



**Eat Well, Live Well**  
**Lesson 9: The Lowdown on Cholesterol**

**Getting Started**

1. Review lesson plan before each session
2. Copy handouts.
3. Gather supplies

**Supplies Needed**

1. Handouts
2. Supplies for activity: Two clear straws, a glass of dark-colored liquid and a pan.

**Beginning the Lesson**

1. Introduce yourself and the organization you represent.
2. Summarize the lesson by reading the objectives.
3. Let the group know the lesson will be informal and they can ask questions any time.

**Objectives:** The participants will:

1. Understand what are high blood cholesterol levels and healthy cholesterol levels.
2. Learn general information about cholesterol and habits that promote healthy cholesterol levels.
3. Set a goal to reduce cholesterol or maintain healthy cholesterol levels.

**Activity: Let's choose a heart healthy diet**

At the beginning of the lesson, ask participants to write down what they ate the previous day. You may want ask them to do this while you are setting up so as not to distract them from the lesson. Say to them: Think back for few minutes and write down what you ate for breakfast, lunch and dinner yesterday. Write down all the foods you ate between meals too (help those who cannot write to note the foods they ate). We will come back to this at the end of the lesson.

First, start by having the participants count off one, two, three, four and five. Ask them to write the number down (maybe on one of handouts) to use later in lesson.

You can start the lesson by asking participants what they know about cholesterol. For example, questions like these:

1. How many of you have had your blood cholesterol levels checked in the past year?
2. How many of you know what your blood cholesterol numbers are?
3. Are any of you trying to do things to help lower your cholesterol?
4. Do any of you take medicine to help lower your cholesterol?

**Script**

We are going to talk about why it is important to know the answers to these questions about cholesterol.

Did you know anyone can have high blood cholesterol levels? People who are young or old, who are thin or overweight, people who exercise or are couch potatoes, and both men and women can all have high blood cholesterol levels. Some people have high blood cholesterol levels because of poor eating or exercise habits. Others may have high blood cholesterol because of genes – that is family history. It can even be from both of these reasons. Whatever the reason, about one in five persons (20%) in America has high blood cholesterol.

What would that look like in this group? We started by counting off one through five. Let us have all who counted off number one to stand (count how many are standing and use in next sentence). That means \_\_\_ of you may have high blood cholesterol levels (fill in blank with appropriate count).

**Introduction - Who is at risk for high blood cholesterol levels?**

As we said before, anyone can have high blood cholesterol levels. However, some people are more at risk than others. Count how many of these risk factors apply to you. *Write risk factors on a flip chart as you go over these.*



1. Risk factors you cannot control:
  - a. Age – blood cholesterol levels can increase as you get older.
  - b. Gender – men tend to have higher total cholesterol levels than women. However, after menopause, women tend to have higher LDL cholesterol levels (“bad” cholesterol).
  - c. Family history/heredity – high blood cholesterol tends to run in families.
  
2. Risk factors you can control:
  - a. Diet – eating foods high in saturated fat, trans fatty acids and cholesterol can increase your blood cholesterol levels (saturated fat and trans fatty acids seem to be worse). Saturated fats and cholesterol are found in meats, butter, and dairy products. Trans fatty acids are present in hydrogenated fats such as shortening, stick margarine, and bakery items made with shortening.
  - b. Overweight/obesity – being overweight tends to increase blood cholesterol levels and increases your risk for heart disease. Losing weight can help lower cholesterol levels.
  - c. Inactive lifestyle – also known as being a couch potato, getting little or no exercise increases your risk for heart disease. Physical activity can help lower “bad” (LDL) cholesterol and raise “good” (HDL) cholesterol levels.

How many of you have three or more risk factors? Do you think you should be concerned?

### **Why be concerned about high blood cholesterol levels?**

High blood cholesterol puts you at risk for heart disease. When there is too much cholesterol in the blood, it can build up in your arteries and harden over time. The arteries that carry blood to your heart may get clogged. This reduces blood flow to your heart and causes chest pain. If a blood clot forms and blocks the artery, then it can cause a heart attack. If a clot forms in your artery that carries blood to the brain, it can cause a stroke.

Note to the speaker: Use the clogged artery handout to illustrate this. You may also use straws for demonstration. Take two straws, one normal and one stopped-up (with paper wad, gum or wax). A normal straw will let the liquid flow through it easily whereas a stopped-up straw will not. Try to draw up liquid with both straws to show this.

Total blood cholesterol includes HDL cholesterol and LDL cholesterol. HDL is good or healthy cholesterol, because it protects your heart. It helps your body get rid of extra cholesterol. LDL is bad or lousy cholesterol, because it clogs your arteries and increases your risk for a heart attack or stroke. Fat is also found in your blood in a form called triglycerides. When your body does not immediately use calories from a meal, they are turned to triglycerides. High triglyceride levels can increase risk for heart disease. You should ask your healthcare provider to measure all



these when your blood cholesterol is checked. If you have diabetes, you are at a greater risk for heart disease.

***Refer to Handout “Quick Reference of Cholesterol Levels” and go over the desirable levels.***

### **What can you do to have healthy cholesterol levels?**

Healthy eating habits, being physically active, staying at a healthy weight or losing even a small amount of weight, if overweight, are the main things you can do to have healthy cholesterol levels and reduce your risk of heart disease.

#### **Choose foods for a healthy heart**

- Eat a variety of colorful fruits and vegetables - 5 or more servings per day.
- Eat a variety of grain foods like bread, cereal, rice, pasta, oats and oatmeal - 6 or more servings per day. Make sure at least 3 servings are whole grain.
- Switch to lean meat and poultry without skin - choose up to 6 ounces per day.
- Have baked or grilled (NOT FRIED) fish like salmon, and tuna— have at least 2 servings each week.
- Eat beans and peas (1/2 cup cooked), nuts (1/3 cup) or seeds (1Tbsp) - 4 to 5 times a week.
- Try soy foods several times a week, such as soy milk, tofu, soybeans, textured soy protein, etc.
- Use vegetable oils like canola, olive, safflower, corn and soybean oils in cooking.

#### **Cut down on foods that will increase your risk of heart disease and stroke**

- Limit fatty foods. Choose fat free and low fat milk (1% in fat) and milk products - 2 to 3 servings daily.
- Cut down on butter and whole-milk cheeses and foods made with these.
- Limit salt intake. Use fresh, frozen or no-salt added canned vegetables.
- Cut down on high fat processed meats like sausage, bologna, salami, bacon and hot dogs.
- Use soft or tub margarine in small amounts instead of stick margarine, butter, shortening or lard.
- Limit fried foods. Try roasting, grilling, broiling, sautéing or baking instead.
- Cut back on bakery items and snack foods made with shortening, butter, margarine or hydrogenated oils, such as snack crackers, cakes, cookies, biscuits, muffins, croissants, etc.

#### **Be Fit**

- Maintain a healthy body weight. Lose weight if overweight.
- Increase your physical activity. Do at least 30 minutes of physical activity 5 or more times a week.
- Stop smoking if you smoke.
- Control your blood sugar levels. If you have diabetes, your risk for heart attack is the same as someone without diabetes who has already had a heart attack.



- Control your blood pressure – healthy habits for cholesterol also promote healthy blood pressure.
- Have your “Lipid Profile” (Total cholesterol, HDL, LDL, triglycerides) done once every **five** years if you are healthy. Have them checked once a year if you are at risk for heart disease, or if you have already had a heart attack.

#### **Activity**

Give this checklist to participants and let them check foods they think are heart healthy. If you need to save time, read out loud and let group identify heart healthy habits.

#### **Activity: Let's choose a heart healthy diet**

Remember, all of you have written down what you ate yesterday. Now let us go over that. Ask everyone to go over their food recall and mark the foods that are heart healthy. Encourage them to change their diets and help them to identify foods to replace in their current diet.

#### **The Diabetes Alphabet**

We will talk about all of these messages in the coming lessons. Let's get a jump-start on learning by reciting them now. *Note to the speaker: you may find it helpful to make a poster board with these messages listed for use throughout the series.*

**A for A1c Test-** Check twice a year (lesson 2)

**B for Blood Pressure-** Check at each doctor's visit (lesson 6)

**C for Cholesterol-** Check once a year (lesson 6)

**D for Daily Exercise-** Be physically active every day (lesson 8)

**E for Eating Well-** Take down portions, stay on your meal schedule (lesson 3,4,5)

**F for Foot Care-** Check your feet for sores, blisters, or injuries every day (lesson 7)

**S for Sugar Testing-** Check your blood sugar daily or as recommended by your doctor (lesson 2)



## Checklist for Healthy Heart

Mark the items that are heart healthy (place an **X** in the box in the column on the right).

- Eat Fish – twice a week
- Eat fried foods several times a week
- Drink whole milk, 2-3 servings daily
- Eat vegetables only once a week
- Eat whole grains every day
- Eat nuts and beans several times a week
- Fruits and vegetables – 5 or more servings per day
- Low fat and non-fat dairy foods – 3 servings daily
- Use lard for cooking
- Use olive oil or canola oil for cooking
- Eat high fat- processed foods like sausage, bologna, salami, bacon and hot dogs every day



## Key for the Instructor

Eat Fish – twice a week	<input checked="" type="checkbox"/>
Eat fried foods several times a week	<input type="checkbox"/>
Drink whole milk, 2-3 servings daily	<input type="checkbox"/>
Eat vegetables only once a week	<input type="checkbox"/>
Eat whole grains every day	<input checked="" type="checkbox"/>
Eat nuts and beans several times a week	<input checked="" type="checkbox"/>
Fruits and vegetables – 5 or more servings per day	<input checked="" type="checkbox"/>
Low fat and non-fat dairy foods – 3 servings daily	<input checked="" type="checkbox"/>
Use lard for cooking	<input type="checkbox"/>
Use olive oil or canola oil for cooking	<input checked="" type="checkbox"/>
Eat high fat- processed foods like sausage, bologna, salami, bacon and hot dogs every day	<input type="checkbox"/>

**Note:** Have a prize for one or two who get the most right.



## References

Heart Attack. July 17, 2003. <[http://www.ftca.com/Heart\\_Attack/body\\_heart\\_attack.html](http://www.ftca.com/Heart_Attack/body_heart_attack.html)>.

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How can I Lower High Cholesterol? American Heart Association. July 17, 2003. <<http://www.americanheart.org/downloadable/heart/1030374239974LwrHighChol.pdf>>.

Wright, M. (2001). The Healthy Heart Guidelines. College of Family and Consumer Sciences Cooperative Extension Service, the University of Georgia. July 17, 2003. <<http://www.fcs.uga.edu/pubs/PDF/FDNS-E-49.pdf>>.

The Food Stamp program provides nutrition assistance to people with low income. It can help buy nutritious foods for a better diet. To find out more, contact your local food stamp office, food bank or senior center.

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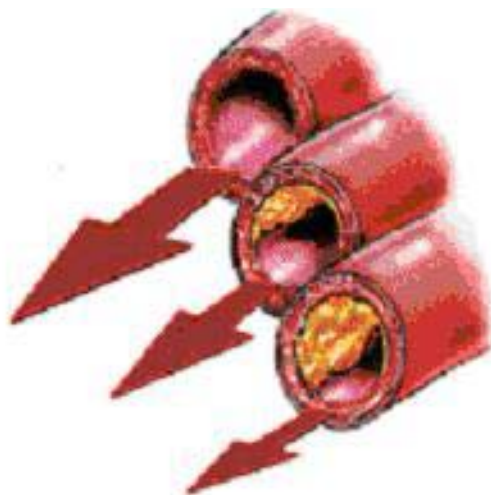
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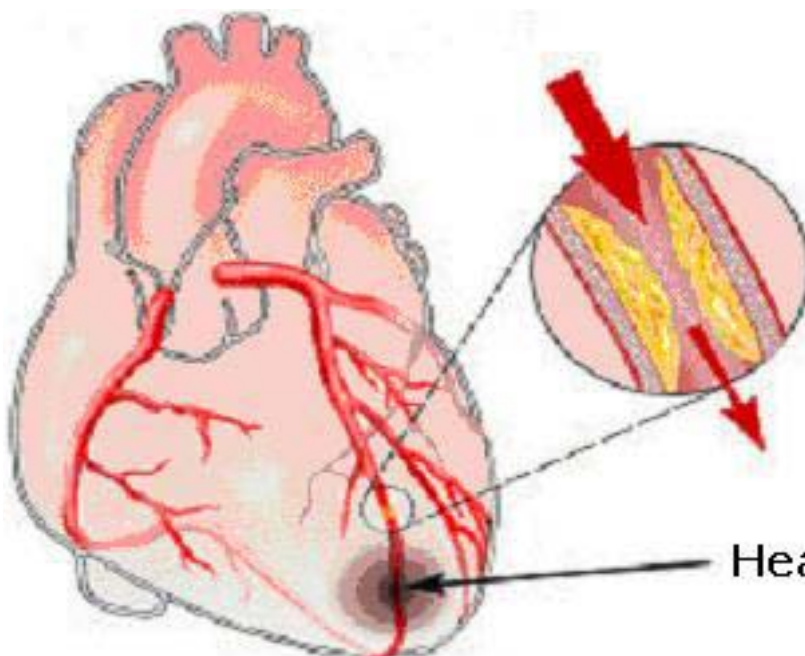


## CLOGGED ARTERIES

Healthy Artery  
with Normal  
Blood Flow



Plaque Deposits  
Restricting  
Blood Flow



Heart Attack



## Let Your Heart Lead Your Stomach

### Eat well for your heart

The key to a heart healthy diet is choosing from a wide variety of foods.



♥ Eat at least 5 servings of colorful fruits and vegetables everyday.

♥ Include whole grain foods such as whole wheat breads, cereals, pasta, brown rice and oatmeal.

♥ Include fat-free and low-fat dairy products.

♥ Choose low fat poultry and lean meats - trim off fat and skin.

♥ Have fish at least 2 times a week.

♥ Eat beans, nuts or seeds 4 to 5 times a week.

♥ Cut down on bakery foods and packaged cookies and snacks.

♥ Cook and season with small amounts of vegetable oil instead of butter, margarine or lard.

♥ Avoid fried foods.



### Stay at or close to a healthy body weight.

♥ **Consume fewer calories.**

♥ Watch portion sizes.

♥ Cut down on high sugar foods like soft drinks



## ♥ Exercise, or be active, most days of the week

♥ Aim for at least 30 minutes of activity 5 or more days each week.

♥ Spend less time watching TV and sitting.

♥ Take your dog for a walk.

♥ Walk around the house or in your garden.



## Keep blood sugar and blood pressure at desirable levels.



♥ Eat less salt.

♥ Do not add salt to foods at the table.

♥ If you drink, limit alcohol to no more than one drink per day for women and two drinks per day for men.

♥ Check your blood sugar and blood pressure regularly.

♥ Stop smoking.

♥ If you are at risk for heart disease have your “**Lipid Profile**” done once a year.





## Quick Reference of Cholesterol Levels

<u>Total Cholesterol Level</u>	<u>Category</u>	<u>Risk</u>
Less than 200 mg/dL	Desirable	
200-239 mg/dL	Acceptable	<b>Increases risk for heart disease</b>
240 mg/dL	High	<b>Increases risk for heart disease</b>
<u>LDL Cholesterol Level</u>	<u>Category</u>	<u>Risk</u>
Less than 100 mg/dL	Optimal	
100 - 129 mg/dL	Acceptable	
130 - 159 mg/dL	Borderline High	<b>Increases risk for heart disease</b>
160 – 189 mg/dL	High	<b>Increases risk for heart disease</b>
190 mg/dL	Very High	<b>Increases risk for heart disease</b>
<u>HDL Cholesterol Level</u>	<u>Category</u>	<u>Risk</u>
Higher than 60 mg/dL	Desirable	<b>Decreases risk for heart disease</b>
Lower than 40 mg/dL	Too Low	<b>Increases risk for heart disease</b>
<u>Triglyceride Level</u>	<u>Category</u>	<u>Risk</u>
Less than 150 mg/dL	Normal	
150 to 199 mg/dL	Borderline-high	<b>Increases risk for heart disease</b>
200 to 499 mg/dL	High	<b>Increases risk for heart disease</b>
500 mg/dL or higher	Very high	<b>Increases risk for heart disease</b>