



CARDIOVASCULAR  
SYSTEM DISEASES,  
BLS, CPR



Dr Maxim Kurbanov

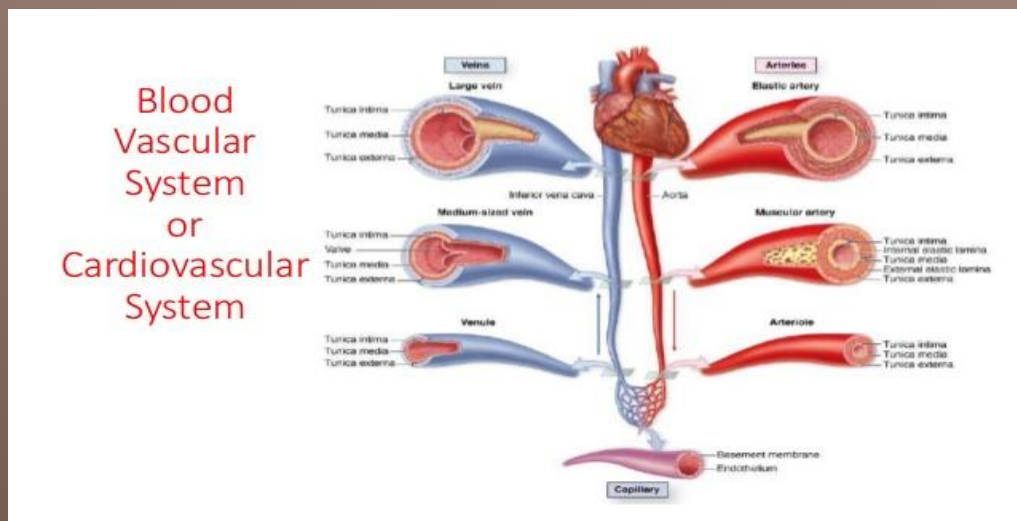
**“MERCURY” FIRST AID TRAINING**



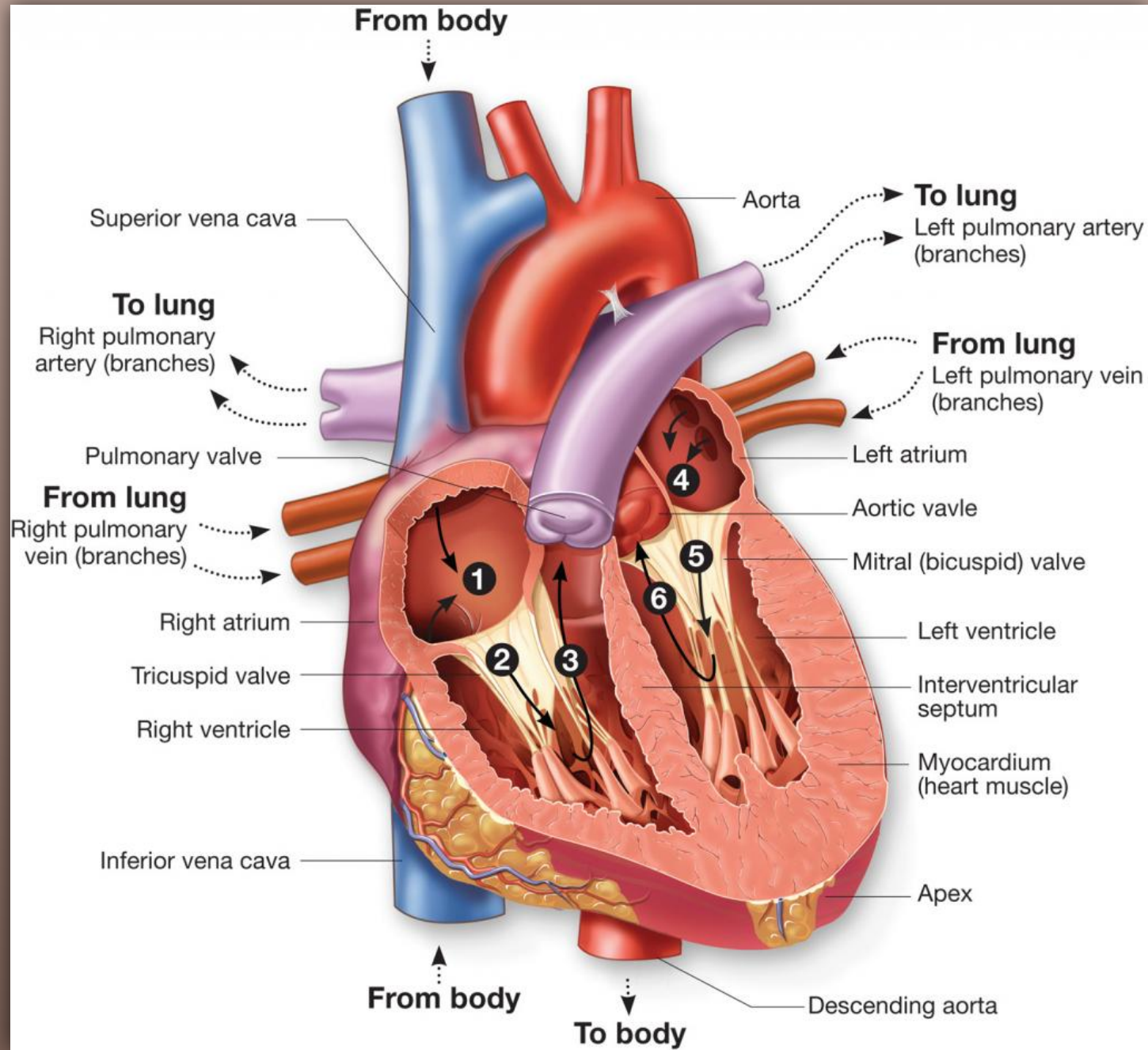
WELCOME TO OUR CLASS

A diagram of an ECG wave with cartoon characters representing the P, QRS, and ST segments. The P wave is a pink character saying "OK, Here I Come!". The QRS complex is a yellow lightning bolt character saying "I Got to Get From The Atrium To Ventricles". The ST segment is a purple character saying "Make'n It Happen... Ventricles Contract." and "I Think I'll Take A Little Rest." The T wave is a red character saying "Ready To Go Again!".

To Calculate Heart Rate:  
Count the number of "R" waves in 6 seconds.  
(6 large blocks X's 10 = 1 min rate)

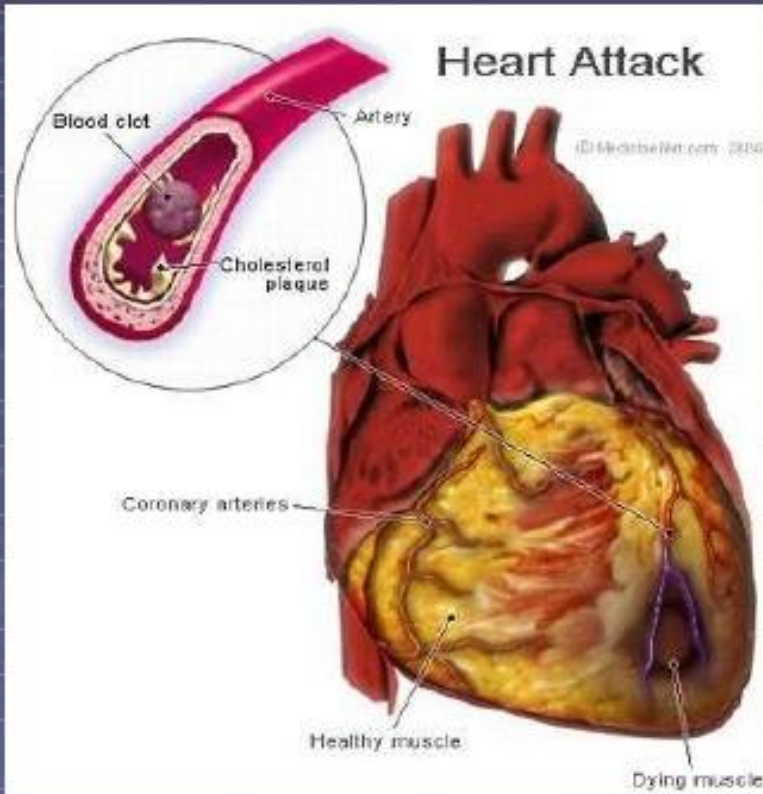
A diagram of an ECG grid showing a large square representing 20 seconds and a small square representing 0.4 seconds. The vertical axis is labeled "VOLTAGE" and the horizontal axis is labeled "TIME IN SECONDS".

# TUTORIALS FOR CVD TRAINING



# HEART ANATOMY

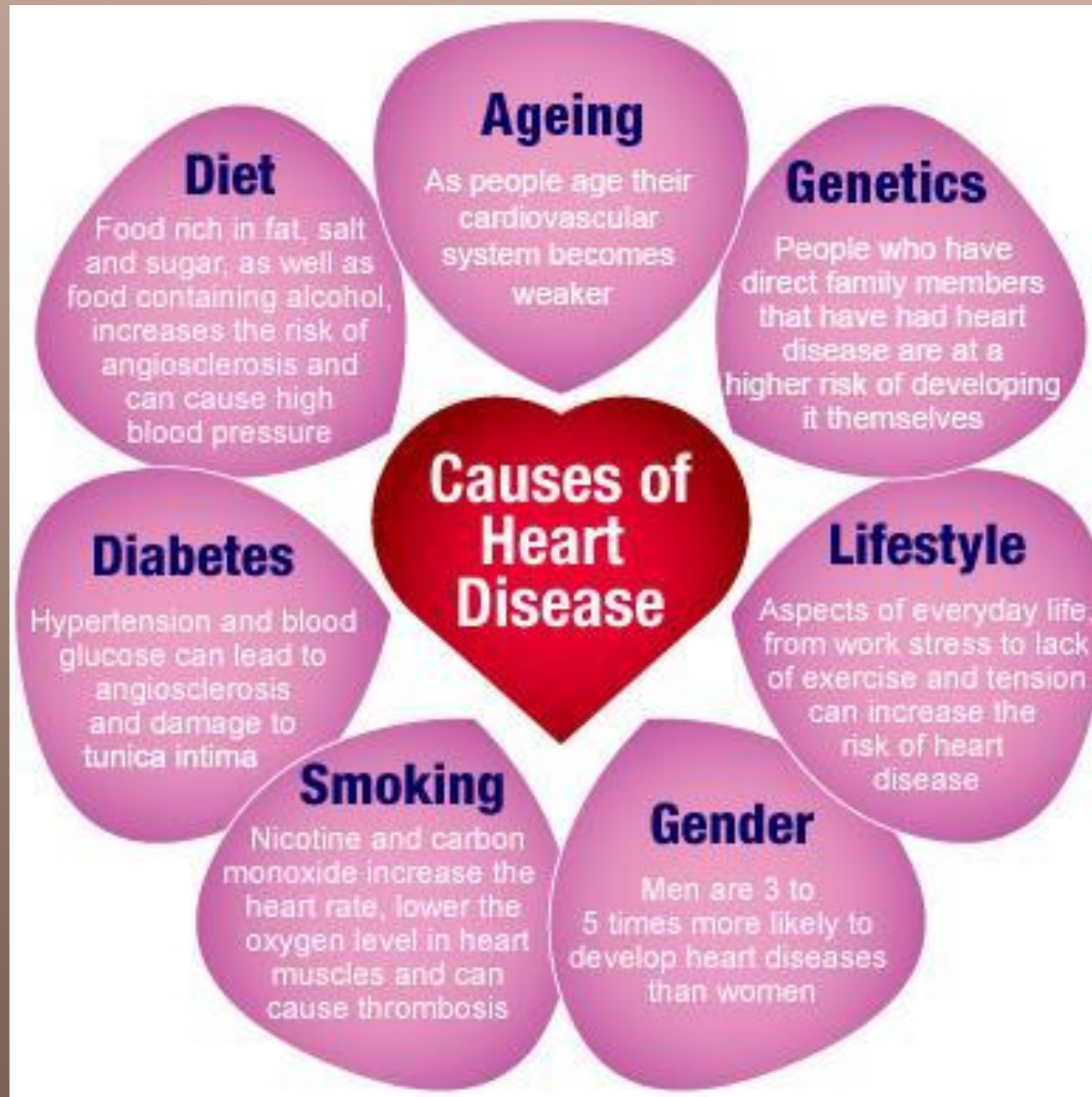
# Cardiovascular System Diseases - Heart



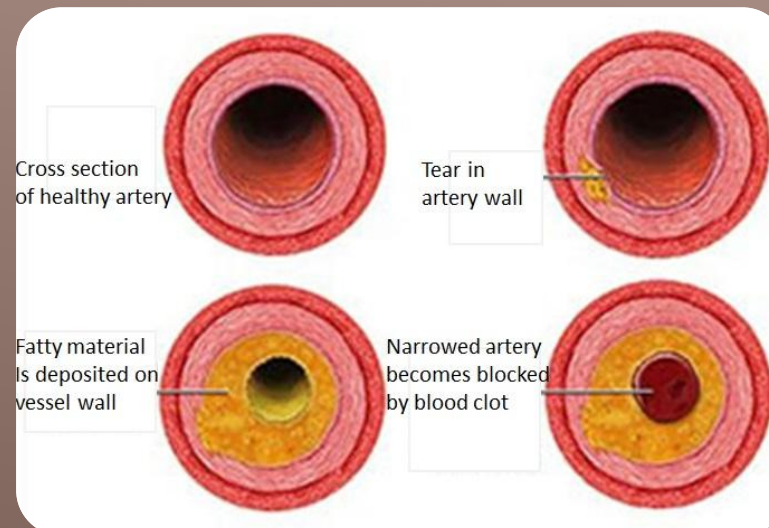
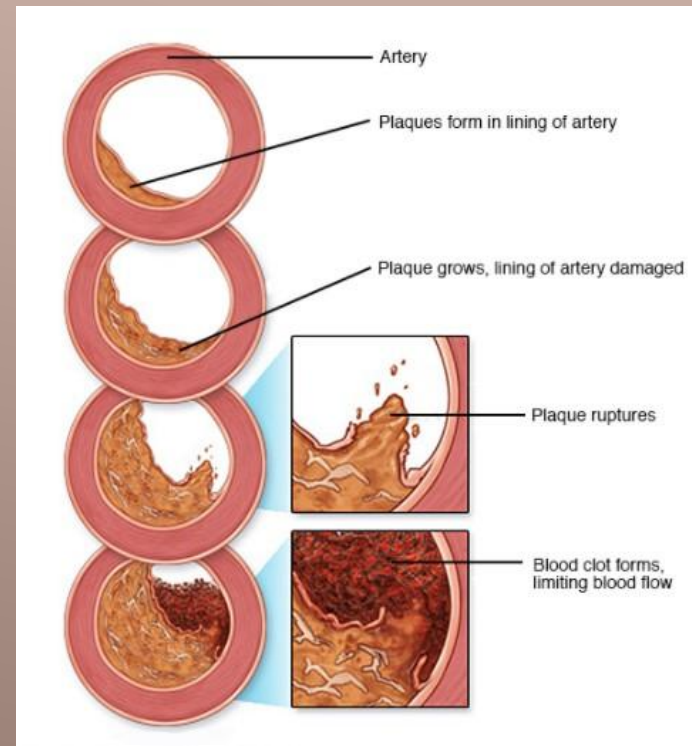
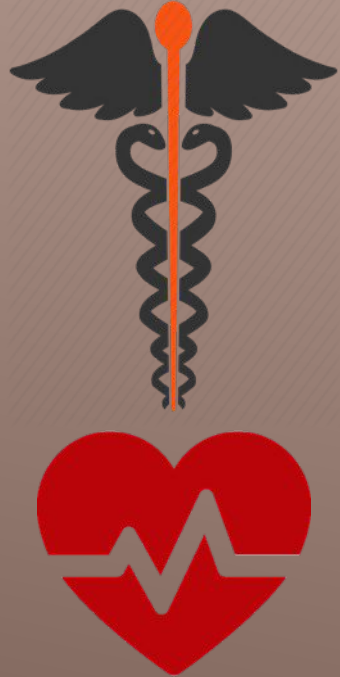
- Angina Pectoris
- Arrhythmia
- Bundle Branch Block
- Cardiac Arrest
- CardioMyopathy
- Congenital Septal Defect
- Congestive Heart Failure
- Coronary Artery Disease
- Endocarditis
- Fibrillation
- Flutter
- Heart Valve Prolapse
- Heart Valve Stenosis
- Myocardial Infarction - Heart Attack
- Myocarditis
- Pericarditis
- Tetralogy of Fallot



CARDIOVASCULAR SYSTEM DISEASES



**MAIN CAUSES OF CVS DISEASES**



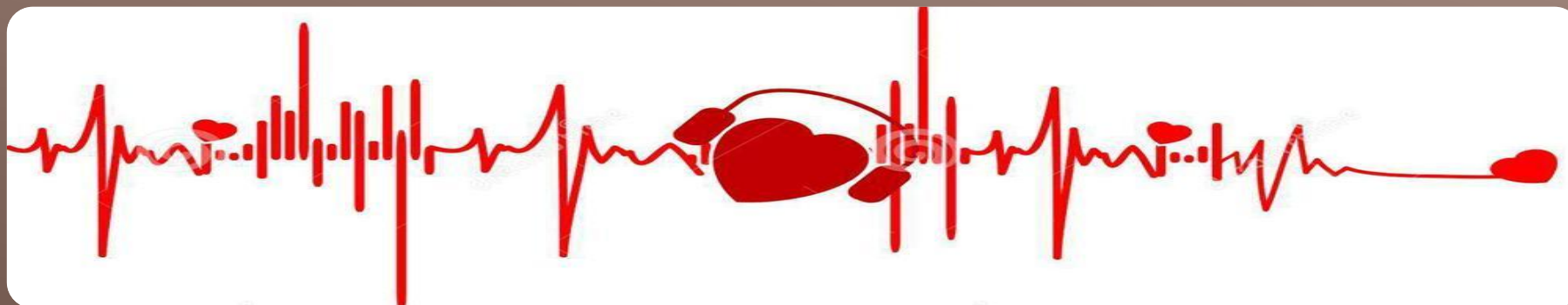
# HEART MUSCLE NECROSIS AFTER PROLONGED ISCHEMIA

TIME FOR THEORY



LEARNING TIME

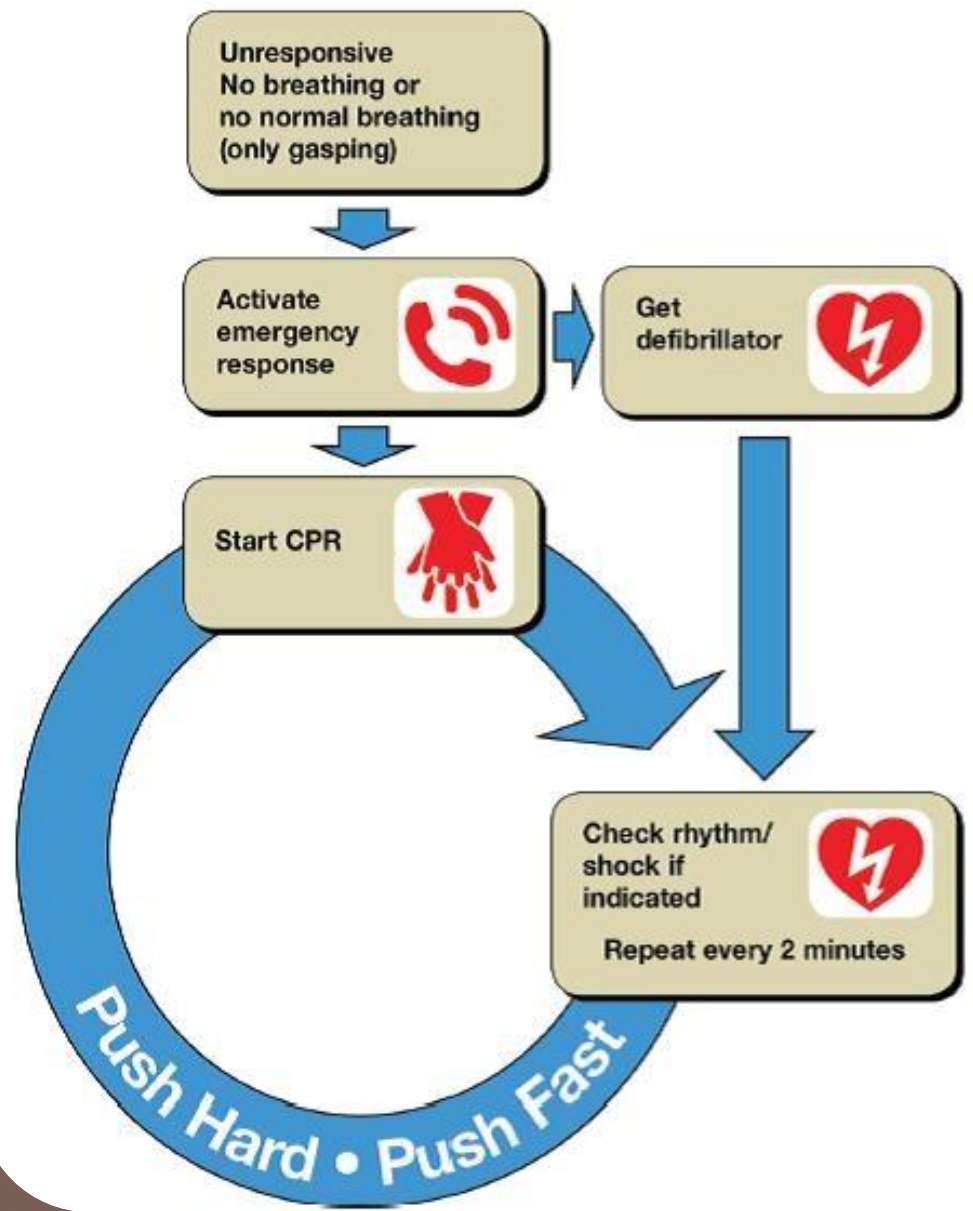





TIME FOR PRACTICE




**LEARNING TOGETHER**




**CPR is as easy as**  
**C-A-B**




**C**  
**Compressions**  
Push hard and fast  
on the center of  
the victim's chest



**A**  
**Airway**  
Tilt the victim's head  
back and lift the chin  
to open the airway



**B**  
**Breathing**  
Give mouth-to-mouth  
rescue breaths

American Heart Association   
*Learn and Live*

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# BLS AND CPR



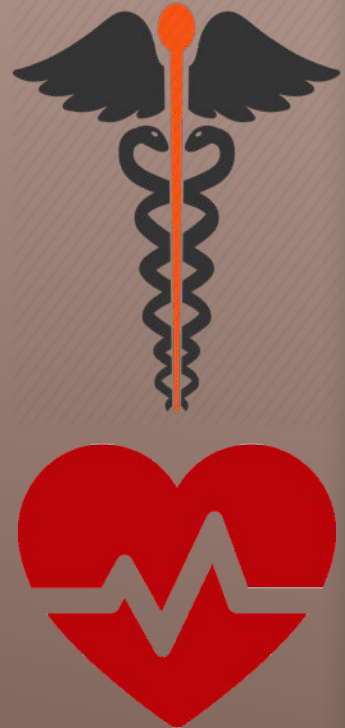
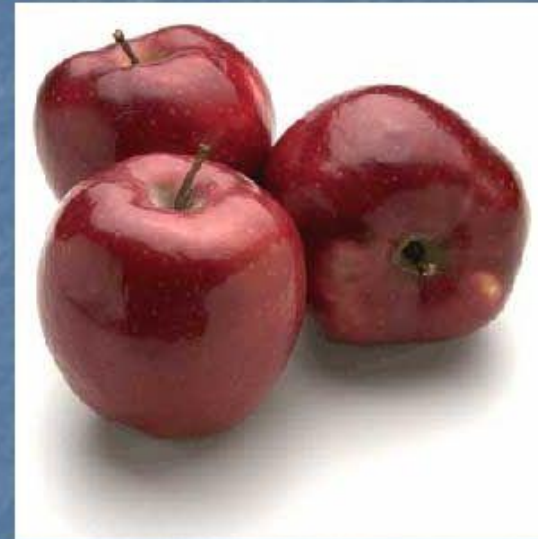
**REFRESHING OF BLS ALGORYTHM**



**WHY ECG IS IMPORTANT?**

# Circulatory System Health

- You can prevent cardiovascular disease by exercise, eating healthy and NOT SMOKING
- A diet low in saturated fat and cholesterol is important for heart health
- Excess fat and cholesterol builds up on artery walls
- Excess weight gain enlarges the circulatory system, which causes the heart to pump harder





**READY TO SAVE LIVES**

# CPR (Adult) Unresponsive and Not Breathing



1

## Check Response

- Tap or squeeze shoulder. Ask loudly, "Are you Okay?" No response?



2

## Call for Help!

- Have someone alert EMR and get an AED (Automated External Defibrillator).



3

## Check Breathing

- Look quickly at face and chest for normal breathing. Occasional gasps are NOT considered normal



4

## Give 30 Chest Compressions

- Place heel of one hand on centre of chest (lower half of breast bone)
- Place heel of second hand on top of first
- Using upper body weight, push hard, at least 2 inches in depth
- Push fast, at the rate of at least 100 times per minute. Allow chest to fully recoil



5

## Open Airway

- Tilt-head-lift-chin to open the airway



6

## Give 2 Breaths

- Pinch victim's nose
- Give 1 breath per 1 second
- Give 2 such breaths
- Make chest visibly rise with each breath
- Remember to take a fresh breath in between breaths



## Child (1 year to puberty) - CPR

- All steps are the same as for Adult however use one hand for chest compressions as the pressure required for a child is less.
- Use two hands if required
- When two people are available, follow cycles of 15 compressions & 2 rescue breaths. 10 such cycles are to be given in 2 minutes

Repeat Cycles:(Step 4, 5, 6)



# REMEMBER!





**THANK YOU!**