratory system, the better.

Create a healthier personal environment
Reduce dust and humidity to help you breathe easier.

Share your feelings
Talk about your anxious feelings with family members, friends, or healthcare personnel.

Learn to relax
Meditation, listening to music, imagining peaceful scenes may help you relax. Take time to do restful activities.

Set realistic goals
You may not be able to walk to the end of your road but you may be able to walk in the yard. With any activity, allow for rest periods.

Participate in your health care decisions
Active involvement in medical and lifestyle decisions will help you to feel more in control of your life.
Taking Care of Your Emotional Health

Your emotional health is as important as your physical health. They both play an equal part in how you are feeling. It is no secret that shortness of breath and anxiety do not mix well. Below is an example of how anxiety can increase physical discomfort.

Stop the Cycle!

The key to controlling panic is to break the cycle before it starts. When you feel yourself becoming short of breath, stop what you are doing. Assume a “shortness of breath position” and begin pursed lip breathing. Breathe in slowly and deeply, then exhale slowly and fully. Take at least twice as long to exhale as to inhale. Continue to do this until you feel more in control of your breathing. Follow this with your choice of relaxation tips.

1. You become stressed, tired, or excited.
2. Your breathing muscles tire even more.
3. Your shortness of breath increases.
4. Your anxiety increases.
5. You begin to breathe faster.
6. Your breathing muscles tire.
7. You become anxious.
8. Shortness of breath begins.
Learn to Relax

You can help control anxiety by avoiding things that trigger stress and by relaxing whenever you feel yourself getting tense. Here are some tips to help you learn to relax. It is best to practice the tips several times so that when you do experience anxiety, you will feel comfortable with the techniques.

- Find a quiet place and get comfortable in a sitting or lying position. Close your eyes and do diaphragmatic breathing and try not to think about anything besides how you are breathing. Breathe in slowly and fully. If thoughts come into your mind, let them pass and refocus on your breathing.

- Picture yourself in the calmest place you can imagine. It may be the seashore, a mountaintop, wooded glen or any place that relaxes you. Concentrate on appropriate events for that setting; birds singing, waves crashing to the shore, wind blowing in the leaves. Imagine enough details so that you really feel that you are there. Stay in the place until you feel relaxed. Return there whenever you start to feel anxious.

- Try progressive muscular relaxation. Slowly tense, then relax each part of your body. Start with your toes, clench them tight, hold for several seconds. Then relax them as you breathe out. Go next to your ankles, knees and continue working your way up your body, ending with your scalp. This is especially relaxing in a darkened room.

- It may also be helpful to meditate, pray or listen to music or a relaxation tape.

Relax to Breathe More Easily

When it is hard to breathe and you can’t do what you want to do, you may feel fearful or angry. Those feelings are natural, but they increase your shortness of breath. Even when you don’t feel upset, your muscles may be tight, making it harder for you to breathe.

How To Do It
To make your breathing easier, try this way to relax:

1. SIT UPRIGHT IN A CHAIR. Let your arms hang loosely at your sides. Breathe deeply, slowly, and evenly.

2. CLENCH YOUR FISTS. Shrug your shoulders. Tighten your arms. Count to two. (Don’t hold your breath.)

3. LET YOUR SHOULDERS FALL DOWN. Open your hands, and let your arms hang loosely. Count to four. Keep breathing deeply.

4. TIGHTEN YOUR LEGS AND FEET. Count to two.

5. COMPLETELY RELAX. Let all your muscles go loose from your tongue to your toes. Count to four.

When To Do It
Practice relaxing for five minutes twice a day and any time you feel yourself getting tense or breathing hard.

How It Works
To breathe and to move, you use muscles. Stiff, tense muscles are harder to move than are relaxed muscles. Tense muscles waste energy. You need more oxygen to spend more energy on tense muscles than on relaxed muscles. You try to breathe faster to get more oxygen. Then you feel breathless. Relax and you will breathe easier!
Congratulations!

You have now successfully completed the CHF teaching program. Our hope is that you are now comfortable and feel you have the control to manage your illness in order to maximize your quality of life.

Remember, much of your continued success rests in your hands; however if there is anything VNA of Middlesex-East can do to help, please call us. Even if you have what you may think is a simple or redundant question, do not hesitate to call us!

Call 1-800-607-4299; press 0 for the operator and ask to speak to a clinical manager.

Thank you for entrusting us to help you enhance your lifestyle.