

## Learning about Cholesterol and Low-Density Lipoproteins (LDL): After Your Visit

### What is Cholesterol?

Cholesterol is a type of fat in your blood. It is needed at every age for many body functions, such as making new cells. Cholesterol is made by your body and also comes from food you eat.

Cholesterol comes in different types:

- **LDL**, is the "bad" cholesterol. LDL builds up inside the blood vessel walls, making them too narrow. This reduces the flow of blood and can cause a heart attack or stroke.
- **HDL**, which is the "good" cholesterol, that helps clear bad cholesterol from the body.

### What is a normal value for LDL?

A normal value for LDL is less than 100.

### What causes LDL to be high?

Eating a diet high in saturated fat and trans fat is what raises LDL the most.

- Saturated fat is found mostly in animal foods, such as fatty meats, poultry skin, and whole fat dairy foods. It's also found in many snack foods and bakery goods.
- Trans fats can also raise cholesterol. Trans fat is found in foods that contain "hydrogenated" oils in them. Avoid those that list more than zero grams (0g) trans fat on the nutrition facts. It is found in foods such as baked goods, fried foods, shortening, and stick margarine.

### How do you Lower your LDL Level:

- **Exercise** can help improve your LDL level.
- **Include DHA (an omega-3 fatty acid)** in your diet. Good sources of DHA include salmon, herring, and albacore tuna. Two servings per week are recommended.
- **Eat psyllium.** Check food labels for soluble fiber. Products with psyllium are effective in reducing cholesterol.
- **Eat plant stanols.** Plant stanols/sterols occur naturally in fruits, vegetables, seeds, and beans. These compounds block the absorption of cholesterol that you eat. The amount of plant stanols found in a normal diet is not enough to lower cholesterol. As a result, many foods add plant stanols/sterols including Benecol<sup>®</sup> and Take Control<sup>®</sup> margarines, some juices, yogurts, cheeses and granola bars. You can also take a plant stanols/sterols supplement.

These products can block absorption of cholesterol that you eat, stanols do not reduce the amount of cholesterol your body naturally makes.

Include 1.2 grams of plant stanols per day in your child’s meal plan. These natural compounds found in plant cells can reduce LDL (“bad”) cholesterol levels.

<b>Foods with Plant Sterols/Stanol (At least 1 gram Phytosterol per serving)</b>	<b>Serving Size</b>
Smart Balance Omega Plus Buttery Spread	1 tablespoon
Benecol Regular or Light Spread	1 tablespoon
Take Control Light Spread	1 tablespoon
Minute Maid Premium Heart Wise Orange Juice	8 ounces
Strums Instant Oatmeal	1 packet
Nature Valley Healthy Heart Chewy Granola Bar	1 bar

### **Meal Planning Tips**

<b>Food Group</b>	<b>Recommended Foods</b>
Milk and Milk Products	<ul style="list-style-type: none"> <li>• Fat-free or low-fat dairy products</li> <li>• Sherbet</li> <li>• Frozen yogurt</li> </ul>
Meat and Protein	<ul style="list-style-type: none"> <li>• Very lean meats</li> <li>• Poultry with the skin removed</li> <li>• Fish, especially salmon, herring, mackerel (recommended only for children age 6 years or older), rainbow trout, sardines, and albacore tuna (fish should be limited to 2 servings per week).</li> <li>• Dried beans and peas</li> <li>• Nuts and seeds</li> <li>• Low-fat peanut butter</li> <li>• Egg whites</li> <li>• Soy protein and tofu</li> <li>• Choose foods that are baked, broiled, roasted, grilled, or steamed. Avoid fried foods.</li> </ul>

Grains	Whole grains prepared without fat. Examples: <ul style="list-style-type: none"> <li>• Whole wheat</li> <li>• Brown rice</li> <li>• Barley</li> <li>• Quinoa</li> <li>• Bulgur</li> <li>• Wild rice</li> <li>• Oats</li> </ul>
Vegetables	Any and prepared without added fat.
Fruits	Any and prepared without added fat. <ul style="list-style-type: none"> <li>• 100% fruit juices (limit 4 to 6 oz/day)</li> </ul>
Fat and Oils	Heart-healthy vegetable oils: <ul style="list-style-type: none"> <li>• Olive</li> <li>• Canola oil</li> </ul> Low-fat salad dressings and mayonnaise
Beverages	<ul style="list-style-type: none"> <li>• Fortified plain soy milk</li> <li>• Water</li> <li>• Avoid sugary drinks</li> </ul>
Other/Snacks	<ul style="list-style-type: none"> <li>• Pretzels</li> <li>• Popcorn without added fat</li> <li>• Nuts</li> <li>• Seeds</li> </ul>