

1. What typically can cause CHF?
2. What are three compensations the body uses to try and increase CO?
3. What is the “cost” of increasing HR?
4. What is the “cost” of getting thicker?
5. What is the “cost” of getting bigger/thinner?
6. What is the “cost” of stimulating the Renin-Angiotensin-Aldosterone system to increase cardiac output?
7. How does volume overload cause edema?
8. Where are typical places fluid overload is noticed?
9. Compare the symptoms of right-side heart failure with those of left-side heart failure.

1. Hypertension--increased afterload wears out heart); CAD (coronary artery disease)—ischemia and possible myocardial infarctions reduce the number of healthy muscle fibers; valve problems—allow regurgitation and overwork the heart
2. Increased heart rate; structural changes in the heart muscle; fluid retention controlled by the kidney
3. Decreased filling time
4. Gets stiffer and less room for blood
5. Overstretches to the point that leverage for pumping begins decreasing
6. Fluid retention that causes edema
7. Volume overload causes pressure to increase in capillaries and veins, resulting in more fluid seeping out into the tissues.
8. Jugular vein distention; Liver congestion; Ascites; Swollen ankles; Pulmonary edema
9. Right side failure means fluid is backing up in the systemic circulation, so swelling and edema may occur: in the liver, ankles, abdomen, and jugular vein. Left-side heart failure causes fluid to back up in the lungs while it “waits” to enter the left side of the heart, so pulmonary edema results.