Project HEART
Health Workshop

JABSOM Cardiology &
Lifestyle Medicine Interest Group

Curriculum Overview

01 Anatomy & Physiology

02 Cardiovascular Diseases

03 Lifestyle Modifications

04 CPR Workshop



01

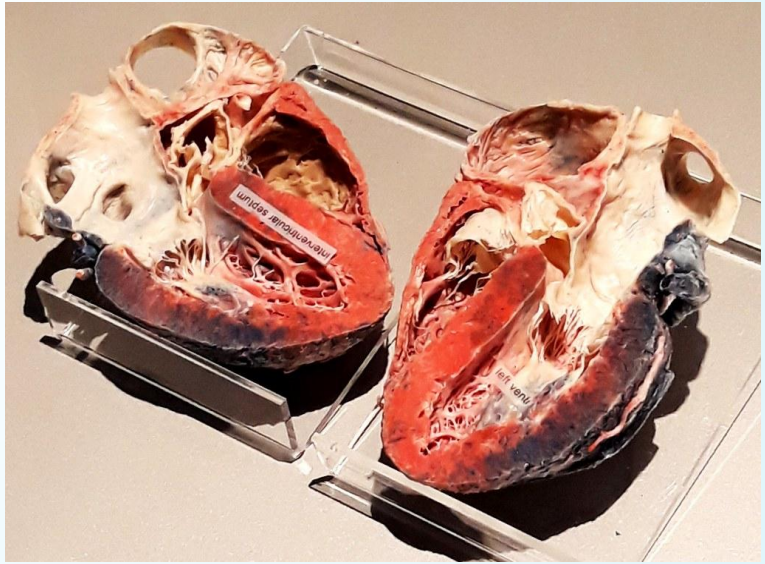
Anatomy and Physiology

What is The Heart?

One of the most important organs in the circulatory system

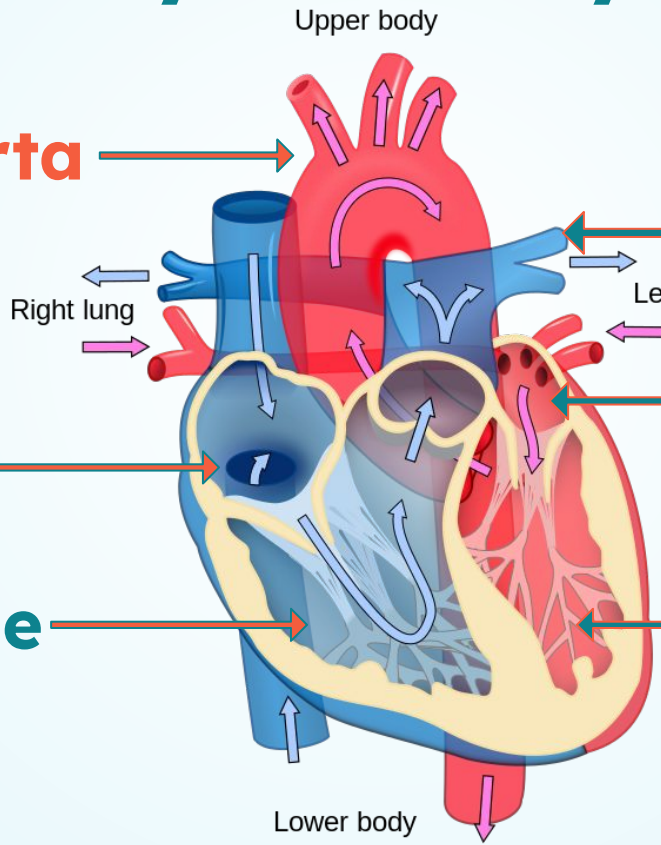
Some facts...

- The adult heart is about the size of two fists
- Your heart beats 35 million times a year
- The heart has its own conduction system so it can beat even when the brain has stopped



Anatomy and Physiology

Coronary arteries supply blood to the heart itself and come off the aorta to the left and right







02

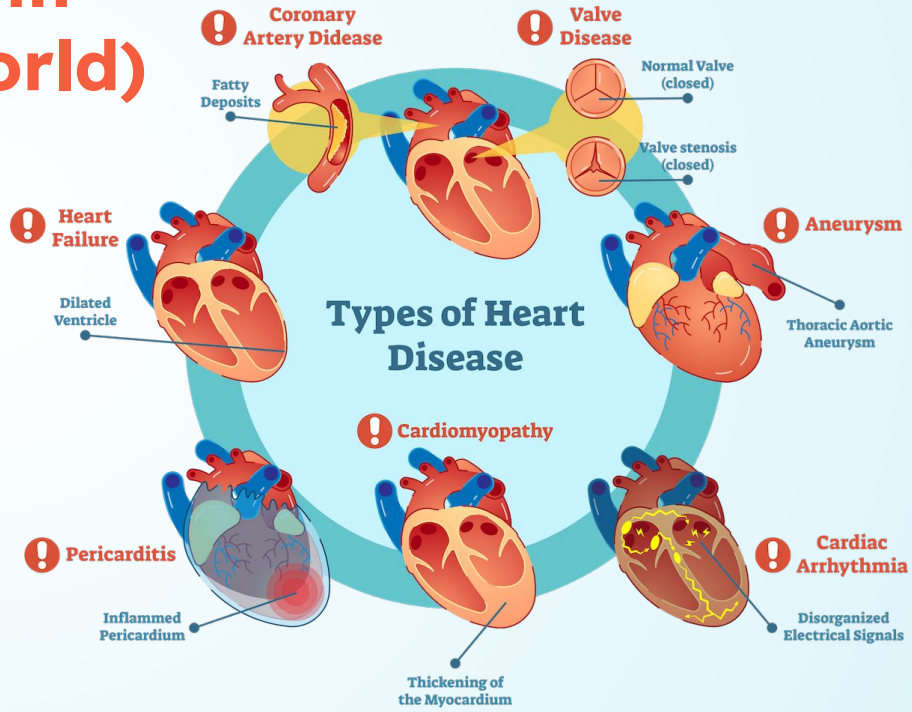
Cardiovascular Disease Overview

What is Cardiovascular Disease?

The #1 cause of death in Hawaii (and the US/world)

To name a few…

- Coronary Artery Disease *(CAD)*
- Heart Attack
- Stroke
- Arrhythmia
- Heart Failure

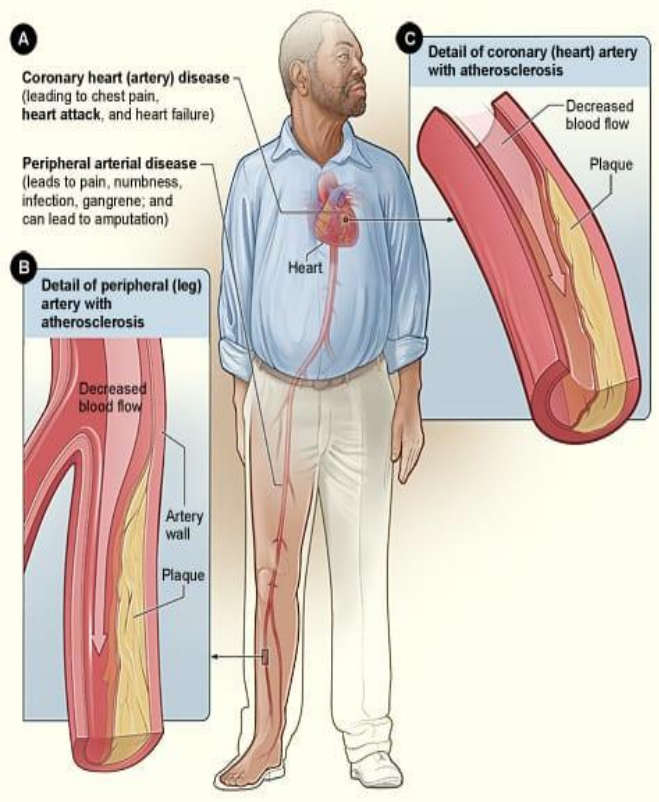


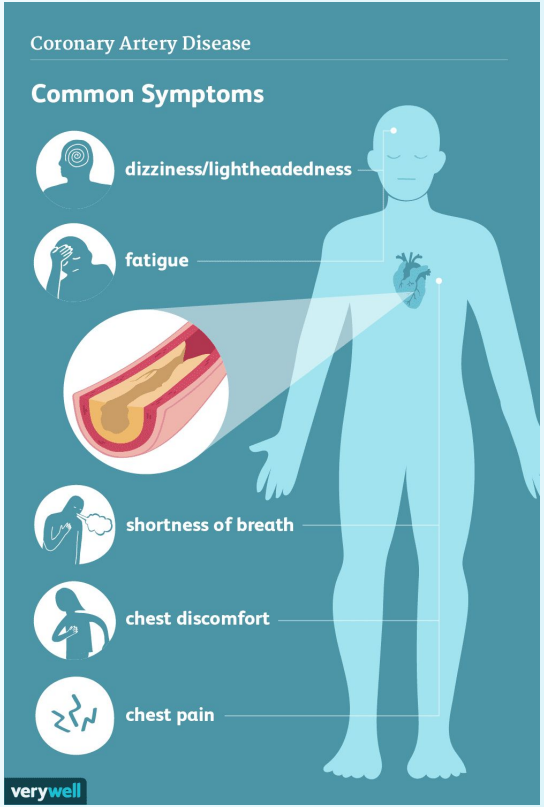
CAD and Heart Attack

CAD: Buildup of **"plaque"** in the coronary arteries leading to poor blood flow

Heart Attack: Death of heart tissue due to lack of blood flow and oxygenation

Progressive CAD leads to Heart Attack!

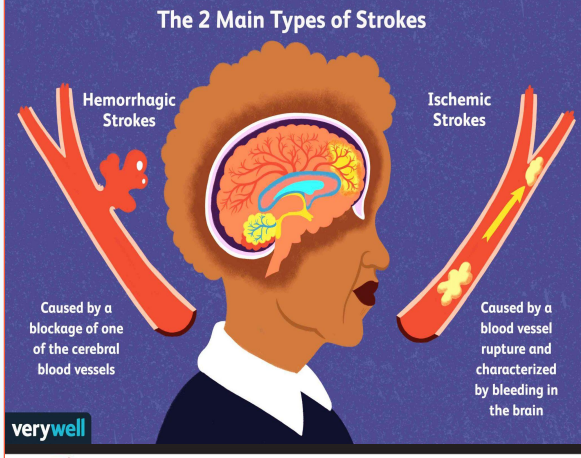


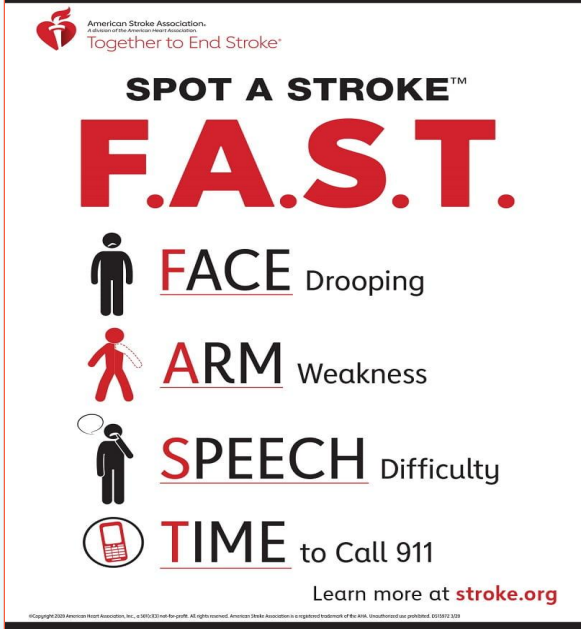


Stroke

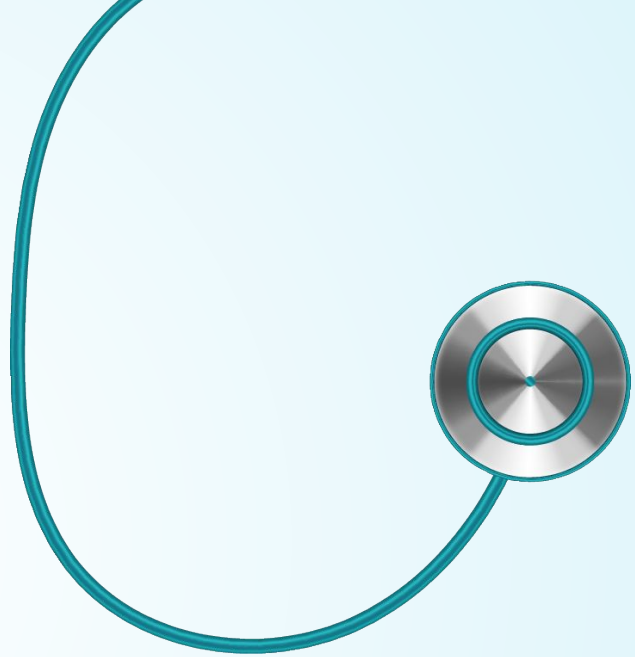
There are two types of stroke but the one we'll focus on is **ischemic**

Similar to heart attack, stroke is tissue death caused by **"plaques"** obstructing blood flow

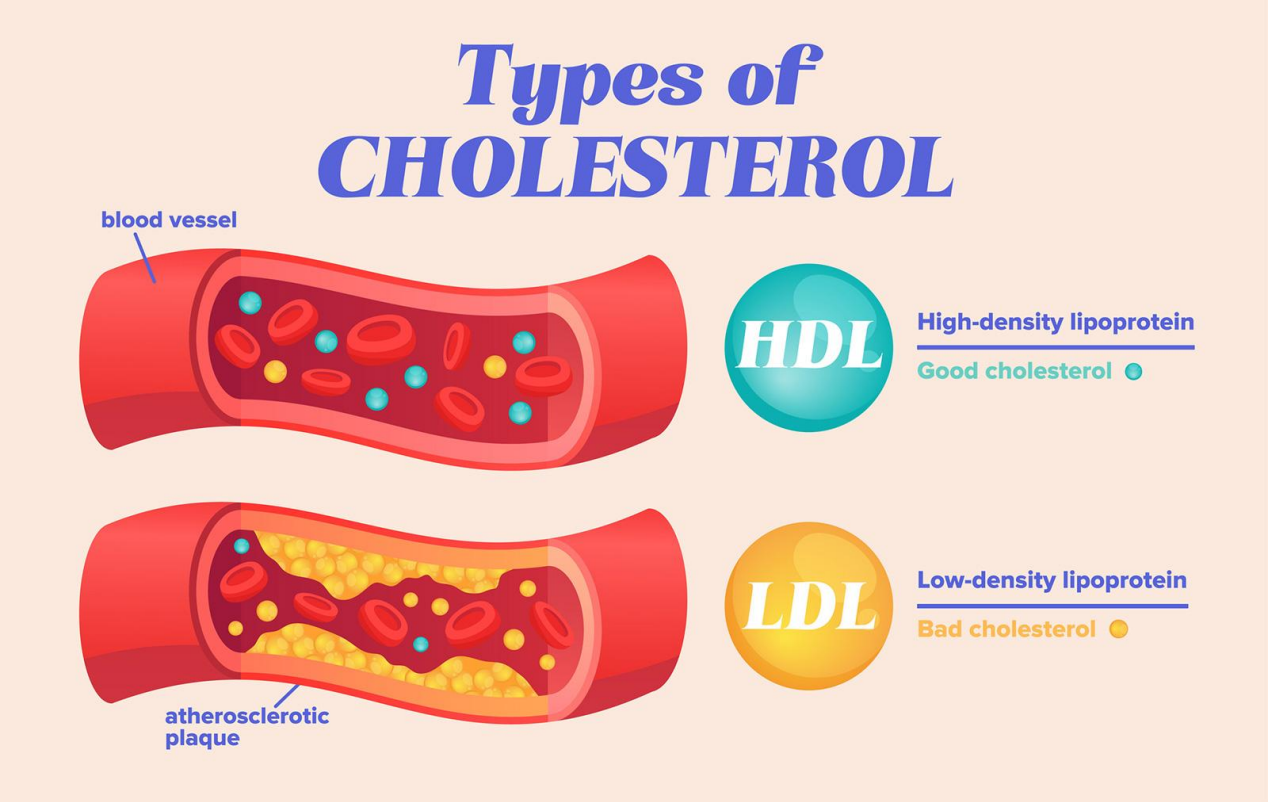




So what do you think these **“plaques”** are made of?



CHOLESTEROL!!!

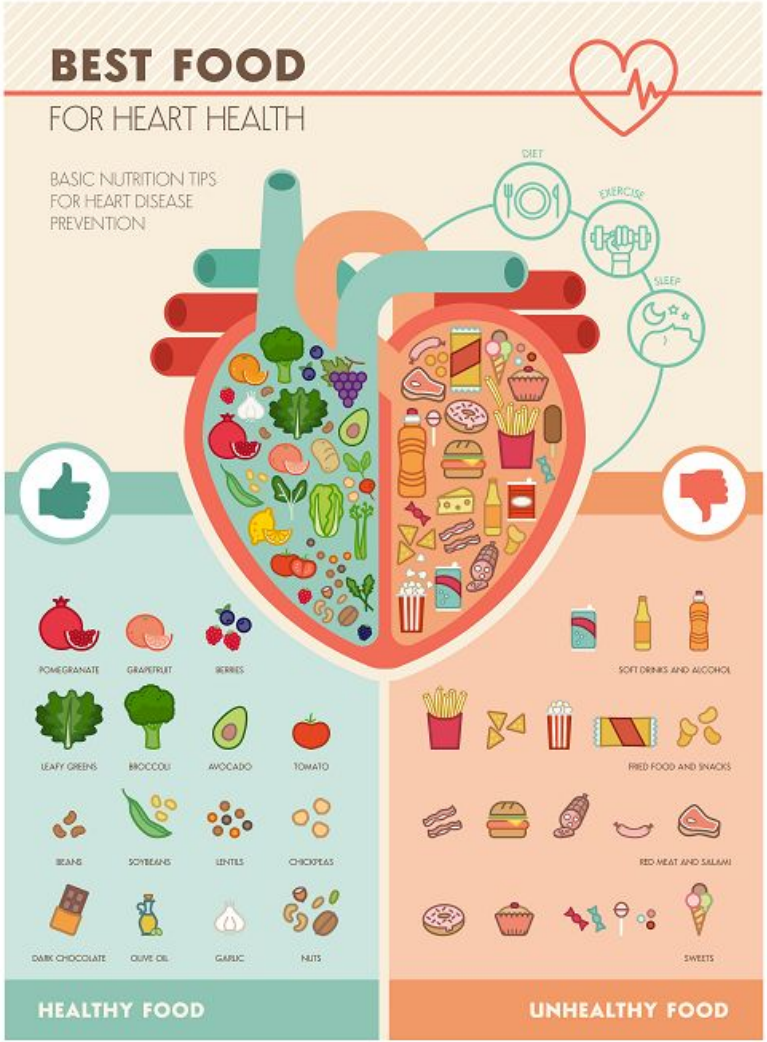






03

Lifestyle Modifications



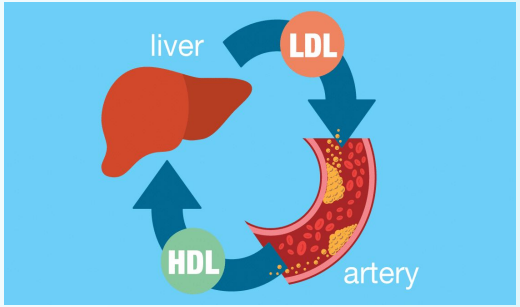
Cholesterol

What is it?

Cholesterol is a naturally made in the body but can also be found in many foods

What does it do?

It's used to make important things like hormones, vitamin D, and more!



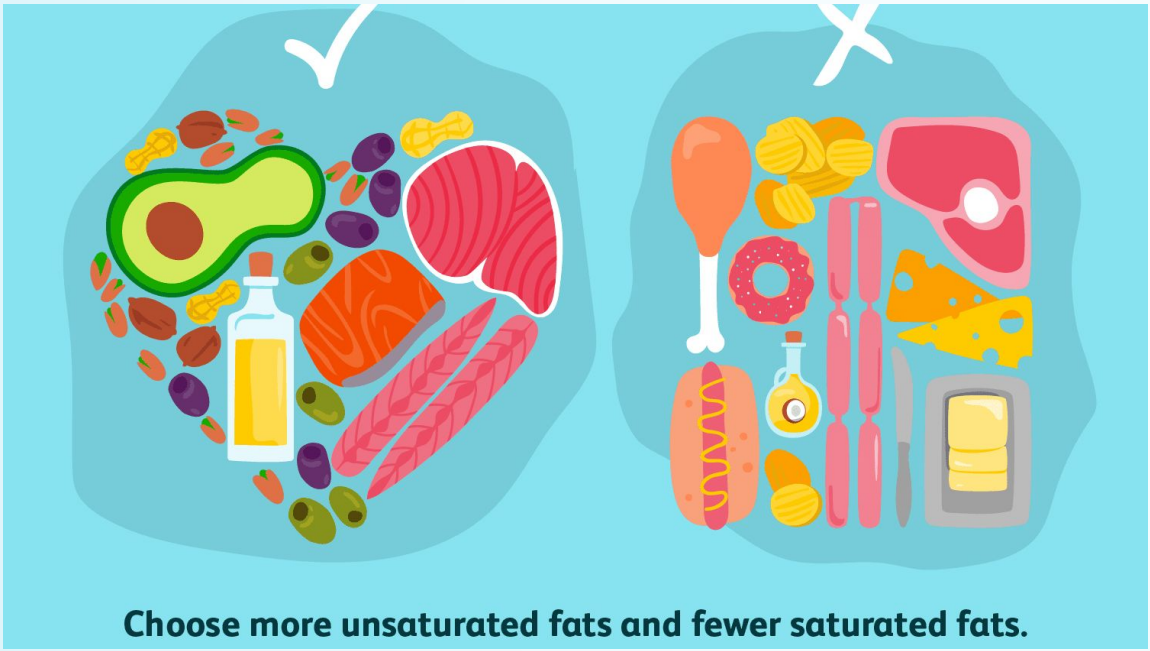
Types of cholesterol:

✅**HDL** (high density lipoproteins): takes cholesterol **out of the arteries**

❌**LDL** (low density lipoproteins: deposits cholesterol **into the arteries**

Does this mean all fats are bad?

Saturated vs. Unsaturated fats



❌Saturated Fats

- Inflammatory
- Increases LDL
- Found in **meats, butter, dairy products, and fried foods**

✅Unsaturated Fats

- Increases HDL
- Found in **olive oil, salmon, avocado, and nuts**

Activity: Fat Match

❌Saturated Fats

butter



whipping cream



bacon



beef burger



Sort these foods:

- Butter
- Nuts
- Olive oil
- Whipping cream
- Olives
- Avocados
- Bacon
- Seeds
- Beef burger

✅Unsaturated Fats



almonds



olives



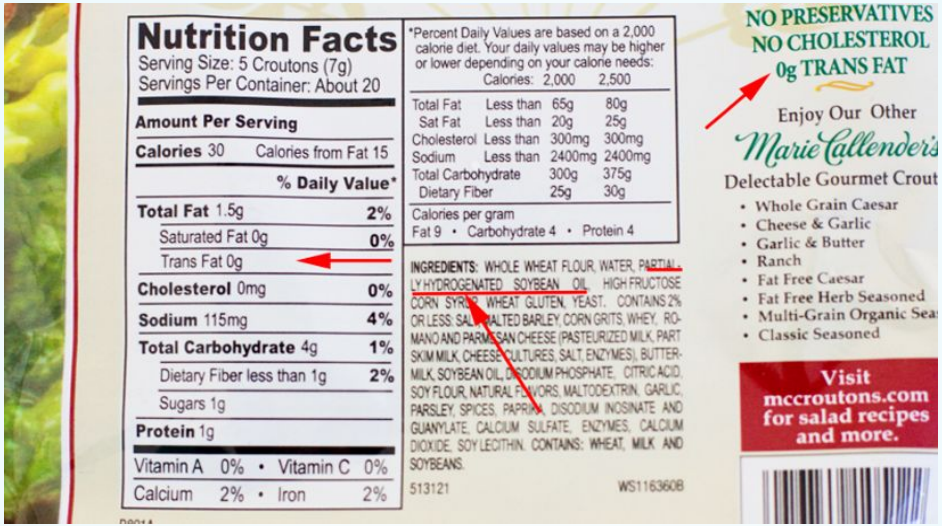
avocado



seeds



How to read food labels



- Beware of misleading labels… If trans fat is under <0.5g per serving, it doesn't have to be shown on the nutrition label!!!
- **Hydrogenated** oil in the **INGREDIENTS** section = ❌**trans fat**
- Try to limit dietary fat ***(especially saturated and trans)*** and eat lots of **fiber**!!!

Serving Size

- 1 serving size = 1 portion size for 1 day
- How much is each serving size?
  - ⅔ cup!
- What do 8 serving sizes mean?
  - 8 days of food!



Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving

Calories **230**

	% Daily Value*
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

Percent Value

Tells us how much of everything you should have in one day!



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Nutrition Label Checklist



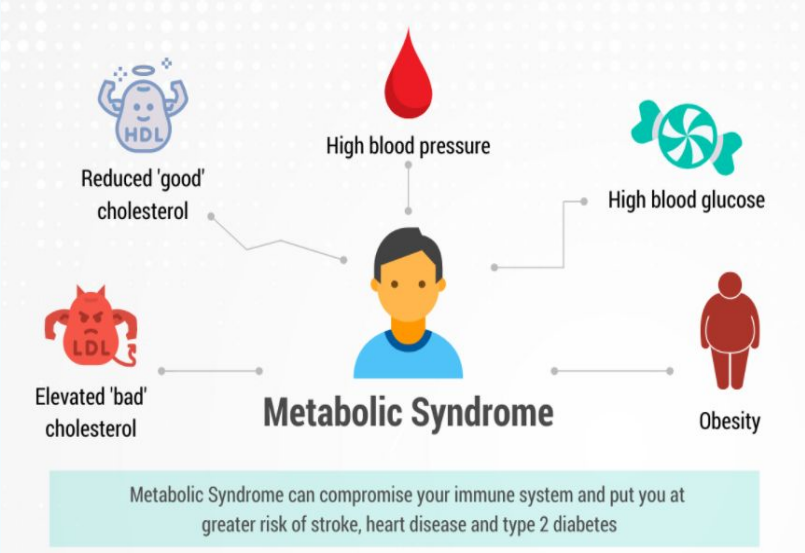
- ❑ Check the calories!
- ❑ Check the serving size!
- ❑ Check the fat!
- ❑ Check the protein!
- ❑ Check the carbohydrates!
- ❑ Check the sodium and cholesterol!

Other diseases to worry about...

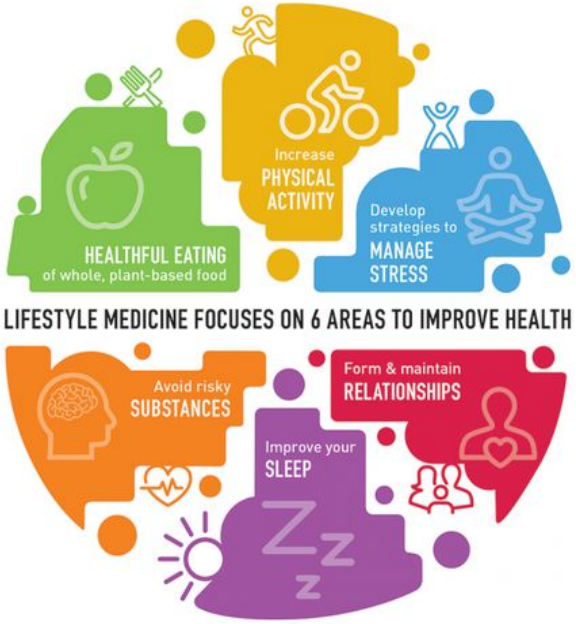
Obesity

Diabetes

Hypertension



How to improve your health...



eat plants

keep moving

sleep well

be present

stay calm

love people

Recommend **150 minutes** of moderate aerobic activity per week

Recommend **7-9 hours** of sleep per day

Try **deep breaths** or meditation to help manage stress and improve spiritual health

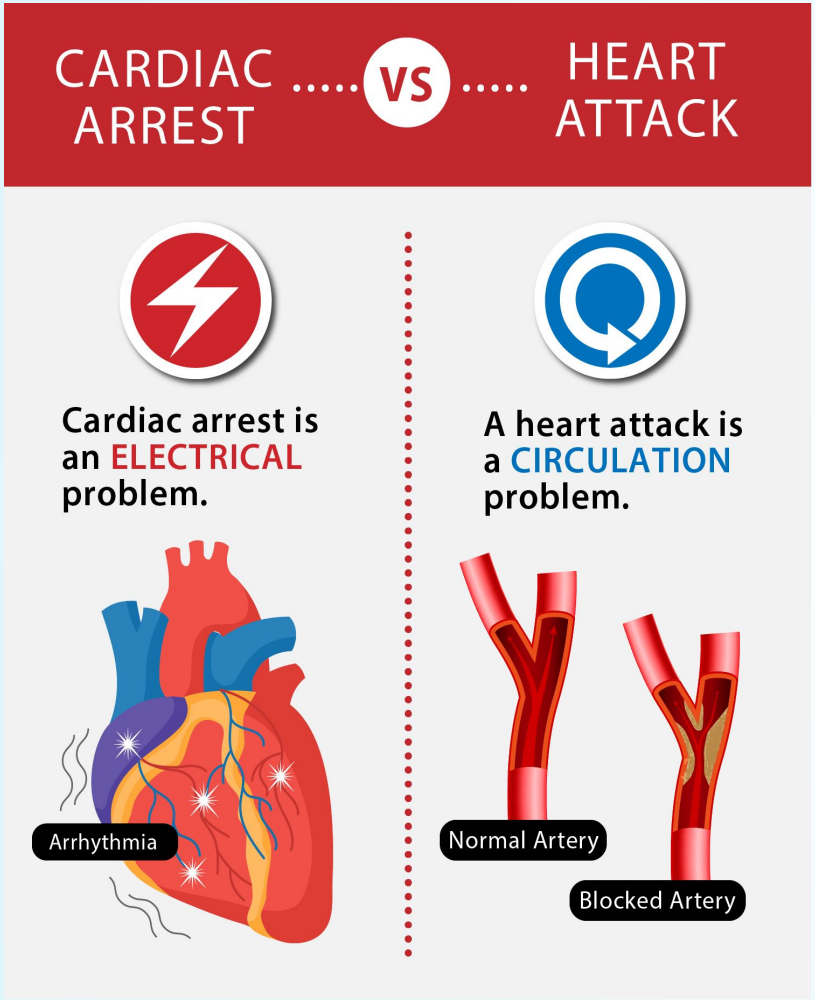




04

CPR Workshop

What is CPR?



Cardiopulmonary Resuscitation (CPR) is used for CARDIAC ARREST

The Main Idea: Manually pumps blood since the heart is not doing so

How to do it (Hands-Only CPR):

- Place your hands on the **midline** of the victim's chest on the **lower part of the breast bone**
- Compress at a rate of **100-120** compressions per minute
- Provide enough **depth** and **full chest recoil**

Their life depends on your quick action!

Be Ready! Recognize It's Sudden Cardiac Arrest (SCA)

- Victim is collapsed, unresponsive and not breathing
- Don't be fooled by gasping, gurgling or seizure-like activity
- SCA may also be caused by a hard blow to the chest

Call 9-1-1

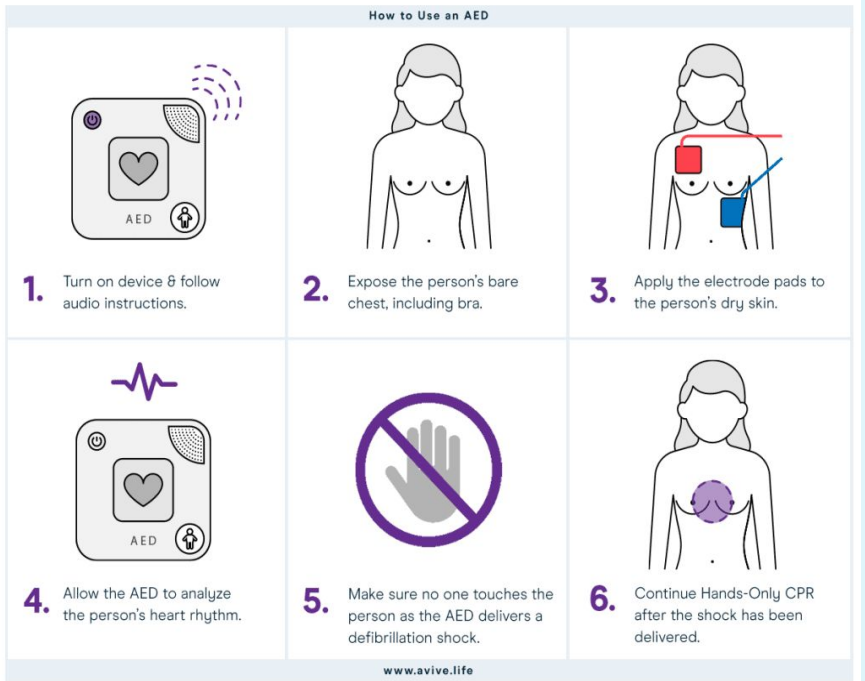
- Follow emergency dispatcher's instructions
- Call on-site emergency responders
- Ask anyone to retrieve an AED

Hands-Only CPR

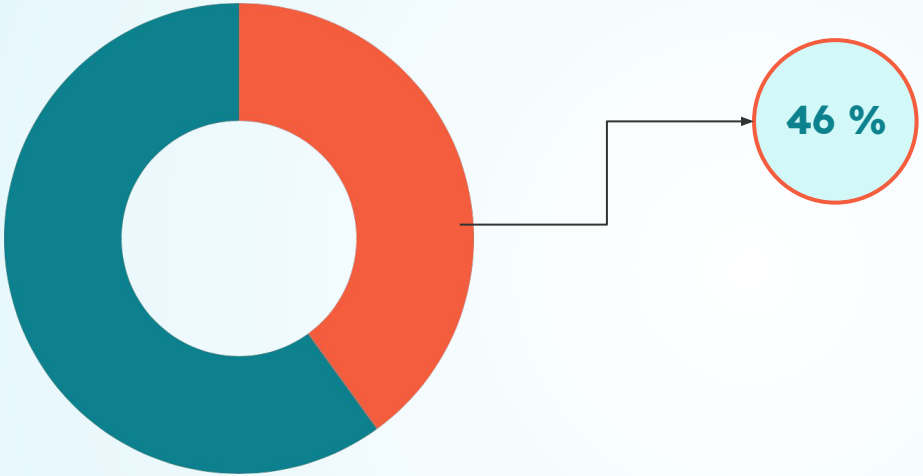
- Begin CPR immediately
- Push hard and fast in the center of the chest
- 2-inch compressions—about 100 per minute

Defibrillation

- Know where to find your onsite AED
- Follow step-by-step audio instructions
- AED will not hurt the person, only help



Our statistics



About **475,000 people** die from cardiac arrest every year.

Only **46%** of cardiac arrest patients receive CPR before medical help arrives

But does CPR work?

If performed immediately, it can **improve survival by 2-3x**

Time for PRACTICE