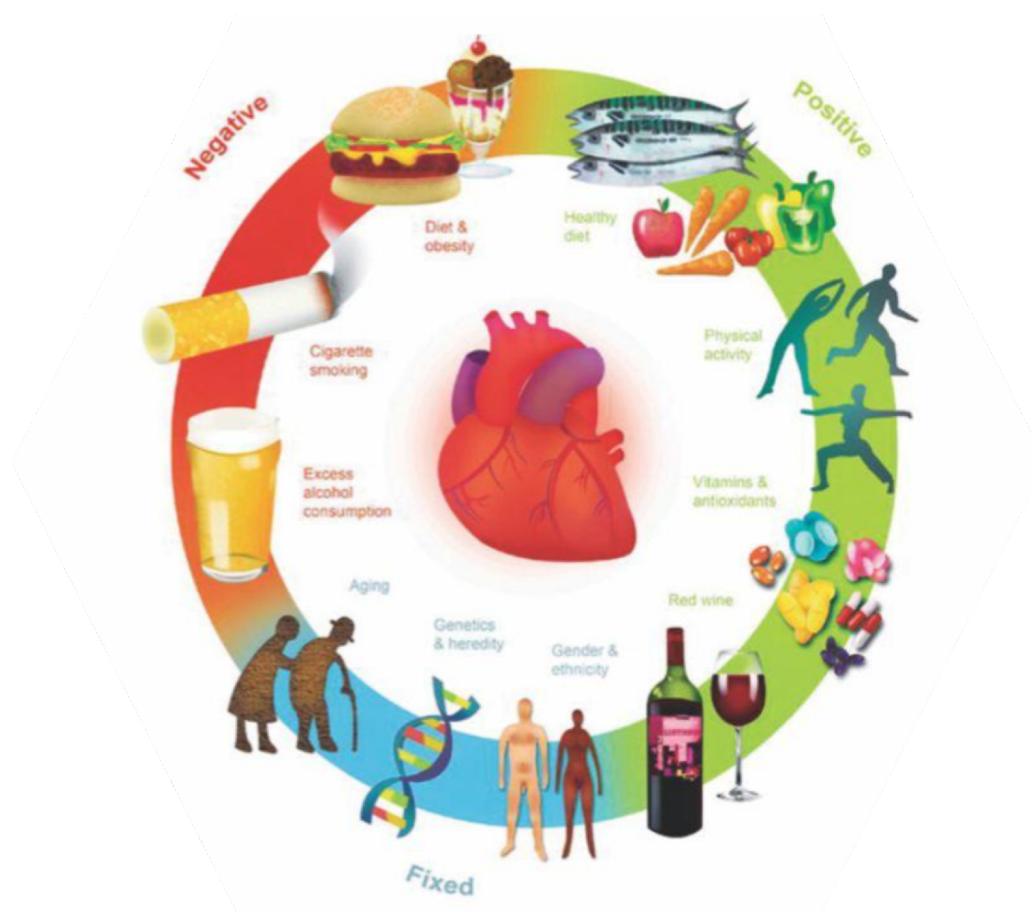




# RISK FACTORS

# Risk factors are items that increase your risk of disease.



# RISK FACTORS

## Unmodifiable

- Can't be changed

## Modifiable

- Can be changed

# Risk Factors that cannot be changed

Age

Gender

Family history  
of coronary  
heart disease

Family history  
of high  
cholesterol

Race/Ethnicity

# Modifiable Risk Factors

Smoking

Hypertension

Sedentary  
lifestyle

Obesity

Diabetes

Stress

Elevated  
cholesterol  
levels

# Which is a modifiable risk factor?

- A. Age
- B. Family History
- ✓ C. Hypertension
- D. Sex

# 1. Smoking



#1 modifiable risk factor

Damages the artery walls

Reduces HDL cholesterol level

Triggers blood clots to form

Biggest risk factor for sudden cardiac arrest

Increases heart rate

Raises blood pressure

Reduces blood vessels size by 50%

# 2. Hypertension



Incidence increases with age

Damages vessel walls

African American more likely to have high blood pressure than whites

family history and obesity at high risk

Dietary intake of sodium can affect Blood Pressure

# JNC VII Classification of BP

## BP Classification

Preferred

Normal

Stage 1 HTN

Stage 2 HTN

## SBP

<120

120-139

140-159

160+

## DBP

<80

80-89

90-99

100+

# 3. Sedentary Lifestyle



More than 60% of American adults are not regularly physically active

25% of all adults are not active at all

# Benefits of Exercise



# Exercise Benefits continued

○ Lowers blood glucose levels during and after exercise

○ Improves insulin sensitivity

○ Lowers glycated hemoglobin levels

○ Improves mild to moderate hypertension

○ Increases cardiovascular conditioning

○ Increases strength and flexibility



# 4. Obesity



Overweight BMI 25-39

Obesity BMI 30+

80% of Type II diabetics  
are overweight

Apple vs. pear

# 5. Diabetes



Obesity and physical inactivity are two risk factors for Type 2 diabetes

Risk of death from CVD 2-4 times higher in women with diabetes compared to women without diabetes

Diabetes raises the build up of plaque & Fatty deposits

# 6. Stress



Increases heart rate

Increases blood pressures

Increases cholesterol level

Tightness in muscles

Increases Blood Sugars

# Managing Stress



## Relaxation techniques

- Progressive muscle relaxation
- Guided imagery
- Biofeedback
- Yoga
- Reduces catecholamine levels thus reducing stress

# CHOLESTEROL-What is it?

## An unnecessary necessity



Necessary component of human physiology

- Building block of cell membranes, bile acids, sex hormones

Waxy fat-like substance, produced in the body and unnecessarily acquired in the diet

Present in all animals and products of animal origin such as milk, cheese, and eggs

**NO** cholesterol found in any plant products including fruits, grains, legumes (dried peas and beans), vegetables, or the oils made from them

# Which of the following is not a source of cholesterol?

- A. Eggs
- B. Hamburgers
- ✓ C. Peanut Butter
- D. Hot Dogs


# A Little is a Lot!



FOR EVERY 1% DECREASE IN CHOLESTEROL, THE HEART  
ATTACK RATE IS LOWERED BY 2%

Often this decrease can be achieved by following a healthy, low-fat  
diet with regular exercise.

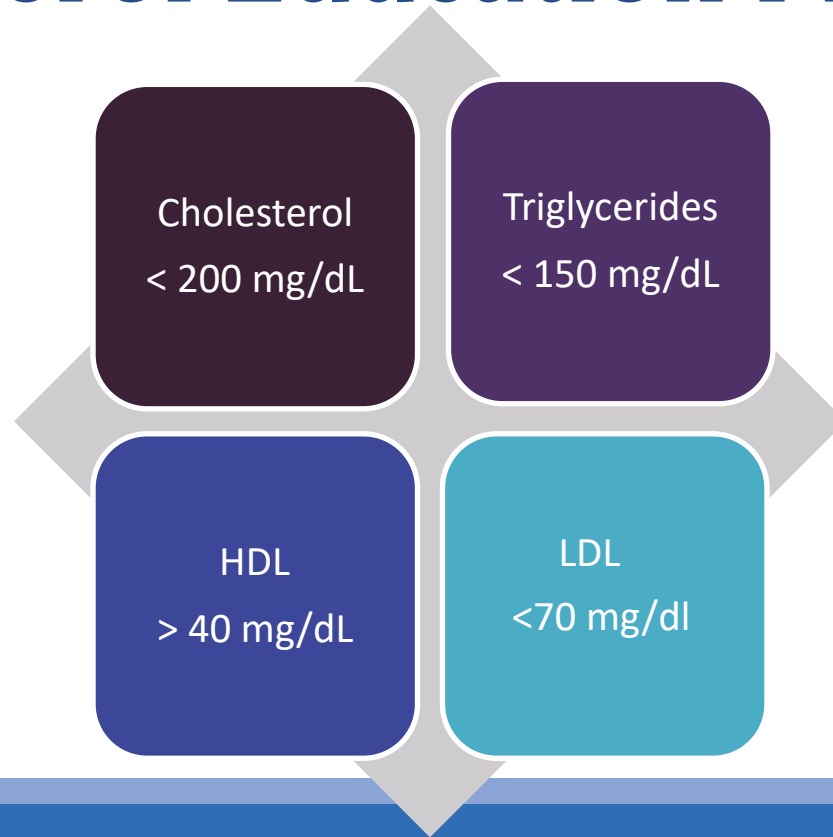
# What Test Checks for High Cholesterol?



<b>The Lipid Profile--includes</b>
Total Cholesterol
HDL
LDL
Triglycerides
Cholesterol:HDL ratio

# High Cholesterol Levels

## NCEP Guidelines (National Cholesterol Education Program)



# Lipoproteins

- special carriers that transport cholesterol to and from the body's cells

## "The Good"



## High-density lipoproteins (HDL's)

- known as "the good" cholesterol and help scavenge LDL cholesterol from arterial walls which decreases the risk of plaque development

# “The Bad and The Ugly”

Low-density  
Lipoproteins (LDL's)

- Primarily made of fat and little protein

“The Bad”

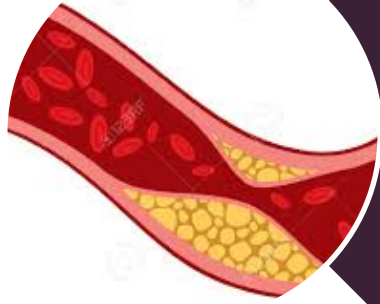
Responsible for transporting 60%-80% of the body's cholesterol through the blood stream

“The Ugly”

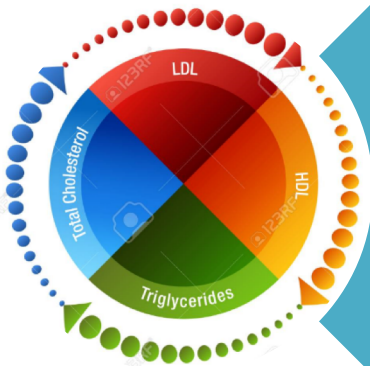
Excess LDL not used by the body remains in circulation, collects on arterial walls, causes inflammation, and produces plaque which can result in blockages



# “The Bad and The Ugly”

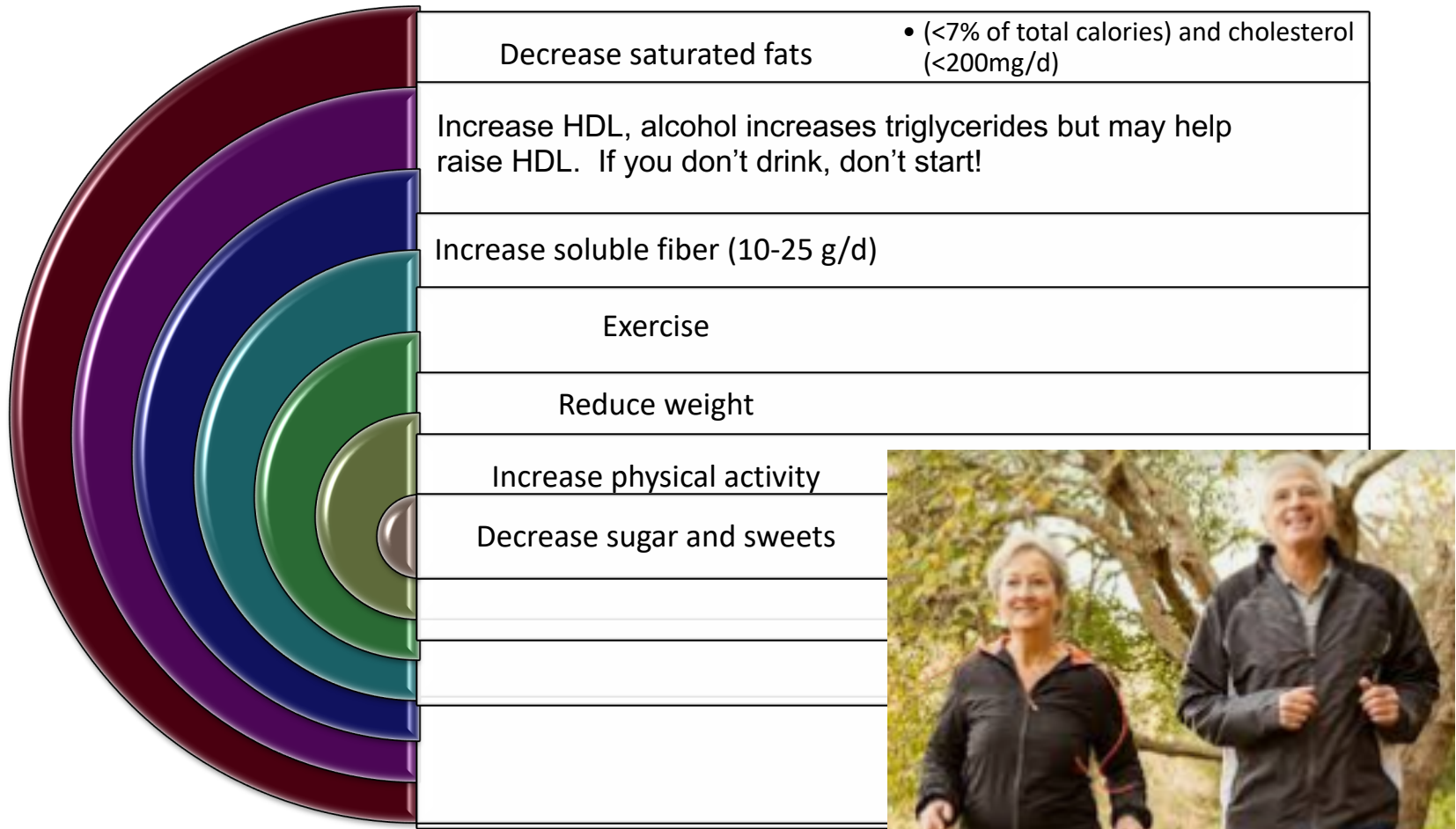


Triglycerides is a type of fat, too much can cause blockages.



Ratio – looking at  
total cholesterol vs.  
HDL

# Lifestyle Changes



# Cholesterol Doesn't Decrease



If the levels do not come down enough with lifestyle modification, medications called statins may be necessary

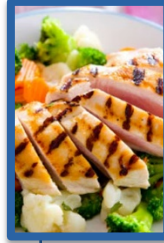


If medications are prescribed--  
TAKE THEM

# Your Health Depends on You



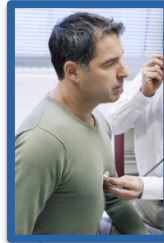
Quit smoking



Eat healthful foods



Be physically active



Have regular medical check-ups



Follow your doctor's advice



Stay on treatment for high blood pressure and high cholesterol

# Which modifiable risk factor when changed, reduces a person's risk for heart disease by 50%?

- A. Hypertension
- B. High Cholesterol
- C. Lack of exercise
- ✓ D. Smoking

By increasing physical exercise, we can positively affect which of the following risk factors?

- A. Blood Pressure
- B. Cholesterol
- C. Weight
- D. Stress
- ✓ E. All of the Above