
INTRODUCTION



HONOUR REQUIREMENTS

- Describe the basic function of the following parts of the circulatory system: heart, blood vessels, blood, and lungs.
 - Describe the major difference between arteries and veins. What is a capillary and what is its function?
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- Identify two locations for measuring your pulse. Demonstrate your ability to accurately take someone's pulse.
 - Record your resting pulse rate, then exercise strenuously (ie jog, swim laps, climb stairs, etc.) for 10 minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week recording your results on a chart or a graph. Did the exercise affect your heart rate?
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- Make a simple stethoscope and listen to someone's heart beat.
 - List at least five things you can do to keep your heart healthy. Put these into practice if you have not been doing so already.
 - What is cholesterol and how is it related to arteriosclerosis?
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- What is a heart attack and what are its symptoms?
How can CPR help?
 - What is an ECG and how is it used by a doctor?
 - Find five verses in the Bible that refer to your heart.
Memorise two of them.
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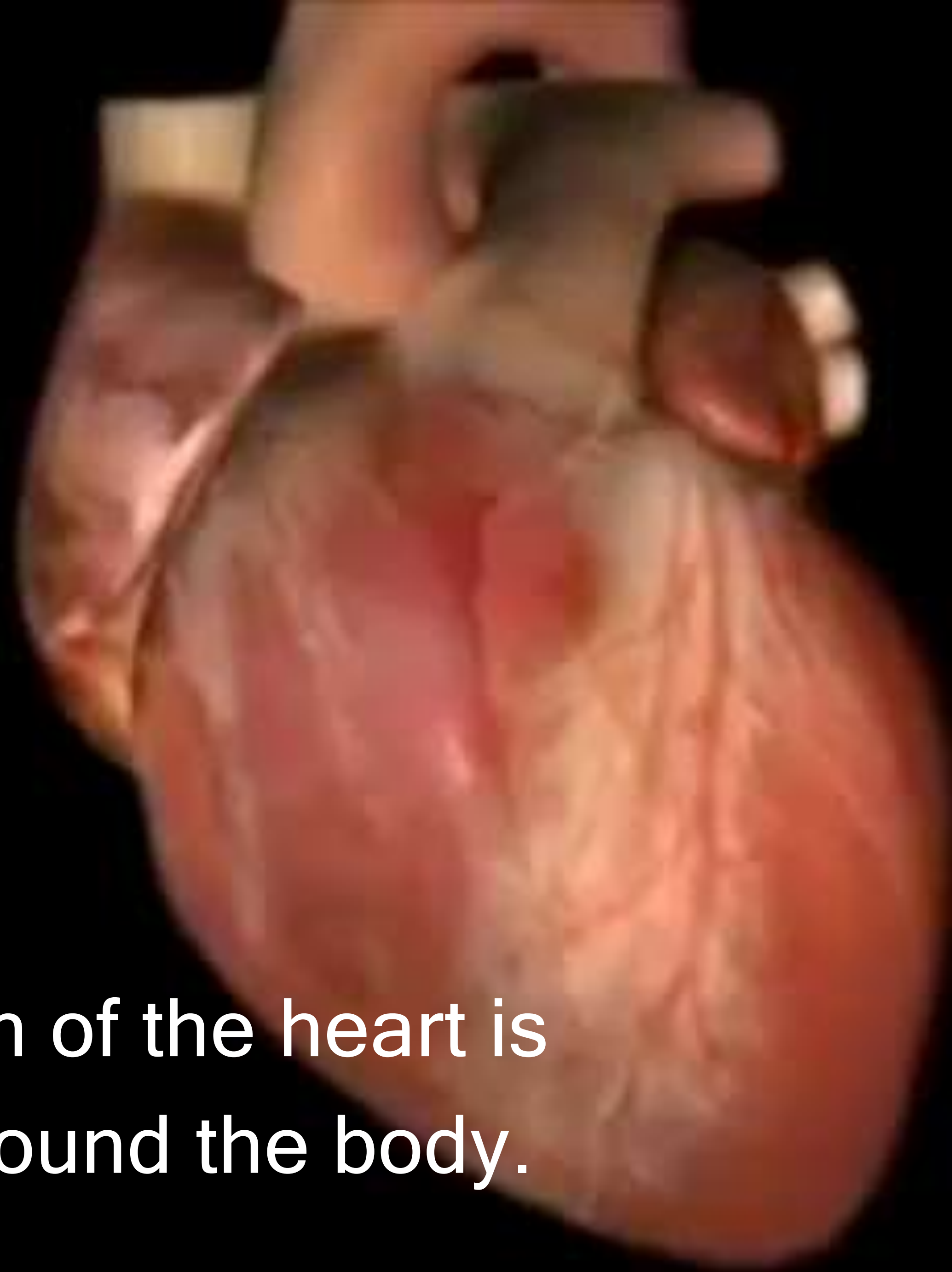
HEART & CIRCULATION



➤ What are some of the things you know about the heart?



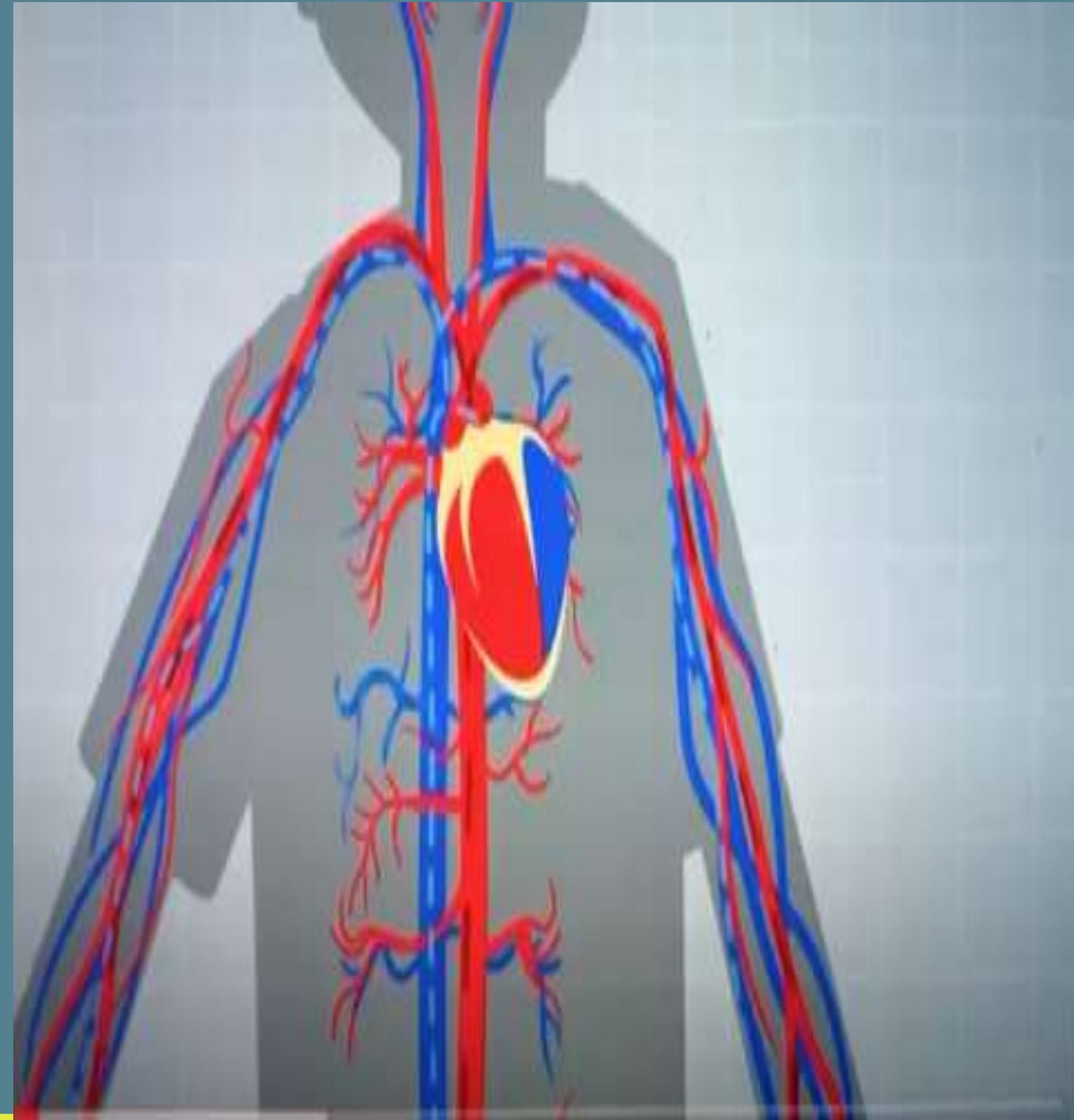
➤ What is the main function of the heart?



➤ The main function of the heart is to pump blood around the body.

DESCRIBE THE BASIC FUNCTION OF
THE FOLLOWING PARTS OF THE
CIRCULATORY SYSTEM: BLOOD
VESSELS,

➤ Blood vessels are tubes that carry blood around our bodies.

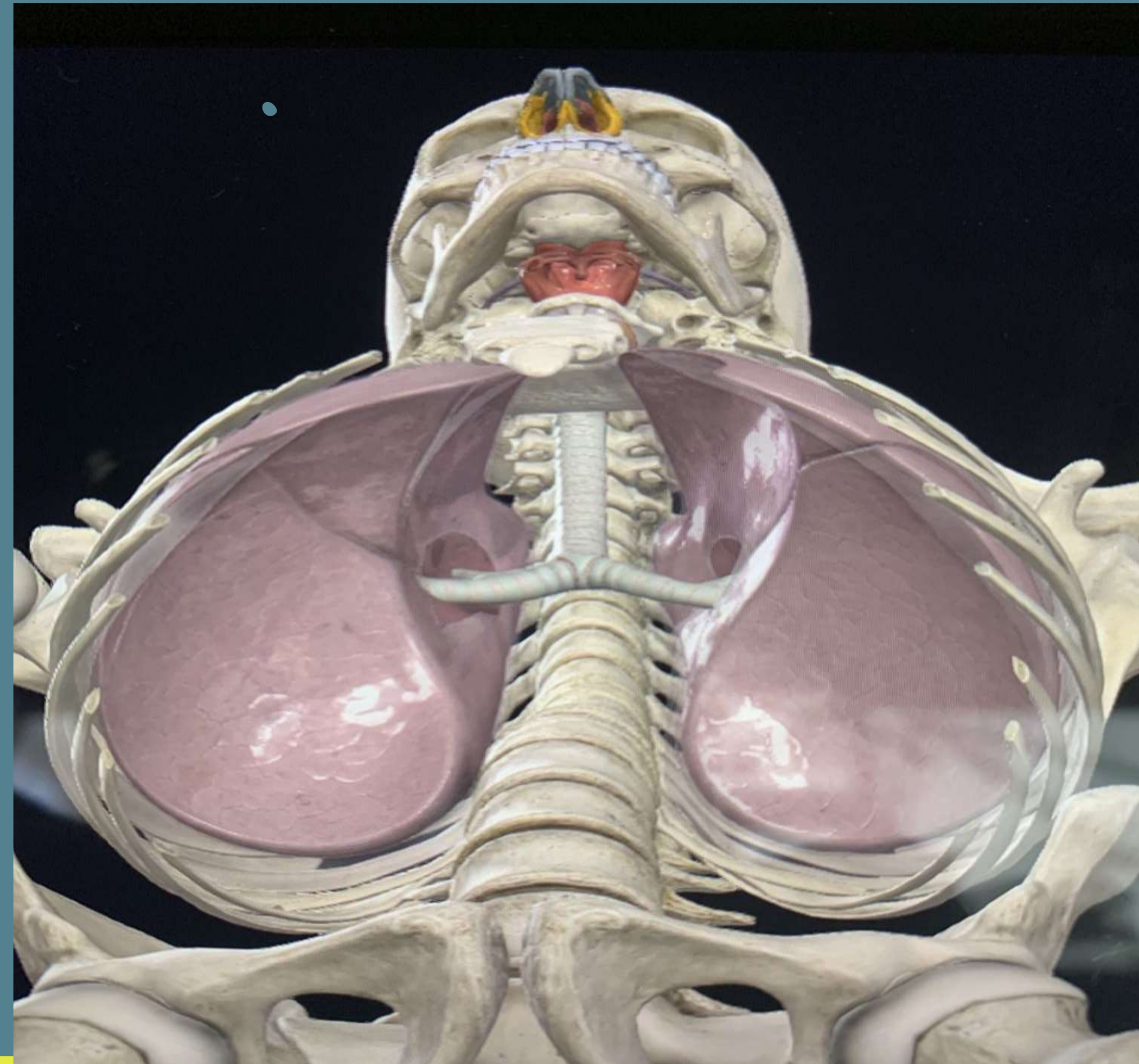


DESCRIBE THE BASIC FUNCTION OF
THE FOLLOWING PARTS OF THE
CIRCULATORY SYSTEM: BLOOD

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- Blood is the transport media of nearly everything within the body. It transports hormones, nutrients, oxygen, antibodies, and other important things needed to keep the body healthy.
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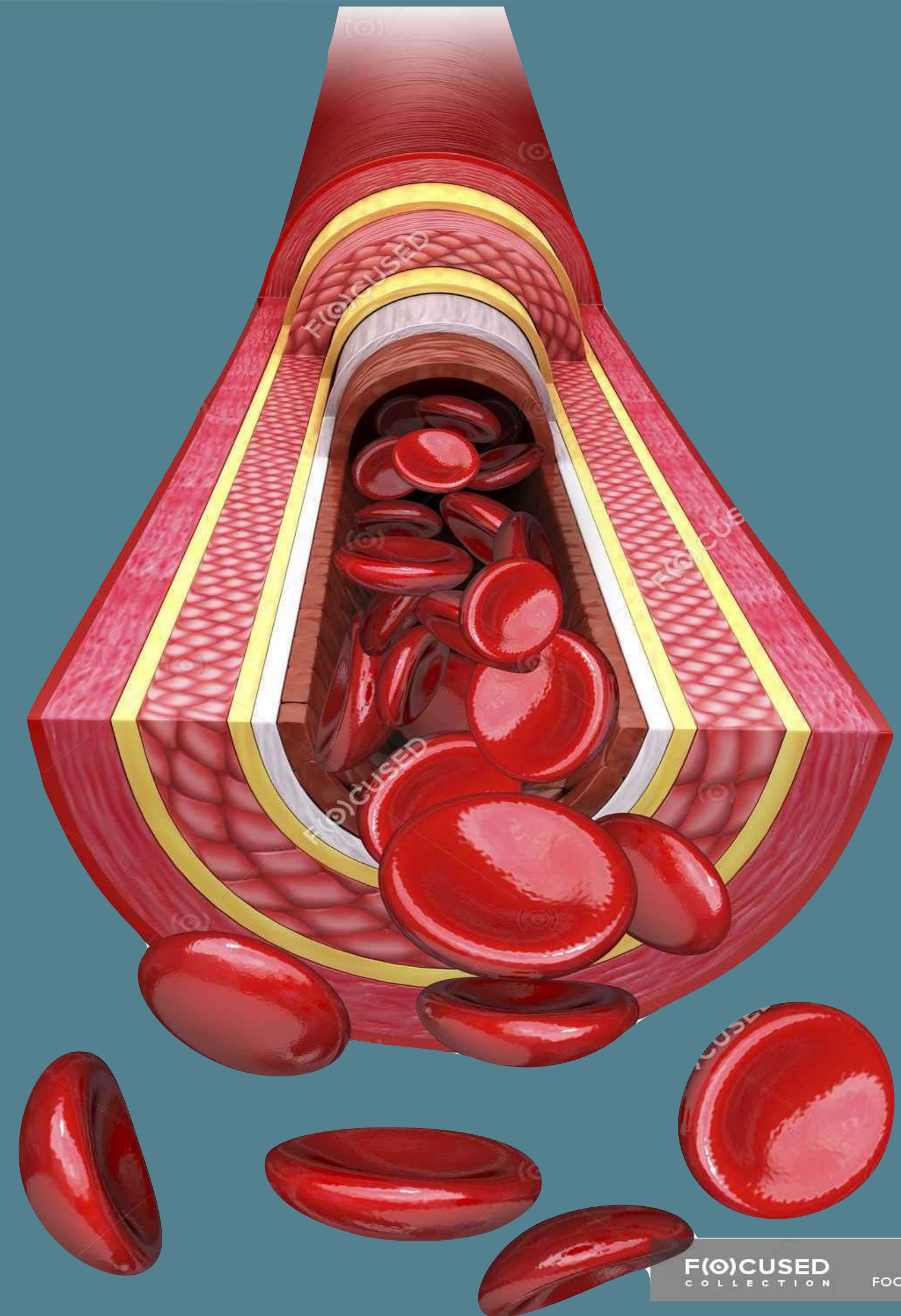
DESCRIBE THE BASIC FUNCTION OF
THE FOLLOWING PARTS OF THE
CIRCULATORY SYSTEM: LUNGS

➤ Lungs facilitate the exchange of gases

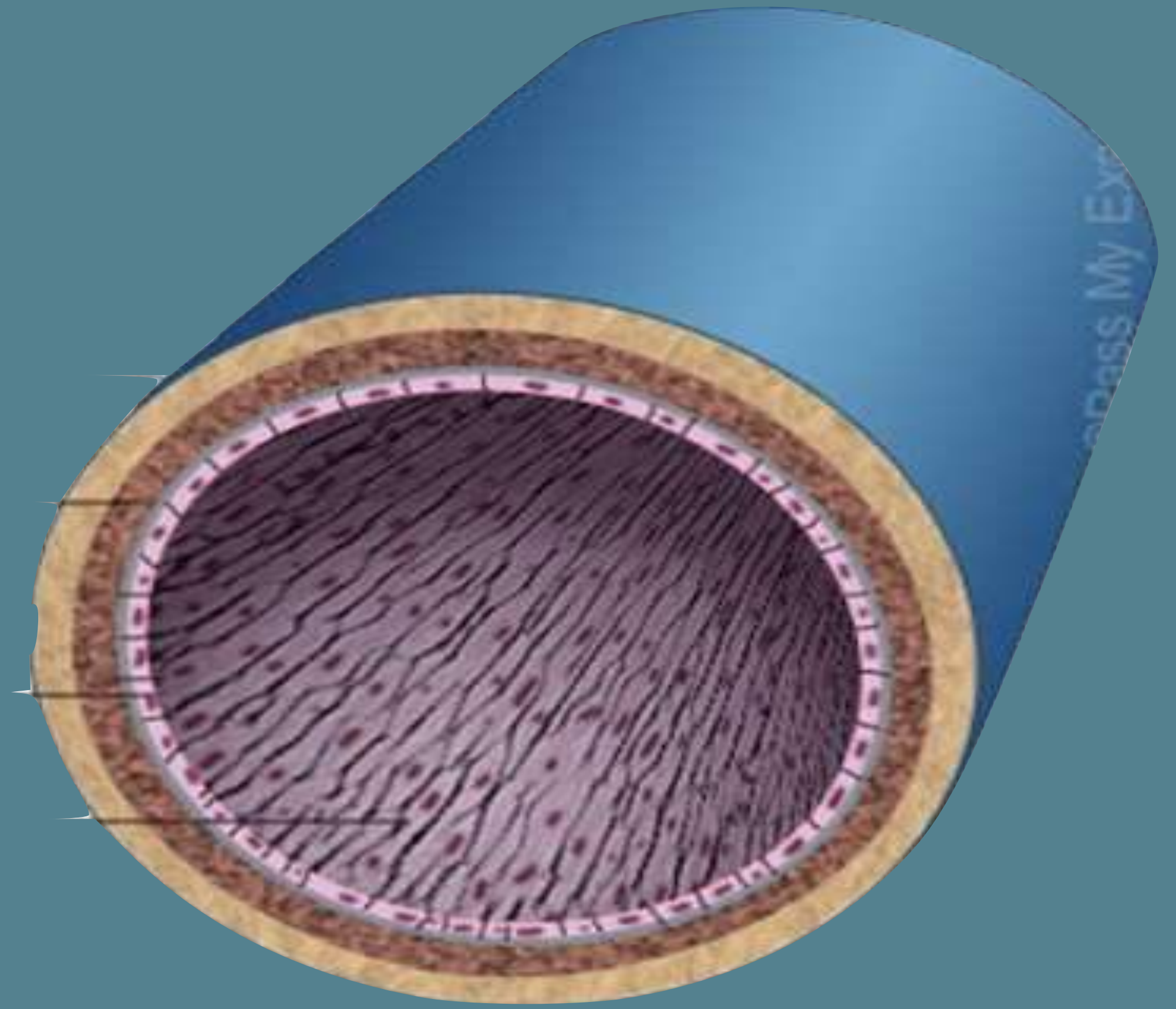


WHAT ARE THE MAJOR DIFFERENCE
BETWEEN ARTERIES AND VEINS?

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- carry oxygen-rich blood away from the heart
 - thick elastic walls, and small lumen

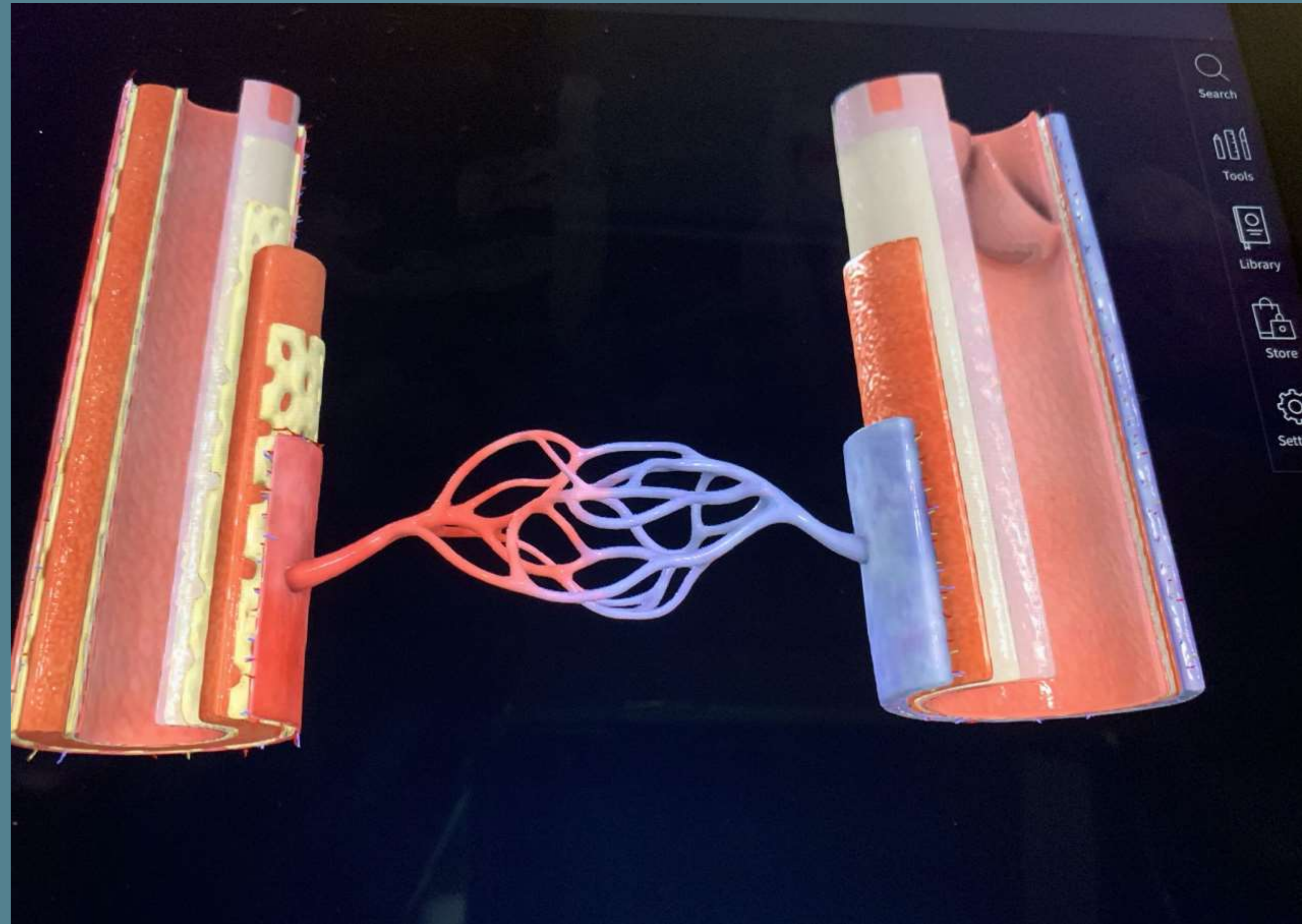


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- -carry deoxygenated blood to the heart
 - -larger lumen than arteries and have thinner walls
 - -have valves
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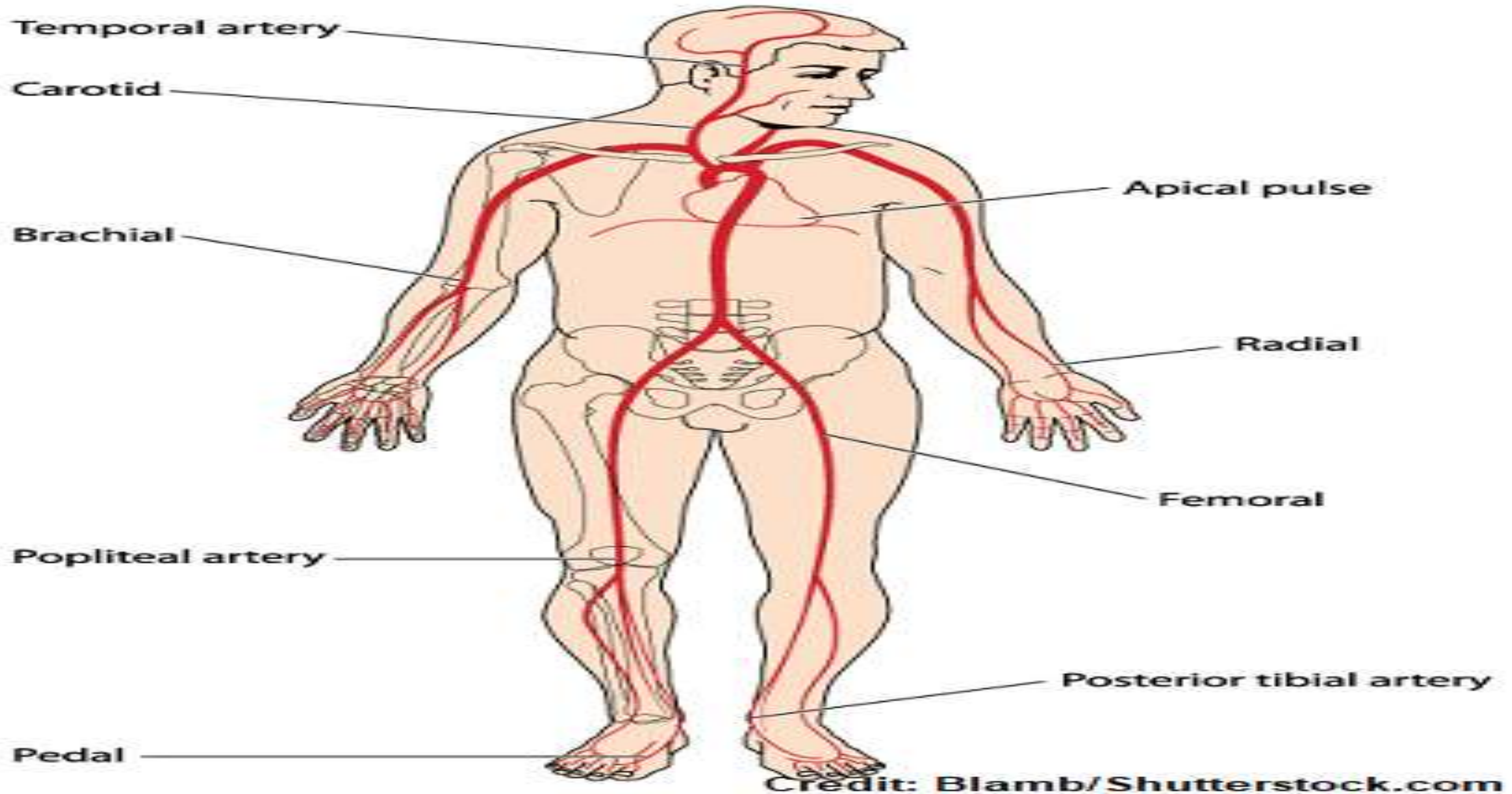


WHAT IS A CAPILLARY AND WHAT IS
ITS FUNCTION?

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- -Capillaries are the smallest vessels
 - -thin permeable walls



WHAT ARE SOME OF THE PLACES
YOU CAN TAKE SOMEONE'S PULSE?



Credit: Blamb/Shutterstock.com

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- (1) Carotid. This site is most commonly used during CPR in an adult as a pulse check site.



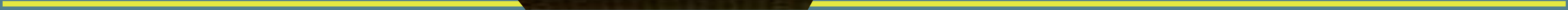
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- Radial. It is most commonly used as the site to count a heart rate



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- Record your resting pulse rate, then exercise strenuously {jog, swim laps, climb stairs, etc} for ten minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week, recording your results on a chart or a graph. Did the exercise affect your heart rate?
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- -Your resting heart rate is the average heart beats per minute measured when you are inactive or relaxed for several minutes.
 - -Children 10 years and older: 60 to 100 beats per minute
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➤ What are some of the ways we can measure our heart rate?



MAKE A SIMPLE STETHOSCOPE AND
LISTEN TO SOMEONE'S HEART BEAT.

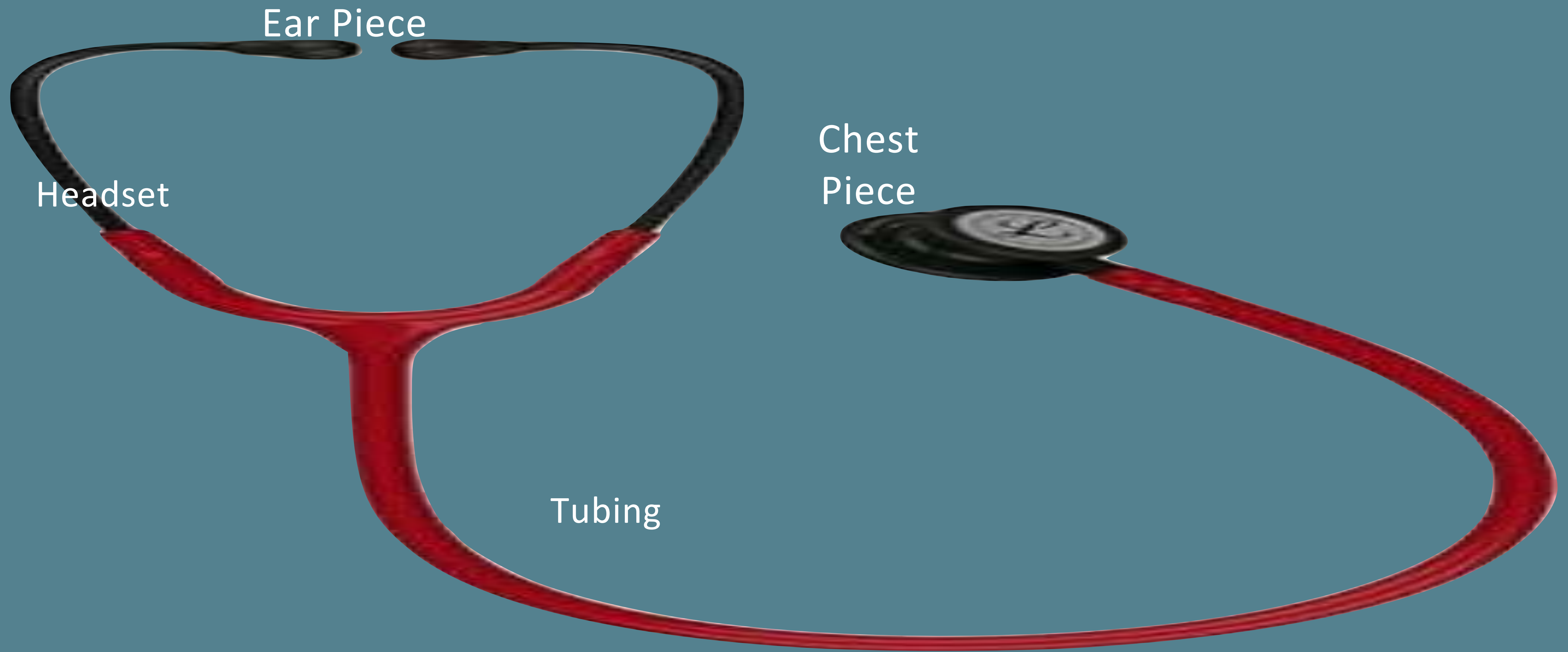
➤ Cap

➤ Balloon

➤ Aluminium Wire

➤ Insulation tape

➤ Tubing



Ear Piece

Headset

Chest
Piece

Tubing



➤ What are five things you can do to keep your heart healthy?

- -Eat lots of vegetables
- -Regular physical activity
- -Use less saturated fat
- -Don't smoke or
- -Manage your weight



WHAT IS CHOLESTEROL AND HOW IS IT
RELATED TO ARTERIOSCLEROSIS?

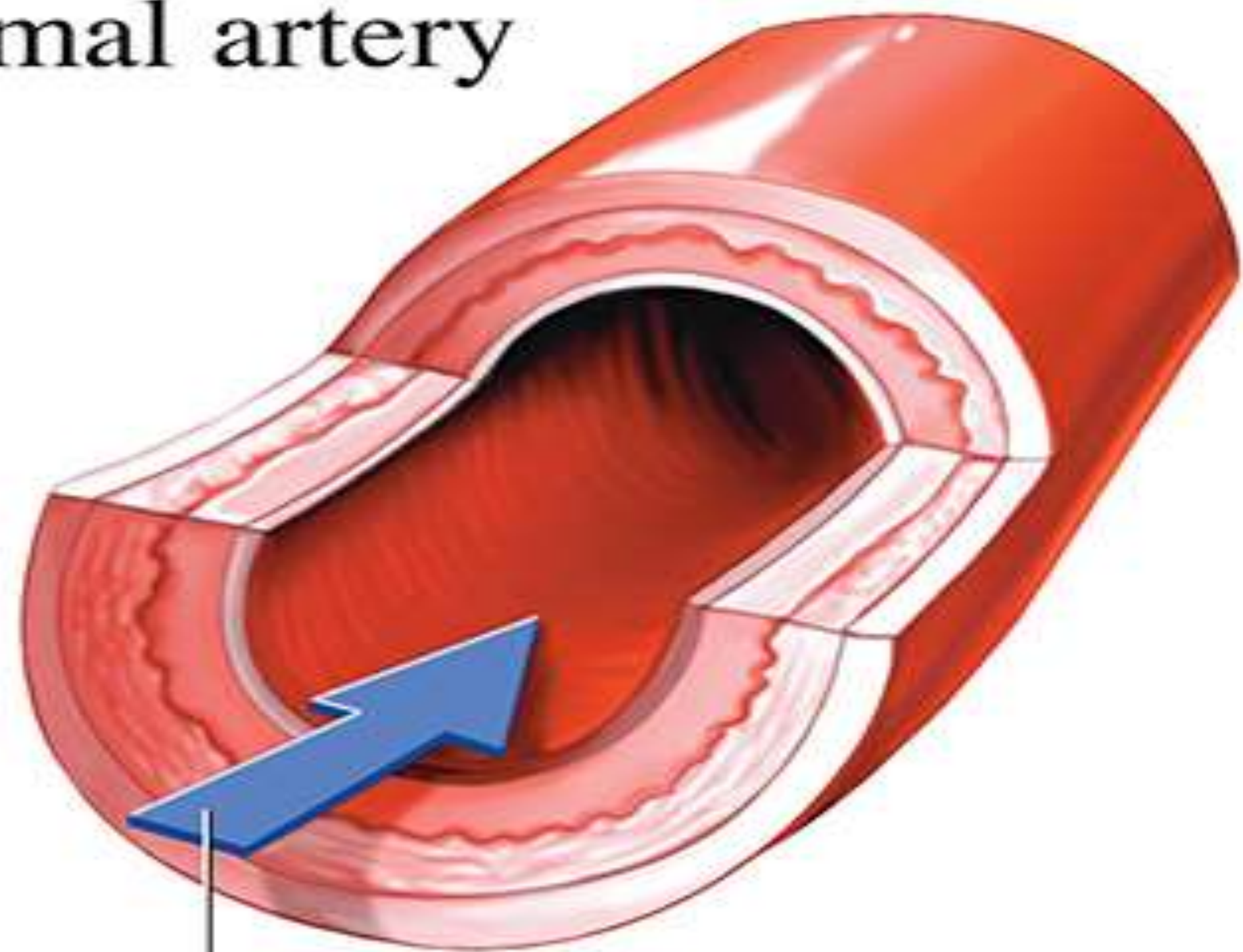
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- Cholesterol is a fatty substance which is made in the liver. It's found in some foods too.
-

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- Too much can clog up your arteries and lead to health problems in the future.
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WHAT IS ARTERIOSCLEROSIS?

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- Arteriosclerosis is the hardening of the blood vessels and atherosclerosis is one of the causes of the arteriosclerosis.
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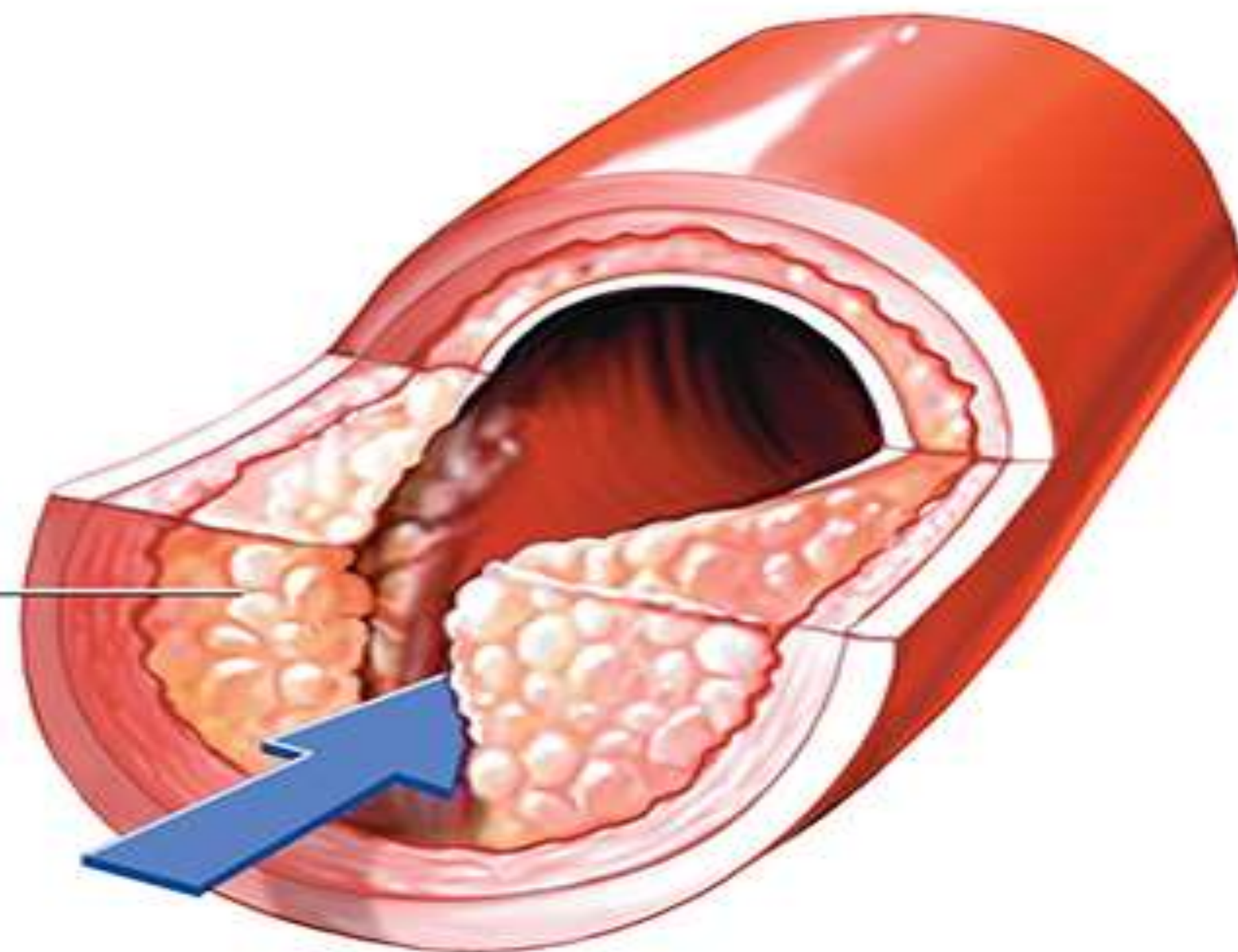
Normal artery



Blood flow

Artery narrowed by atherosclerosis

Plaque



WHAT IS A HEART ATTACK?

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- A heart attack is a medical emergency. It happens when there's a sudden loss of blood flow to a part of the heart muscle. Without enough blood and oxygen your heart can be seriously damaged.
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WHAT ARE SOME SYMPTOMS?

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- Chest pain or discomfort that suddenly occurs and doesn't go away. It may feel like pressure, squeezing or heaviness in your chest
 - Pain that may spread to your left or right arm or may spread to your neck, jaw, back or stomach
 - Feeling sick, sweaty, light-headed or short of breath.
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- Sudden feeling of anxiety that can feel similar to a panic attack
 - Excessive coughing or wheezing due to a build up of fluid in the lungs.
 - Pain levels can also vary from person to person. For some people the pain or tightness in their chest is severe, while other people just feel uncomfortable, or pain similar to indigestion.
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- What should you do if you suspect someone is having a heart attack?
-

➤ Do you know the medical services in your country to call?

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- Call 999 for an ambulance immediately
 - Start CPR
 - Ask someone to get the defibrillator
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➤ Defibrillators

Defibrillator Heart Restarter

Anyone can use it
No training necessary

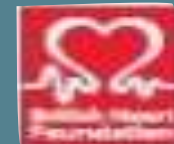


For an unconscious person
NOT breathing normally



Call 999 → Start CPR → Switch on defibrillator → Follow its instructions

Resuscitation Council (UK)



WHAT CPR STANDS FOR?

CPR STANDS FOR CARDIOPULMONARY
RESUSCITATION.

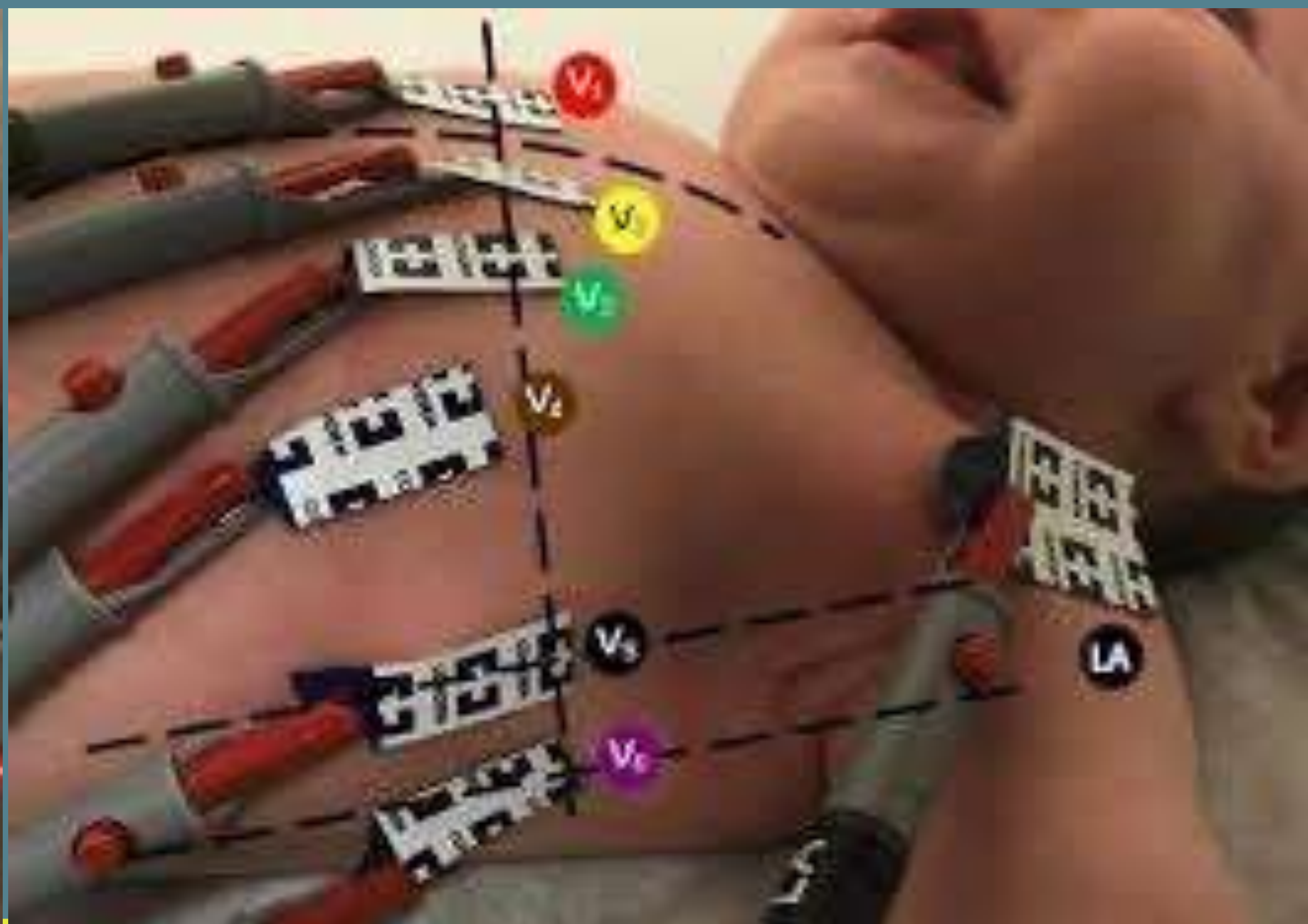
HOW CAN CPR HELP?

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- By performing chest compressions (because of COVID-19 no rescue breaths), you are taking over the role of their heart and lungs, pumping blood and oxygen around their body.
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WHAT IS AN ECG?

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- An electrocardiogram - or ECG - is a simple and useful test which records the rhythm, rate and electrical activity of your heart.







Take Your First ECG

Recording an ECG typically takes
30 seconds.



First, open the ECG app on your
Apple Watch.

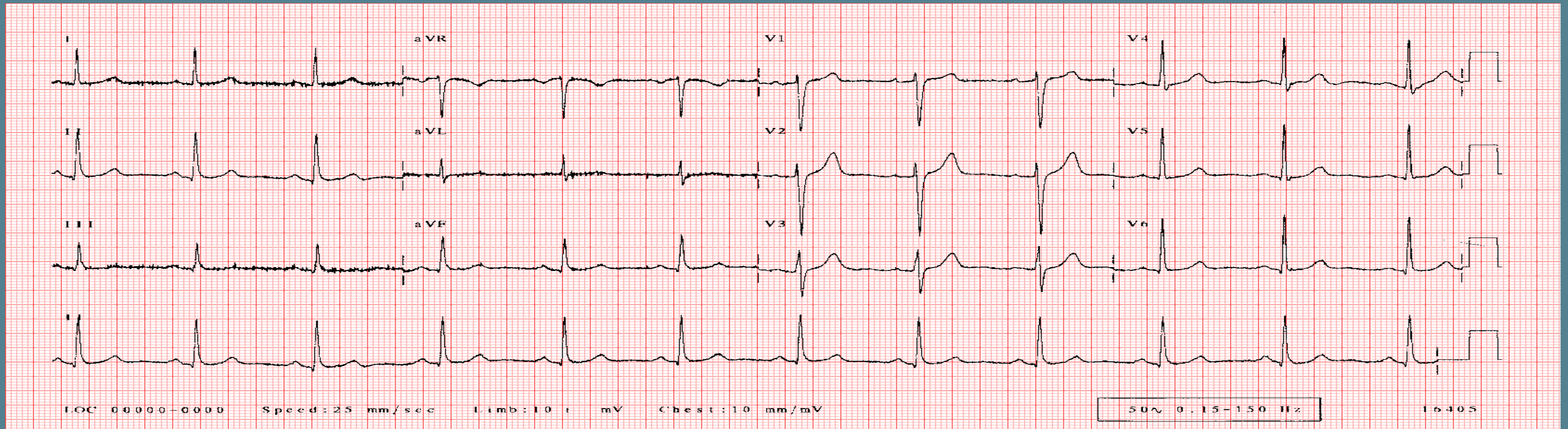


Rest your arms on a flat surface like a
lap, and hold your finger on the
Digital Crown.

Note: To take an accurate ECG, your
Apple Watch needs to be snug on the
wrist and the back of the watch must be
selected in Settings.



- An electrocardiogram - or ECG - is a simple and useful test which records the rhythm, rate and electrical activity of your heart.



FIND FIVE VERSES IN THE BIBLE THAT
REFER TO YOUR HEART. MEMORISE
TWO OF THEM

➤ “What is man, that You should exalt him, That You should set Your heart on him,” Job 7:17 NKJV

➤ “Oh, that they had such a heart in them that they would fear Me and always keep all My commandments, that it might be well with them and with their children forever!” Deuteronomy 5:29
NKJV

➤ “I will praise You, O LORD, with my whole heart; I will tell of all Your marvelous works.” Psalms 9:1
NKJV

➤ “And you shall love the LORD your God with all your heart, with all your soul, with all your mind, and with all your strength.’ This is the first commandment.” Mark 12:30 NKJV

➤ “that I have great sorrow and continual grief in my heart.” Romans 9:2 NKJV

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- -Completing your honour
 - Download your worksheet from <http://youth.adventistchurch.org.uk/e-club-pathfinders> {if you cannot print, write on a sheet}
 - Complete it
-

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- Add it to your folder
 - Ensure club Director checks and sign off
 - Wear your honour proudly
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➤ -Completing your honour

➤ <https://www.heartuk.org.uk>

➤ <https://www.bhf.org.uk>

➤ <https://www.resus.org.uk/covid-19-resources/covid-19-resources-general-public/resuscitation-council-uk-statement-covid-19>

➤ <https://www.nhs.uk/conditions/first-aid/cpr/>
