IN THE KNOW

Developing Top-Notch CNAs, One Inservice at a Time

A Disease Process Module:

Understanding Congestive Heart Failure

Inside This Inservice:

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THE HARDWORKING HEART!

- You think you work hard? How would it feel to work your entire life without rest? No sleeping allowed. And, to make matters worse, your boss keeps throwing high fat foods, cigarette smoke, and stress at you. This is the life of the heart.
- The heart's job is to continuously pump blood through 60 thousand miles of blood vessels. To do this, it beats about 100,000 times every day. That's 35 million beats in a year!
- Whether the boss is awake or asleep, the heart must continue to beat. When the boss is awake and active, the heart's job gets even harder.
- When the heart is weakened by age, damaged by illness or wounded by lifestyle, it can't pump efficiently or effectively.
- When the heart has a hard time pumping the blood to all those miles of blood vessels, some of the blood "backs up."

- Congestive Heart Failure, also known as CHF, is a condition in which the pumping action of the heart is weak.
- Heart failure is *congestive* when blood backs up instead of flowing forward.
- With congestive heart failure, the heart is *trying*, but it just can't push blood quickly enough throughout the body. As a result, the body doesn't get the oxygen and nutrition it needs to function.
- Heart failure is a serious condition that currently has no cure. Nearly 6 million people in the United States suffer from heart failure.
- Keep reading to find out how you can help most clients with CHF live active and healthy lives!

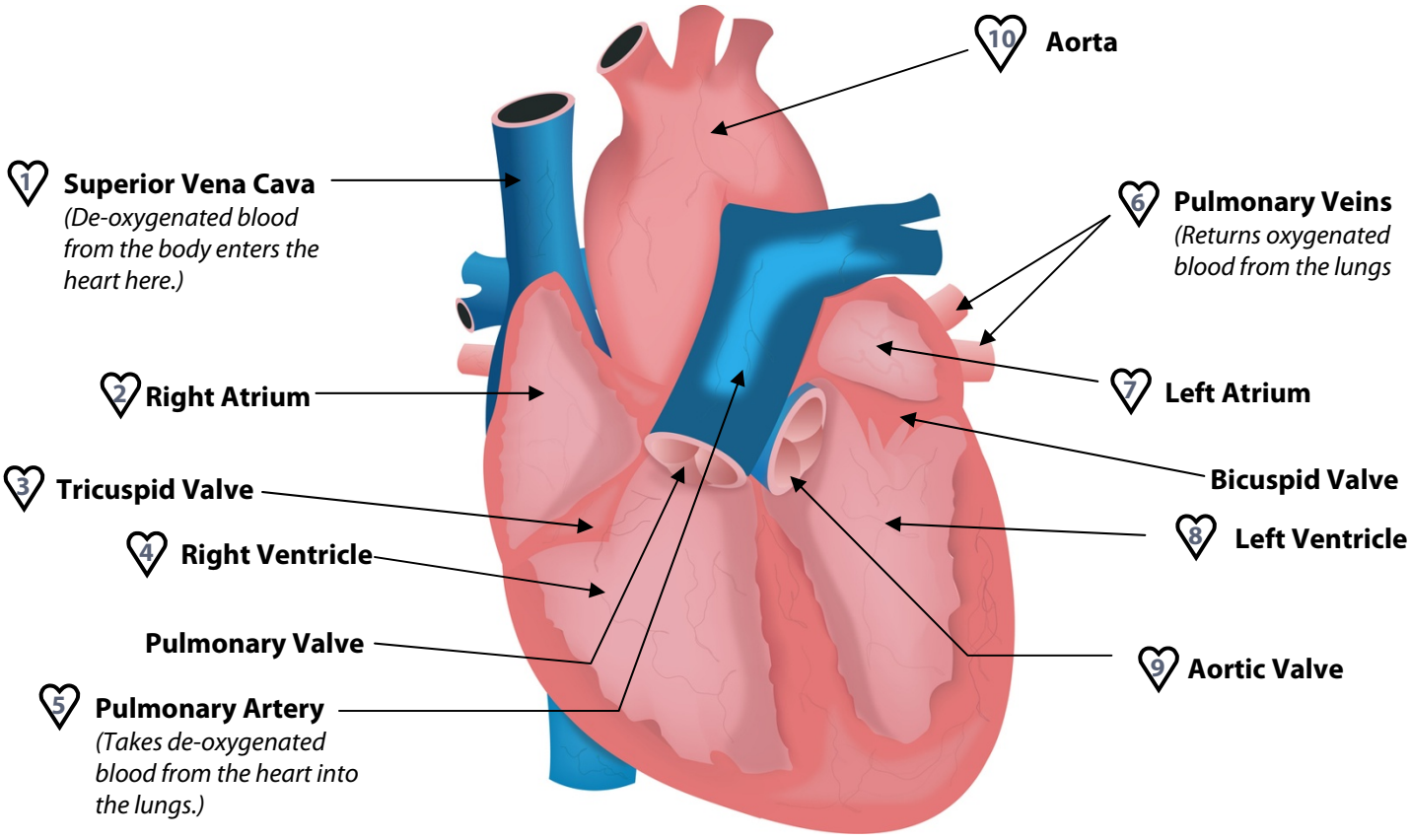
SOME FASCINATING FACTS ABOUT THE HEART

- Cross your heart. *Did you make a cross on the left side of your chest?* The heart is actually closer to the center of the chest, between the lungs. It sits at an angle, pointing to left side of the chest, which makes it seem like it is located there.
- Make a fist with your hand. The heart is about the size of your clenched fist..
- The heart is a muscle. In fact, it's the hardest working muscle in the body.
- For the average person, the heart beats 100,000 times every day. That's 36.5 million times a year and 2.5 billion times in a lifetime!
- In general, women have a faster heart rate than men.
- The sound of a heartbeat is actually made by the closing of *valves* inside the heart.
- Throughout a person's lifetime, the heart pumps the equivalent of about 1 million barrels of blood!
- Each time the heart beats, it pumps "old" blood from the *veins* through the lungs so it can pick up oxygen. Then it pumps this "new" blood out the *arteries* into the body.

"When I was 52, I woke up after eight hours of heart surgery -- that's a big deal..
~ David Letterman

- Imagine squeezing a tennis ball. The force it takes to squeeze is about the same amount of force the heart uses to pump blood out to the body.
- An adult has about 6 quarts of blood which gets pumped around and around the body, several times a minute.
- Even at rest, the heart muscle works harder than an Olympic runner's legs during a sprint!
- If a person's blood vessels were stretched out flat, they would measure over 60,000 miles.
- When pumping, the human heart creates enough pressure to squirt blood a distance of thirty feet.
- The aorta, the largest artery in the body, is nearly the diameter of a garden hose. Capillaries, on the other hand, are so small that it takes ten of them to equal the thickness of a human hair.
- Blood is pumped from the heart to give oxygen and nutrients to the cells. Every cell in your body gets fresh oxygen *every 60 seconds*.
- Red is the color of blood and has come to symbolize love, devotion and loyalty. That's why Valentine hearts are red!

HEART ANATOMY & BLOOD'S AMAZING JOURNEY



TRACE THE PATH OF BLOOD THROUGH THE HEART

1. De-oxygenated blood (blood that has dropped off its oxygen to places in the body) enters the heart through the **SUPERIOR VENA CAVA**.
2. The first stop is the **RIGHT ATRIUM**.
3. When the right atrium becomes full, the **TRICUSPID VALVE** opens, allowing the blood to enter the right ventricle.
4. When the **RIGHT VENTRICLE** becomes full, it contracts (squeezes) and pushes the blood through the pulmonary valve into the pulmonary artery.
5. The **PULMONARY ARTERY** carries blood out of the heart, into the lungs, to pick up oxygen.
6. The oxygenated blood re-enters the heart through the **PULMONARY VEINS**.
7. The blood stops to collect in the **LEFT ATRIUM**.
8. When the left atrium becomes full, the **BICUSPID VALVE** opens, sending the blood into the **LEFT VENTRICLE.**
9. When the left ventricle becomes full, it contracts with enough force to push the blood up though the **AORTIC VALVE** into the aorta.
10. Oxygenated blood in the **AORTA** is pushed out of the heart and into the body so it can deliver oxygen to every body part and organ.