



# Eating HEART HEALTHY

## Seafood In Schools

Lesson Plan: Love Your Heart



**SEAFOOD  
NUTRITION  
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# Eating HEART HEALTHY

Seafood In Schools

LOVE YOUR HEART

Did you know?

• **Heart disease** is the #1 cause of death in the US.





## Learning Outcomes

Following this lesson, students will be able to:

- Identify key terms associated with the human body and nutrition.
- Understand heart disease and the associated risk factors.
- Recognize preventative measures that can be taken to reduce risks of chronic disease.





## Key terms for this lesson

- **Artery** - a vessel through which the blood passes away from the heart to various parts of the body.
- **Blood pressure** - the force, or pressure, of your blood pushing against the walls of your arteries.
- **Blood vessel** - an elastic channel (artery, capillary, vein) that transports blood throughout the human body.
- **Calorie** - a unit of food energy which represents the amount of heat required to raise the temperature of one gram of water by 1°C.
- **Chronic disease** - a human health condition or disease that is long-lasting in its effects.
- **Heart attack** - occurs when the flow of blood to the heart is blocked.
- **Predisposed** - to be more likely than other people to have a medical condition or to behave in a particular way.





## Key terms for this lesson (cont.)

- **Saturated fat** - are simply fat molecules that have no double bonds between carbon molecules because they are saturated with hydrogen molecules.
- **Stroke** - occurs if the flow of oxygen-rich blood to a portion of the brain is blocked.
- **Tobacco** - a preparation of the nicotine-rich leaves of an American plant, which are cured for smoking or chewing.
- **Trans fat** - an unhealthy substance, also known as trans fatty acid, made through the chemical process of hydrogenation of oils.
- **Vein** - a blood vessel that carries blood that is low in oxygen content from the body back to the heart.





## Nutrition and Health Are Closely Related

According to the Centers for Disease Control and Prevention (CDC), chronic diseases and conditions—such as heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis—are the most common, costly, and preventable of all health problems.





# Chronic Diseases are Preventable

Exercise



Diet



Smoking  
Cessation





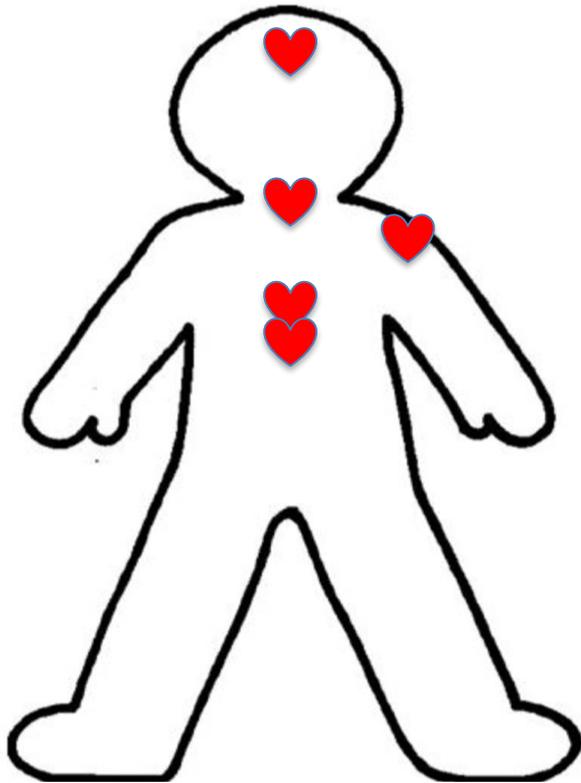
## What is Heart Disease?



- Heart Disease, also called Cardiovascular Disease (CVD), is a health condition that affects the function of the blood vessels (arteries and veins) – preventing them from working properly.
- If the blood vessels or the heart is not pumping blood properly, this prevents blood from being delivered to many important parts of our body.
- Some people are born with certain types of CVD or may be predisposed to the condition, but most people develop CVD as a result of poor lifestyle habits, such as eating unhealthy foods, not getting enough exercise or using tobacco.



## Signs of a Heart Attack



- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breath** with or without chest discomfort.
- **Other signs** may include breaking out in a cold sweat, nausea or lightheadedness.





# Heart Disease Risk Factors

## Controllable Risk Factors:

- High Cholesterol
- High Blood Pressure
- Physical Inactivity
- Obesity/Overweight
- Type 2 Diabetes
- Smoking

## Uncontrollable Risk Factors

- Age
- Family History
- Race/Ethnicity



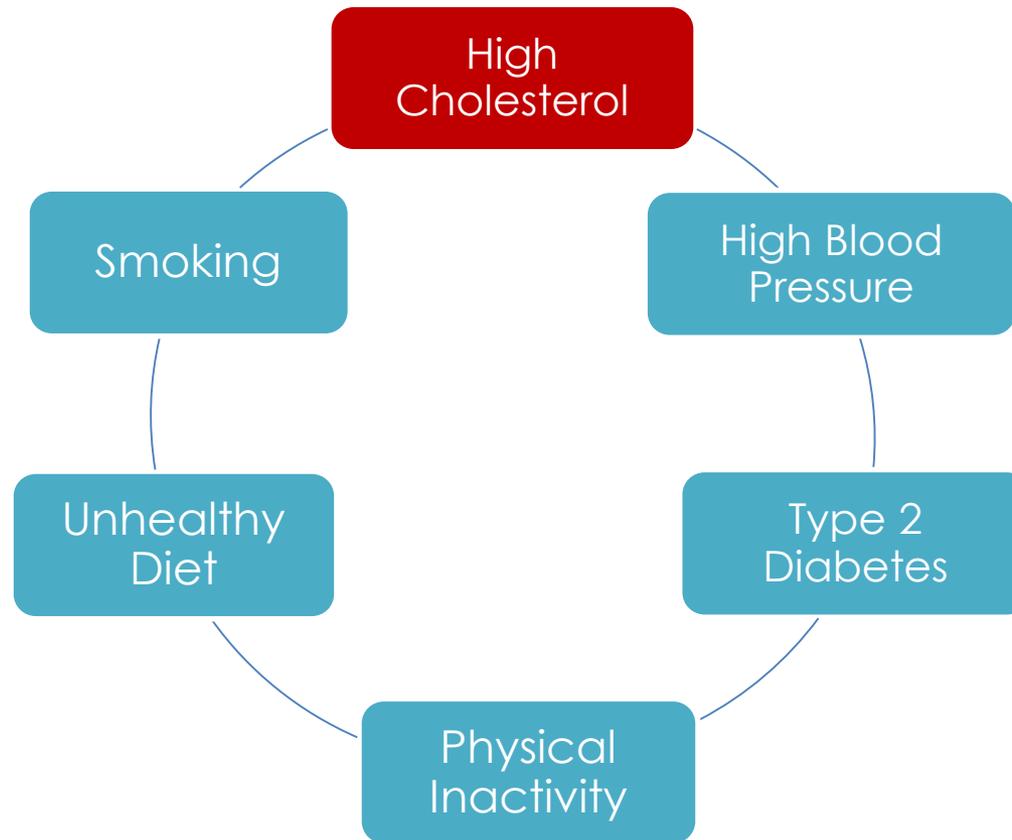


# Looking closer at the risk factors





# Controllable Risk Factors





## High Cholesterol

- Cholesterol is a waxy substance in your bloodstream and cells that is necessary for your body to function properly.
- Molecules called lipoproteins carry cholesterol in the blood. Two important kinds of lipoproteins are low-density lipoprotein (LDL), “bad” cholesterol”, and high-density lipoprotein (HDL), “good” cholesterol.
- Some cholesterol is important for good health, but when too much cholesterol circulates in the blood, it can slowly build up inside the walls of your arteries that feed blood to your heart and brain.





## “Bad” Cholesterol

- The “bad” cholesterol is called LDL (low-density lipoprotein) cholesterol. High LDL cholesterol levels increase the risk for coronary heart disease.
- There are no signs or symptoms of high LDL cholesterol.
- Diets that are high in saturated fats raise “bad” cholesterol levels in the blood. Foods that are high in saturated fat, which should be limited, include the following:
  - Fatty cuts of beef, pork, and lamb
  - Regular (75% to 85% lean) ground beef
  - Regular sausages, hot dogs, and bacon
  - Some luncheon meats such as regular bologna and salami
  - Some poultry such as duck





## “Good” Cholesterol

- High density lipoprotein (HDL) cholesterol absorbs cholesterol and carries it back to the liver, which flushes it from the body.
- HDL is considered “good” cholesterol because having high levels can reduce the risk for heart disease and stroke.
- The following lifestyle habits are ways to maintain “good” cholesterol:
  - Eating a healthy diet
  - Maintaining a healthy weight
  - Getting enough physical activity
  - Not smoking
  - Limiting alcohol use





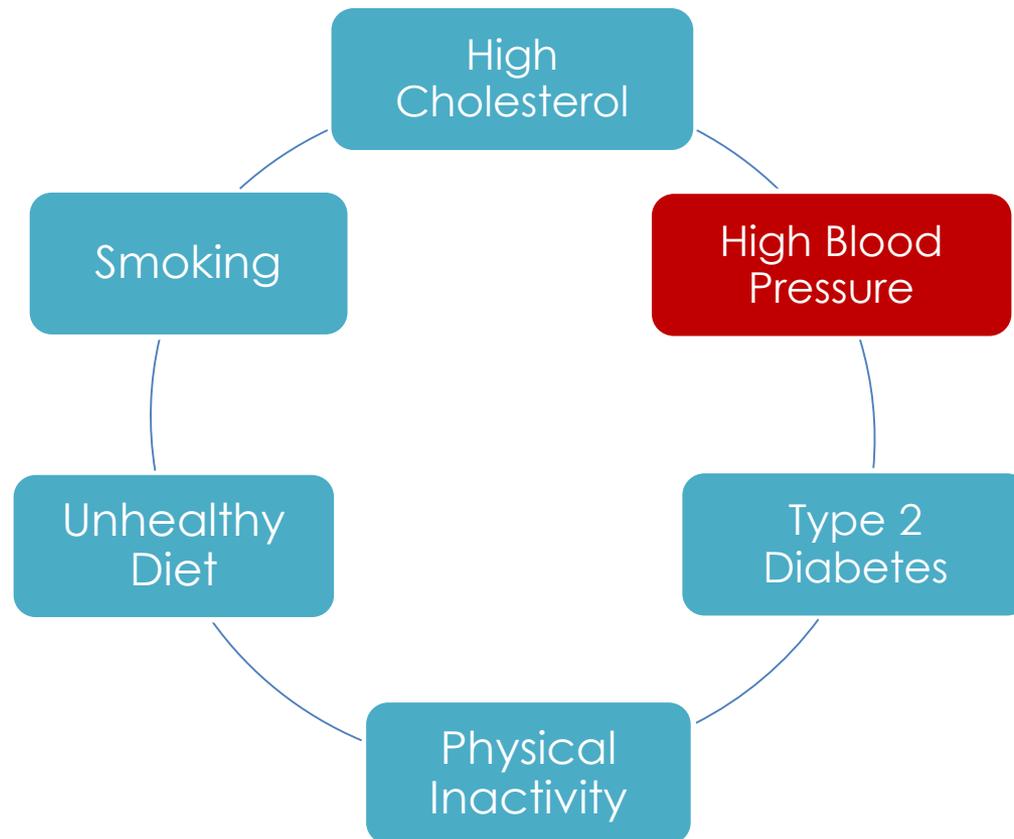
# Take Control of Your Cholesterol

- About **25% of cholesterol** comes directly from what you eat. It is important to choose foods low in saturated fat and *trans* fats and high in whole grains.
- If you are 11 years old or older and have not gotten your cholesterol measured, talk to your parents — especially if your family has a history of heart disease.





# Controllable Risk Factors





# High Blood Pressure

- High blood pressure, or hypertension, is a risk factor for heart disease, and many people do not have any symptoms when their blood pressure is high.
- People with high blood pressure are more likely to have a heart attack or stroke than people with normal blood pressure.
- You can make healthy choices that will help you control your blood pressure and keep it in a healthy range:
  - Keeping your weight healthy
  - Eating a heart-healthy diet with lower levels of sodium
  - Getting enough regular physical activity





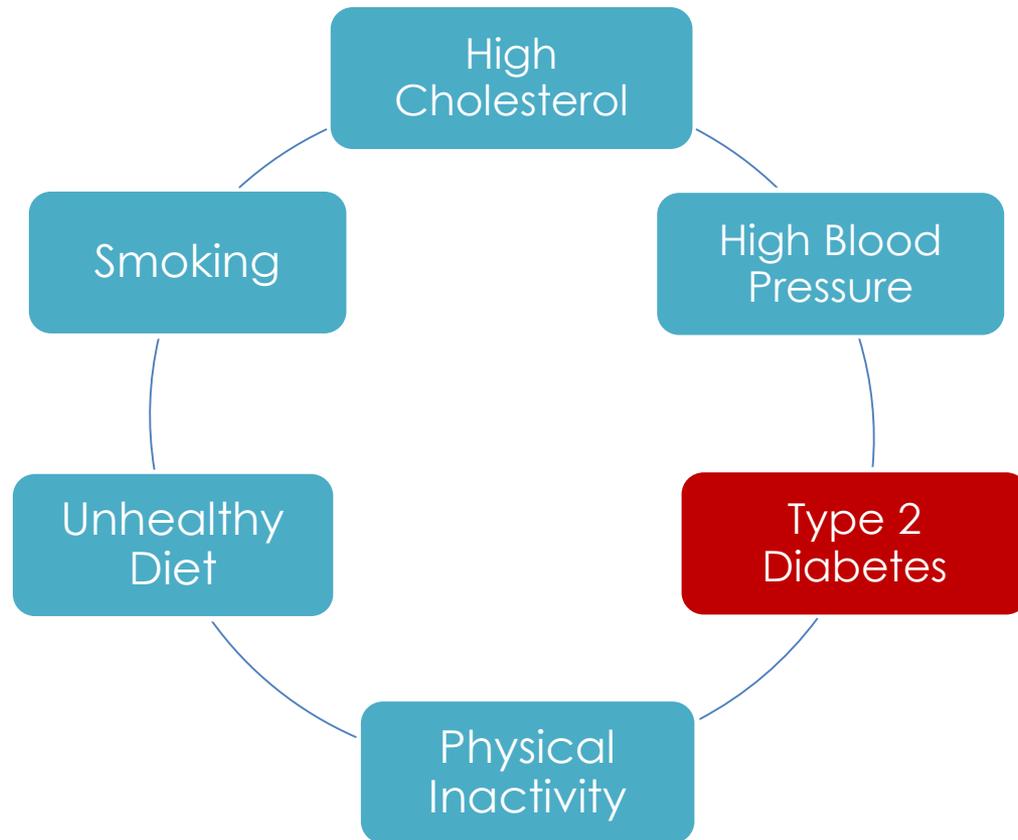
## Know Your Numbers: Blood Pressure

- The American Heart Association (AHA) recommends that all kids have yearly blood pressure measurements.
- To determine your blood pressure, your doctor looks at your systolic and diastolic pressures, which is measured in millimeters of mercury (abbreviated as mmHg).
  - The first number (systolic) represents the pressure in your blood vessels when your heart beats.
  - The second number (diastolic) represents the pressure in your vessels when your heart rests between beats.
- If the measurement is 120 systolic and 80 diastolic, you would say “120 over 80” or write it as “120/80 mmHg.”
- Your blood pressure can be measured by your doctor, school nurse, or you can check it using a blood pressure machine in a local store or pharmacy.





# Controllable Risk Factors





## What is Diabetes?

- Diabetes is a condition in which the body has problems either using or making a hormone called insulin.
- Insulin is important because it helps the body's cells take sugar from the blood and turn it into energy the body can use.
- When the body does not have enough insulin or it does not respond to the insulin, it causes too much sugar to build up in your blood, which can cause damage to your heart and other parts of your body.
- Untreated diabetes can lead to serious medical problems, including heart disease and stroke.





# Types of Diabetes

## Type 1 diabetes

- occurs when the body does not make enough insulin to function. It is the type of diabetes that occurs most often in youth, but it can also develop in adults.

## Type 2 diabetes

- happens when a person's body does not respond well to insulin. It is the type of diabetes that occurs more often in adults, but it can also develop in young people.
  - Being overweight and not getting enough regular physical activity are two unhealthy habits that can increase the risk for developing type 2 diabetes.





# Type 2 Diabetes Risk Factors

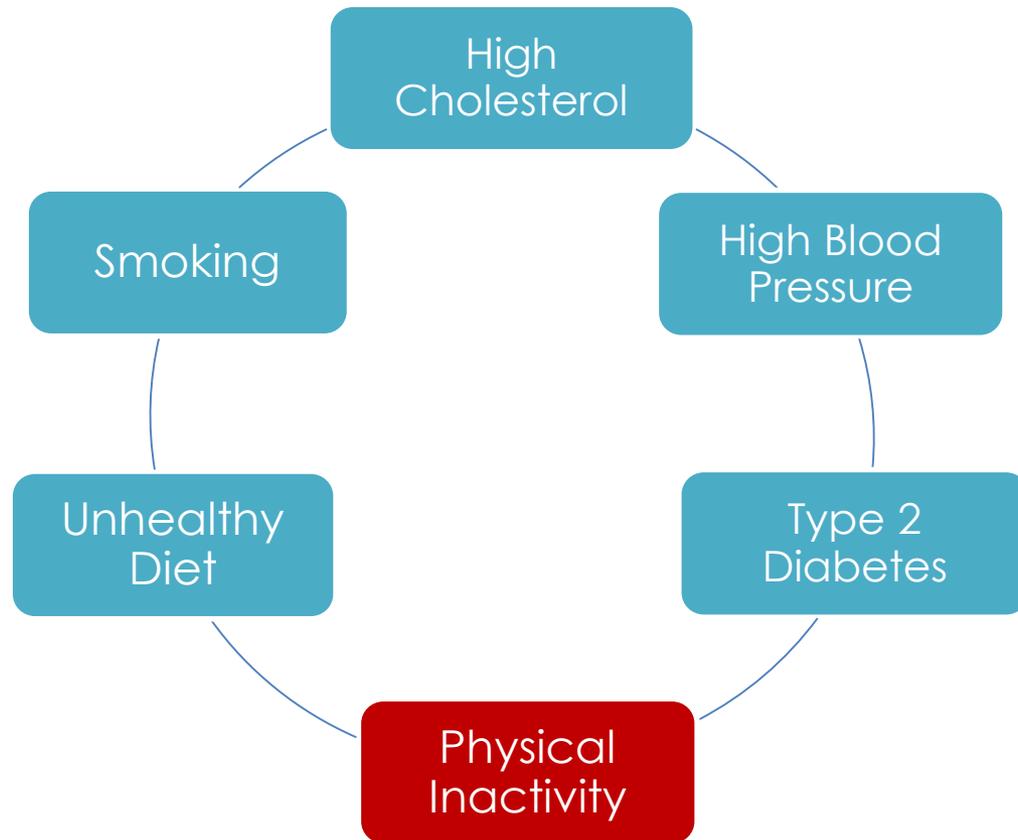
Once a person has type 2 diabetes, they are at risk for other health problems.

- Some of the problems they can develop are:
  - Heart disease
  - Hearing problems
  - High blood pressure
  - Eye damage and blindness
  - Foot damage, even amputation
  - Kidney damage
  - Stroke





# Controllable Risk Factors





## Maintain a Healthy Weight

- Gaining too much weight can be dangerous to your health. A person is considered overweight or obese when they have more body fat than is considered healthy.
- Body Mass Index (BMI), which is a person's weight in kilograms divided by the square of height in meters, is a measure used to determine the amount of body fat a person has.
- It is important to maintain a healthy weight to reduce risks of serious health problems like diabetes, heart disease, high blood pressure, asthma or other breathing problems and even some types of cancer.





## Be Physically Active

- Children and teenagers are recommended to get **at least 60 minutes** of moderate to vigorous physical activity every day.
- Regular physical activity helps keep your heart, muscles, bones, and joints healthy and strong.
- Physical activity can also raise self esteem, improve your mood, help you sleep better and give you more energy.





# Moderate and Vigorous Activities

Below are examples of moderate and vigorous forms of physical activity.

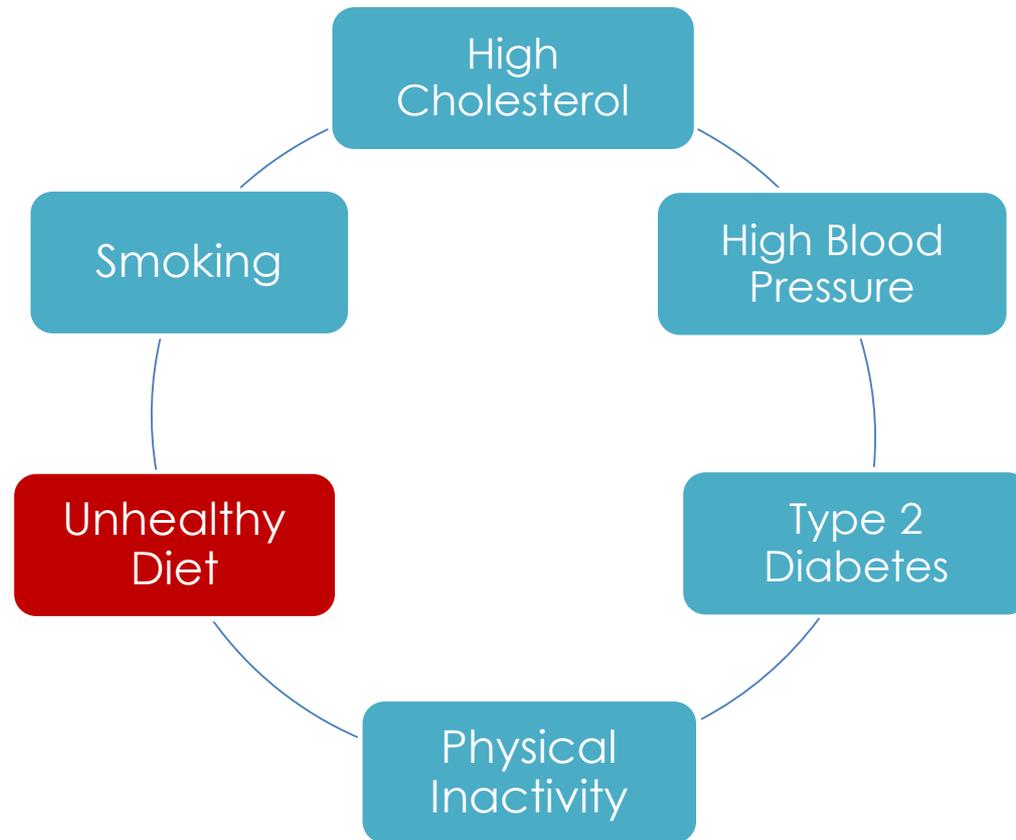
Circle at least two activities that you like to do most often.

- Bike riding
- Swimming
- Brisk walking
- Tennis
- Gardening
- Jogging
- Soccer
- Aerobics
- Dancing
- Jumping rope





# Controllable Risk Factors





# Eat Heart Healthy

- Eat fruits and vegetables daily
- Choose whole-grain and high fiber foods
- Vary your protein foods, which include choosing lean meats and eating seafood at least twice a week
- Choose low-fat and fat-free dairy products
- Limit saturated fats, trans fats, and cholesterol
- Choose and prepare foods with little or no salt
- Cut out drinks and foods high in sugar





# Creating a Healthy Balance

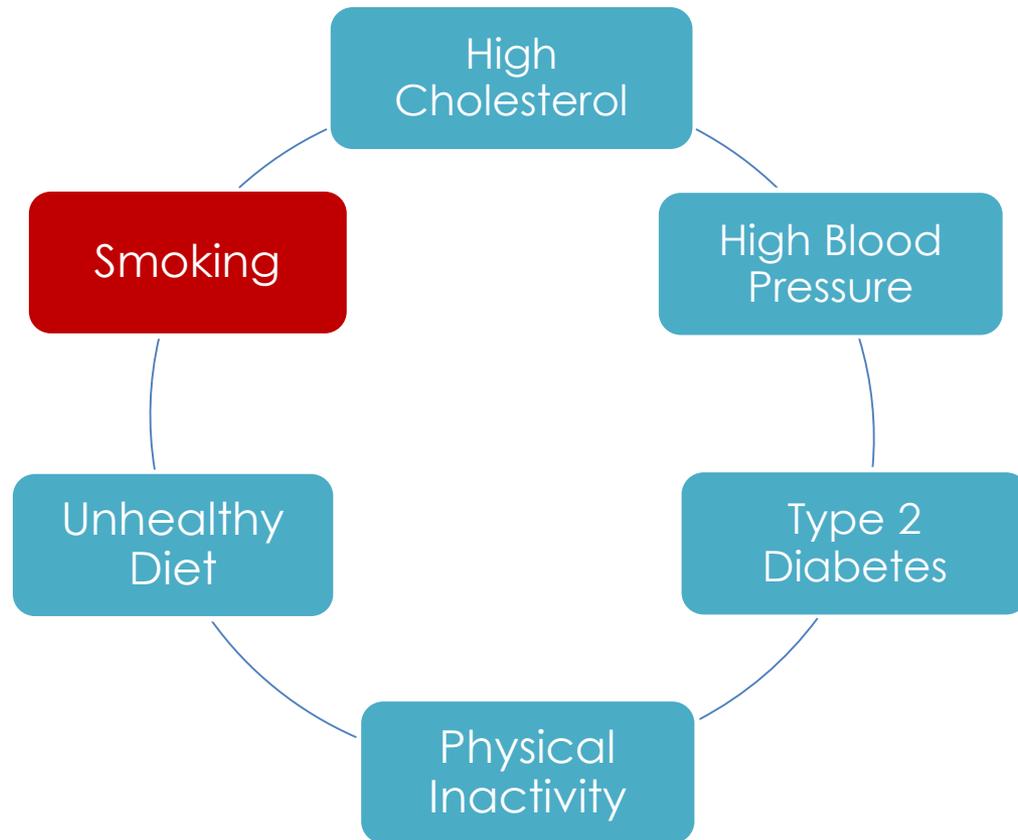


Everyone needs a certain amount of calories to perform their normal daily activities, but you must balance your calories in and calories out.

- If you gained weight, that might mean that you took in more calories than your body needed and the extra calories were stored in the body as fat. If you exercise a lot, you can also gain weight as muscle.
- If you eat fewer calories than you use, you can lose weight.
  - It is also important to participate in regular physical activity to help keep a healthy weight.
  - Remember, keeping a healthy weight is best achieved over time following healthy lifestyle habits.



# Controllable Risk Factors





# Avoid Smoking or Using Tobacco

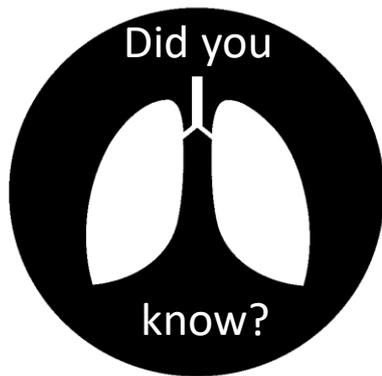
- Smoking cigarettes, this includes electronic cigarettes (e-cigarettes or vapes), or using smokeless tobacco (also called dip, snuff or chew) are some of the worst things you can do to your body.
- Tobacco contains an addictive and harmful chemical called nicotine. Electronic cigarettes and “vapes” also deliver nicotine.
- Any use of tobacco products can cause harm to your body and increase risks of heart disease and cancer.





# Avoid Secondhand Smoke Too!

- It is important to avoid being around others that are smoking.
- Breathing in smoke from someone else who is smoking is called secondhand smoking, and it is also hazardous for your heart and lungs too.



If you inhale the smoke, then the chemicals are able to get into your body!





# You Did It!

You've completed the  
Love Your Heart Lesson!





# Optional Homework Assignments

- Internet Scavenger Hunt
- Your Heart Worksheet





# Homework #1

Students should follow the instructions provided on the worksheet and answer all questions by using the internet.

[Internet Scavenger Hunt Worksheet](#)





## Homework #2

Students should complete the worksheet using information from the resources provided below and from the Love Your Heart Lesson.

[Your Heart Worksheet](#)

Resources:

[About the Heart Handout](#)

[How Your Heart Works Handout](#)





# We value your feedback!

Please take a moment  
to complete the online survey.

Below is a survey link for students and a separate link for the instructor.

[Student Survey](#)

[Instructor Survey](#)

