

# LIVE FROM THE HEART

## KEY CONCEPTS

---

Review with your students before your visit. Students should be familiar with basic lab techniques such as using a microscope and following written lab procedures.

### **ANGIOPLASTY**

A procedure to open clogged arteries in which a tiny, hollow tube with a balloon is inserted into an artery and inflated to compress plaque against the artery wall.

### **ATHEROSCLEROSIS**

Commonly called “hardening” of the arteries; a variety of conditions caused by fatty or calcium deposits in the artery walls causing them to thicken.

### **BYPASS SURGERY**

An alternative passage created surgically to divert the flow of blood around a blockage. Blockages are not removed during bypass surgery. Instead, blood is rerouted around blockages. A bypass graft is sewn above and below blockages so blood can flow around them. Blood can still flow through the original vessel, but most of it is rerouted around the blocked vessel.

### **CAUTERIZE**

To cut soft tissue with heat; helps seal blood vessels to minimize bleeding.

### **CORONARY ARTERY DISEASE**

This results when fatty deposits called plaque buildup in arteries in the heart, causing them to narrow or harden. If the arteries become blocked, the heart receives less oxygen and can become damaged.

### **GRAFT**

Replacing or repairing a damaged body part by surgically transplanting or implanting something onto it (living tissue, for example).

# LIVE FROM THE HEART

## ***GREATER SAPHENOUS VEIN AND MAMMARY ARTERY***

Blood vessels from the patient's body are used to bypass blockages. The most common vessels used are the saphenous vein and mammary artery. Less common vessels are the radial artery in the arm, the gastroepiploic artery around the stomach, and the inferior epigastric artery in the abdominal region.

## ***HEART ATTACK (MYOCARDIAL INFARCTION)***

Occurs when one or more regions of the heart muscle experience a severe or prolonged decrease in oxygen supply caused by blocked blood flow to the heart muscle.

## ***HEART-LUNG MACHINE***

The cardiopulmonary bypass pump is commonly called the heart-lung machine. It is operated by the perfusionist. Transitioning the patient to the heart-lung machine is sometimes referred to as "going on bypass," because the patient's blood literally bypasses the heart and lungs and is sent to a machine.

## ***ISCHEMIA***

Decrease blood flow of oxygenated blood to an organ due to obstruction in an artery.

## ***PLAQUE***

Deposits of fat or other substances attached to the artery wall.

## ***RISK FACTOR***

Risk factors are conditions or activities that increase one's likelihood of developing heart disease. Conditions are illnesses or abnormalities that may lead to heart disease, such as obesity, diabetes, and high blood pressure. Activities are actions people do or do not do that increase their chance of developing heart disease, such as eating poorly or smoking.

## ***SUTURE***

The process of joining two surfaces or edges together along a line by sewing; the material used in this procedure.