

# Partners in Quality Care

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## Learning Objectives:

- \*Review of the cardiovascular system and disorders
- \*Review stroke facts
- \*Review the Aide's role in working with a client with a cardiovascular disorder or stroke

## Structure and Function of the Heart

- The pump of the cardiovascular system
- About the size of a closed fist
- Consists of 4 chambers- right and left atria, and right and left ventricles
- Has 2 phases (1) the working phase, or systole, when the heart is pumping blood to the body, and the **top** number of a blood pressure reading and (2) the resting phase, or diastole, when the heart fills with blood, and the **bottom** number of a blood pressure reading
- Pulse is the beat of the heart felt at an artery, as a wave of blood passes through the artery and is the numbers of heart beats per minute

## Cardiovascular Disorders and Stroke

The cardiovascular system transports nutrients and oxygen to all the tissues of the body and then carries away the waste from these same tissues. Common conditions that affect the cardiovascular system include angina, chronic heart failure and hypertension. *Heart disease is the leading cause of death for both men and women* (CDC heart disease facts).

**Angina** is chest pain that occurs because the heart is not getting enough oxygen.

**Hypertension** is chronically (continual) **high blood pressure**. Blood pressure that remains elevated over time places a great deal of stress on the heart and blood vessels.

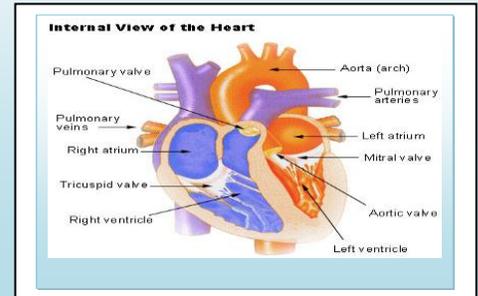
**A heart attack** occurs when the blood flow that brings oxygen to the heart muscle is severely reduced or cut off completely. This happens because coronary arteries that supply the heart muscle with blood flow can slowly become narrow from a buildup of fat, cholesterol and other substances that together are called plaque. This slow process is known as atherosclerosis. When a plaque in a heart artery breaks, a blood clot forms around the plaque. This blood clot can block the blood flow through the heart muscle. When the heart muscle is starved for oxygen and nutrients, it is called ischemia. When damage or death of part of the heart muscle occurs as a result of ischemia, it is called a heart attack or myocardial infarction (MI). About every 40 seconds, someone in the United States has a myocardial infarction (heart attack).

**Heart Failure-** the term "heart failure" makes it sound like the heart is no longer working at all and there's nothing that can be done. Actually, heart failure means that the heart isn't pumping as well as it should be. The leading causes of heart failure are diseases that damage the heart. Examples include coronary heart disease (CHD), high blood pressure, and diabetes. **Congestive heart failure (CHF)** is a type of heart failure which requires seeking timely medical attention, although sometimes the two terms are used interchangeably. The body depends on the heart's pumping action to deliver oxygen and nutrient rich blood to the body's cells. When the cells are nourished properly, the body can function normally. With heart failure, the weakened heart can't supply the cells with enough blood; this results in fatigue (tiredness) and shortness of breath and some people have coughing. Everyday activities such as walking, climbing stairs or carrying groceries can become very difficult.

With CHF, as blood flow out of the heart slows, blood returning to the heart through the veins backs up, causing congestion in the body's tissues, often swelling (edema) results. Most often there's swelling in the legs and ankles, but it can happen in other parts of the body, too. Sometimes fluid collects in the lungs and interferes with breathing, causing shortness of breath, especially when a person is lying down. This is called pulmonary edema and if left untreated can cause respiratory distress. Heart failure also affects the kidneys' ability to dispose of sodium and water. This retained water also increases swelling in the body's tissues.

**CVA (or Stroke)** – damage to part of the brain due to a blood clot (ischemic stroke) or hemorrhage (hemorrhagic stroke) cutting off blood supply. It is the number 5 cause of death and a leading cause of disability in the United States. A TIA (transient ischemic attack), or "mini stroke", is caused by a temporary clot. The time it takes to recover from a stroke varies it can take weeks, months, or even years. Some people recover fully, while others have long-term or lifelong disabilities.

- ❗ The cardiovascular system is sometimes called the blood-vascular, or simply the circulatory, system. It consists of the heart, which is a muscular pumping device, and a closed system of vessels called arteries, veins, and capillaries. As the name implies, blood contained in the circulatory system is pumped by the heart around a closed circle or circuit of vessels as it passes again and again through the various "circulations" of the body.
- ❗ Blood flows from the right atrium to the right ventricle and then is pumped to the lungs to receive oxygen. From the lungs, the blood flows to the left atrium, then to the left ventricle. From there it is pumped to the systemic circulation.
- ❗ Generally, the circulatory system becomes less effective as the body ages. The muscles of the heart and blood vessels gradually begin to lose their strength and efficiency in transporting blood to all parts of the body. The process of returning blood through the veins to the heart also becomes less efficient. The openings of the blood vessels narrow due to the deposits of calcium, cholesterol, and other fatty substances.



### **The Aide's Role in Observing, Recording and Reporting:**

Clients living with a chronic condition such as a cardiovascular disorder including congestive heart failure and stroke require close monitoring of their condition. There are certain warning signs that could indicate a worsening of a person's condition. The Aide working with the client can be a keen observer while assisting clients with care. Follow the plan of care for your client in providing care and note observations while providing care

Discuss with your supervisor the type of observations that are important related to your client's condition, such as increased shortness of breath, or swelling (edema), and discuss with your supervisor what and to whom to report. Discuss with your supervisor additional training you may need for any tasks assigned to ensure quality, safe care for your client

- Assisting with or taking vital signs such as blood pressure, pulse rate and respiratory rate- you may be assigned to take your client's vital signs such as blood pressure or you may assist your client with taking vital signs. Make sure if vital signs are part of your assignment, that you have been checked off as competent in this skill, and that you know how to record the vital sign results or to assist your client to record their results. It is important to know what, when and to whom to report findings. A person with a cardiovascular disorder or a stroke may require close monitoring of their vital signs. Reporting early as assigned for abnormal findings may help the client receive early treatment to prevent their condition from worsening.
- Medication reminders- A person with a cardiovascular disorder or after a stroke will usually be on medications that are an important part of managing their condition. Assisting clients with medications as assigned can be an important part of the Aide's role as part of helping clients to manage their condition. It is important to know the assigned tasks on the plan of care for your client and to provide care as assigned. Notify your supervisor if the client is not taking their medications, appears to need assistance with understanding their medications, unable to obtain their medication, or other reportable observations as noted on the plan of care. Certain medications such as "blood thinners" require the client to have close monitoring of their blood work by their physician and require extra consideration of client care due to the risk of increased bleeding (such as with shaving a client).
- Salt intake- A person with a cardiovascular disorder or stroke may need to reduce their salt (sodium) intake due to high blood pressure. Assisting your clients with monitoring their salt intake and/or preparing a therapeutic low sodium diet may be part of your assignment. Follow the plan of care for your client's dietary needs to help the client manage their condition. Remember there is sodium in pre-packaged, fast food, and canned foods.
- Recording weight gain or loss – an important aspect in managing congestive heart failure is monitoring weight. Weight gain may mean that fluids are building up in the body. If you are assigned weighing your client or assisting your client to weigh, be sure to follow the plan of care for your client for specifics on assisting with weights and what and to whom to report. Generally, a person should weigh themselves every day, preferably every morning, before breakfast and after urinating, with the same type of clothes on, without shoes, on the same scale and in the same spot.
- If your client uses oxygen, maintain a safe environment for oxygen use and review oxygen safety guidelines

**Stroke facts and risk factors to know in assisting client's with a stroke:**

The brain is an extremely complex organ that controls various body functions. If a stroke occurs and blood flow can't reach the region that controls a particular body function, that part of the body won't work as it should. If the stroke occurs toward the back of the brain, for instance, it's likely that some disability involving vision will result. The effects of a stroke depend primarily on the location of the obstruction and the extent of brain tissue affected. While every stroke is different, some type of physical disability or limitation is common. Conditions affecting physical disability after a stroke may be: vision disturbances (risk of falls, risk of inability to read medication bottles), difficulty swallowing (risk of choking), pain, decreased or loss of sensation in a body part (can't feel water temperature or an injury), shuffling gait (risk of falls), confusion (risk of wandering away, safety issues), personality change, speech difficulty or loss of speech (unable to communicate effectively).

*See the attached pages 4 and 5 of the newsletter for signs of a stroke in an easy to remember format- **F.A.S.T***

**The Aide's Role in Assisting Client's with Activities of Daily Living (ADL's):**

Clients with a cardiovascular disorder such as congestive heart failure or a disability from a stroke may require increased time with ADL assistance. A person with congestive heart failure may be constantly tired, have difficulty breathing, and may have anxiety due to chest pain caused by lack of blood supply to the heart muscle.

For clients with low energy levels and per the plan of care:

- Do not rush the client; allow extra time to perform activities. Be aware of any mobility (walking or moving about) issues your client may have and follow the plan of care for assisting your client with mobility issues safely.
- Encourage self-care and assist the client as needed. The client may require assistive devices such as a shower chair, bedside commode, elevated toilet seat, reachers, walker, cane, hoist lift or other devices. Talk with your supervisor for training in using these devices and assisting your client's to use these devices. Report devices that are in poor condition and any safety issues noted with the devices.
- Provide rest periods during bathing and dressing or when you notice the client is tiring during a procedure, ensure safety of the client and follow fall prevention guidelines.
- Encourage the client to wear nonconstricting clothing that is easy to put on and take off. No bras, girdles, socks, or stockings with elastic bands. Avoid tight neck bands. Use a shawl rather than a sweater or jacket.
- Use techniques that will save the client's energy when performing ADL's (chair in bathroom for bathing, toilet articles within easy reach); place underwear inside slacks and put on together.
- Schedule activities requiring a lot of energy (bath) for time of day when energy reserves are high, if possible.

Other tips:

- Discuss with your supervisor any limitations noted with the client's swallowing, especially with a client who has had a stroke. Report if you notice the client choking when eating, and follow the plan of care for any special diet instructions or feeding assistance techniques as you assist your clients with swallowing difficulties.
- Notify your supervisor of changes in the client's condition and ask for additional information or training needed to carry out the client's plan of care.

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