

HOW TO CONTROL YOUR FAT AND CHOLESTEROL

HOW TO CONTROL YOUR CHOLESTEROL NUMBERS




UTHealth
The University of Texas
Health Science Center at Houston
School of Public Health
El Paso Regional Campus




CDC
CENTERS FOR DISEASE
CONTROL AND PREVENTION

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UT HEALTH-CDC



Acknowledgments

Raymundo and his family would like to invite you to read this fotonovela and learn about how to control fat and cholesterol in your diet. This fotonovela can be used by many community health workers and Promotoras de Salud to help people control their cholesterol levels.

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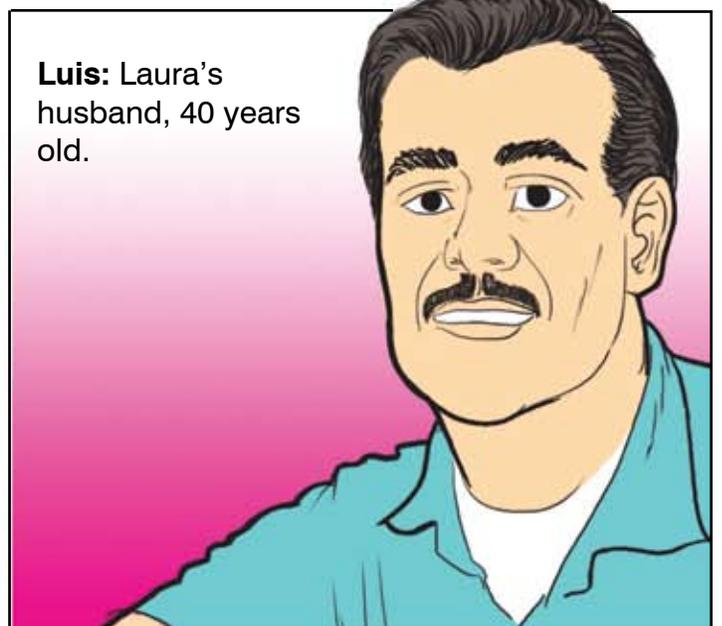
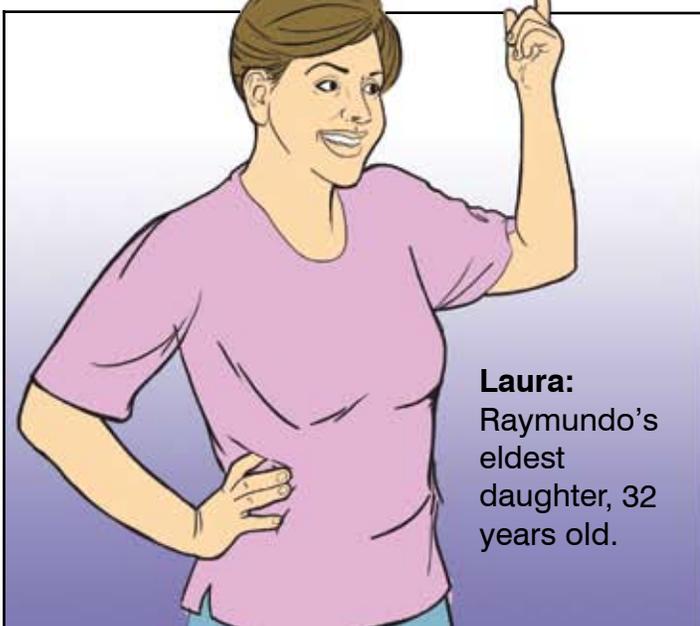
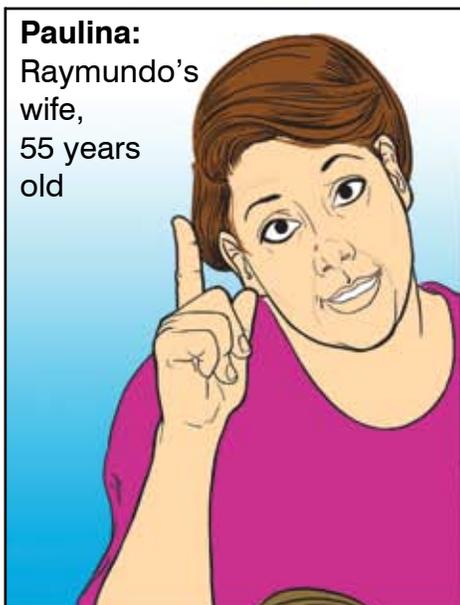
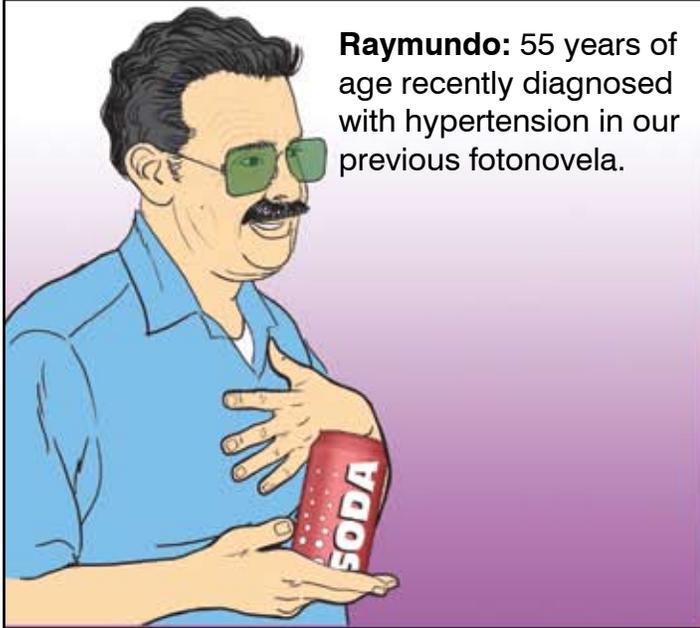
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Illustration and design by Salvador Sáenz

For more information about this fotonovela please contact Doctor Balcázar at Hector.G.Balcazar@uth.tmc.edu or 915 747-8507

Introduction to the Ramirez Family and to Olivia, the Promotora



Laura and her 7 year old son, Pedro are visiting Doctor Rosales' office for Pedro's yearly check up.



Hi doctor, I hope all is well.

Good morning Laura, I need to tell you something.

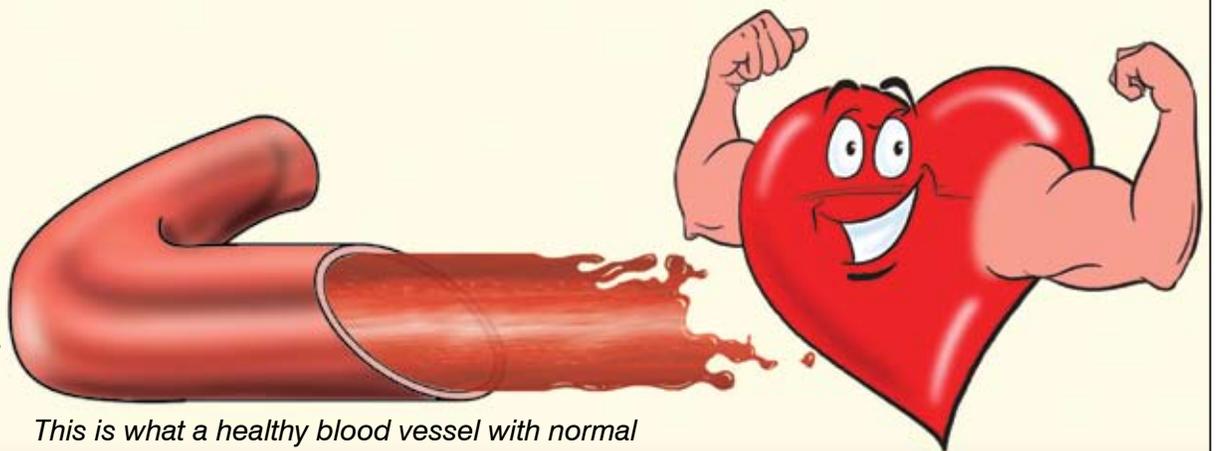
The doctor talks privately to Laura.



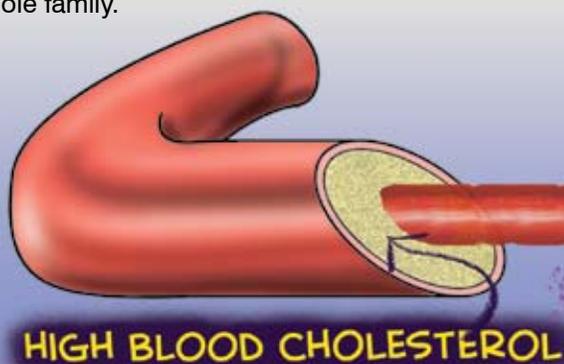
What is the matter?

Laura, I wanted to talk with you about your lab test results because it shows that your cholesterol is high. That makes it hard for blood to move through your body.

High blood cholesterol can lead to heart disease, heart attacks, and stroke. You can do things that will help. Losing weight can help bring down cholesterol levels. Eating healthy and being more physically active can help people lose weight and is good for the whole family.



This is what a healthy blood vessel with normal cholesterol looks like.

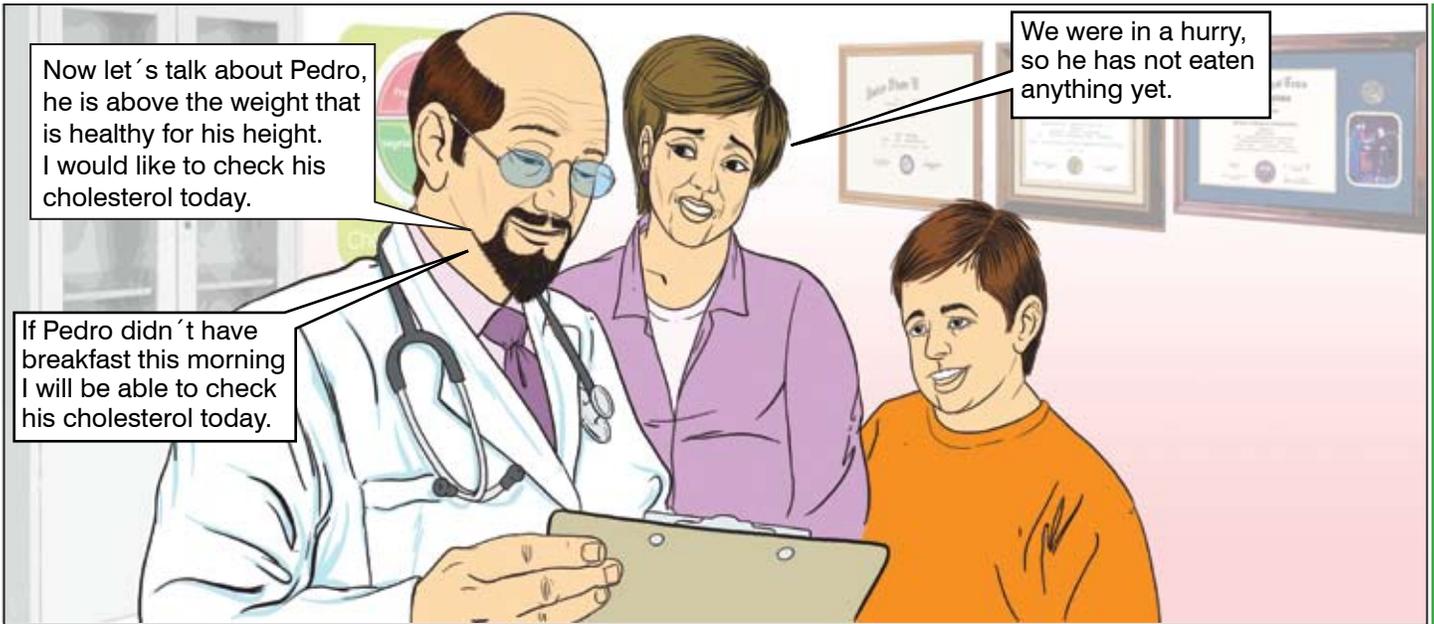


HEART DISEASE

HEART ATTACK

STROKE

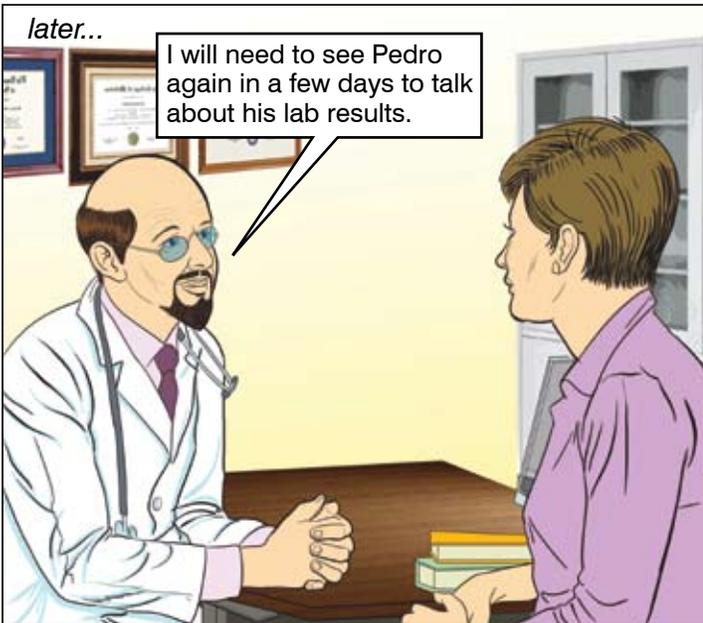




Now let's talk about Pedro, he is above the weight that is healthy for his height. I would like to check his cholesterol today.

We were in a hurry, so he has not eaten anything yet.

If Pedro didn't have breakfast this morning I will be able to check his cholesterol today.

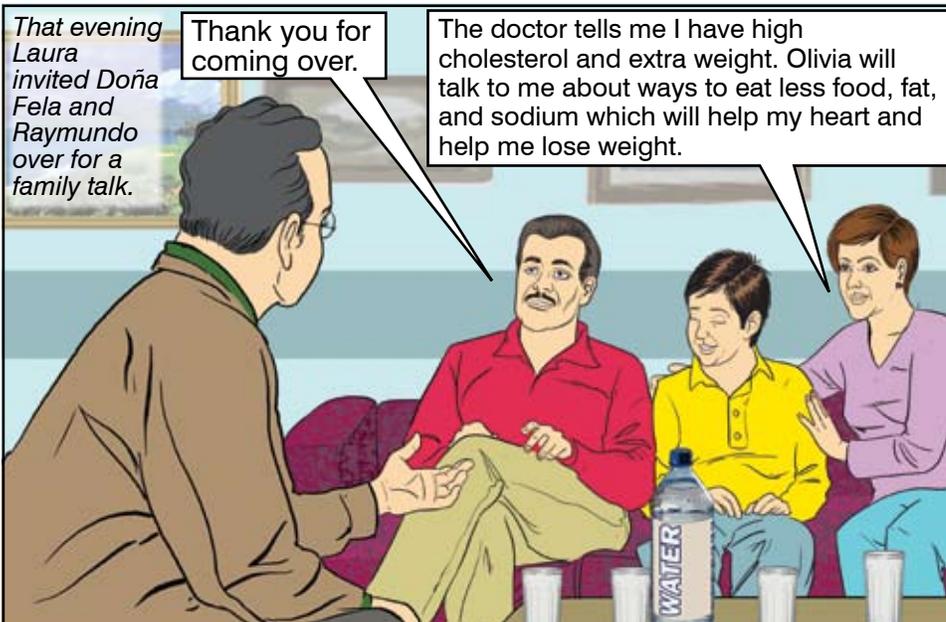


later...

I will need to see Pedro again in a few days to talk about his lab results.



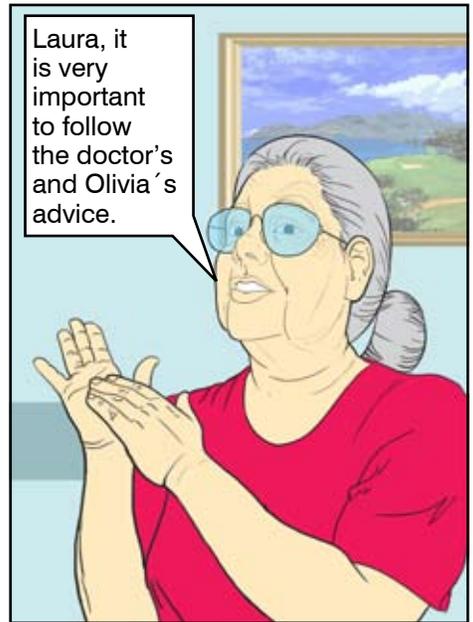
Would you like to meet with the clinic's community health worker (promotora) Olivia? She has been helping adults and kids with high cholesterol and will be glad to help you.



That evening Laura invited Doña Fela and Raymundo over for a family talk.

Thank you for coming over.

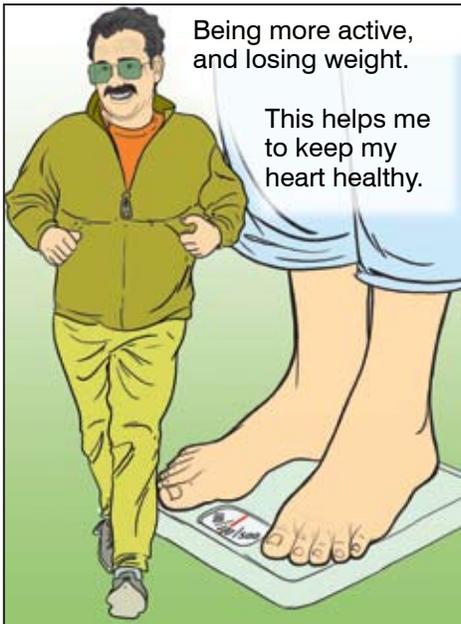
The doctor tells me I have high cholesterol and extra weight. Olivia will talk to me about ways to eat less food, fat, and sodium which will help my heart and help me lose weight.



Laura, it is very important to follow the doctor's and Olivia's advice.

TO KEEP A HEART HEALTHY

Doctor Rosales cares a lot. With his support and yours, I have been able to control my high blood pressure by eating healthy foods.



Being more active, and losing weight.

This helps me to keep my heart healthy.

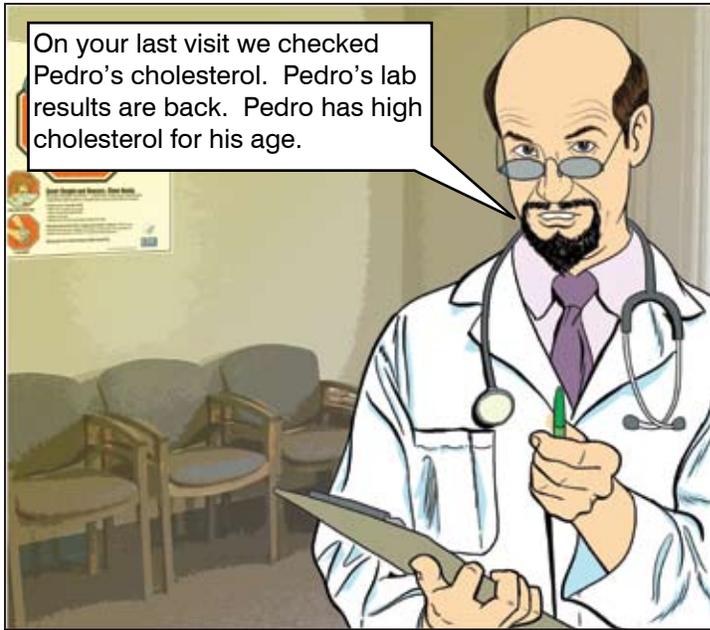


You are right, dad. We will make the changes the doctor and the promotora suggest.

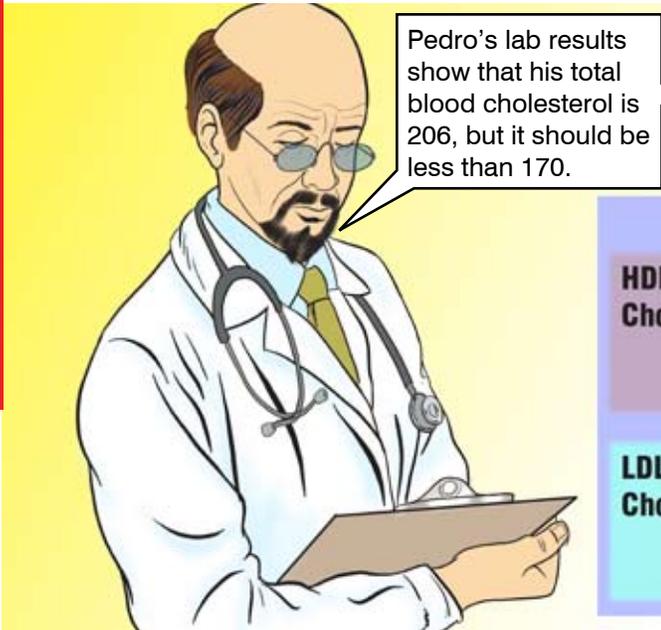
Luis, Laura and Pedro are back at the clinic to meet with Doctor Rosales and Olivia.



Hello. It is good to see you all today.



On your last visit we checked Pedro's cholesterol. Pedro's lab results are back. Pedro has high cholesterol for his age.



Pedro's lab results show that his total blood cholesterol is 206, but it should be less than 170.

His "bad" cholesterol is 148, but it should be less than 110. His "good" cholesterol is 54, which is fine. His "good" cholesterol should not be less than 45.

	DESIRABLE ●	BORDERLINE ●	UNDESIRABLE ●
HDL Cholesterol	<i>children</i> (9-12) more than 45 mg/dl	40-45 mg/dl	less than 40 mg/dl
	<i>adults</i> more than 40 mg/dl		less than 40 mg/dl
LDL Cholesterol	<i>children</i> (9-12) less than 110 mg/dl	110-129 mg/dl	more than 130 mg/dl
	<i>adults</i> less than 100 mg/dl	100-189 mg/dl	more than 190 mg/dl

Guidelines for Total Cholesterol in Children and Teenagers (ages 2-19)



LDL (BAD) CHOLESTEROL:
Keep it low!
Less than 110 mg/dl is best.

HDL (GOOD) CHOLESTEROL:
The higher, the better!
Keep it 45 mg/dl or higher.

TOTAL CHOLESTEROL:
Less than 170 is good.
Numbers 170-199 are on the borderline,
200 or more is high.



http://www.nhlbi.nih.gov/guidelines/cvd_ped/summary.htm#chap9

WHAT IS THE DIFFERENCE BETWEEN GOOD AND BAD CHOLESTEROL?

Doctor, can you explain the difference between "bad" and "good" cholesterol? And what is total cholesterol?



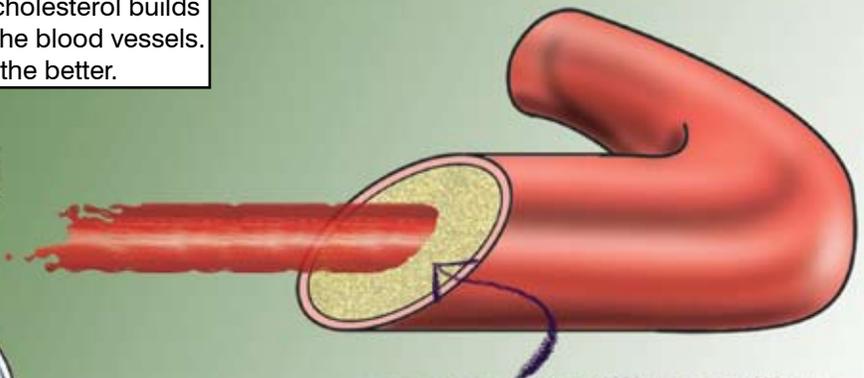
Total cholesterol is the amount of all types of cholesterol in the blood.

FOR ADULTS TOTAL CHOLESTEROL:
Less than 200 mg/dl
Best. Good for you!
200 to 239 mg/dl
Borderline. Be alert!
240 mg/dl or more
High. Danger!



This includes both the good and bad cholesterol.

LDL or "bad" cholesterol builds up and clogs the blood vessels. The lower it is the better.



LDL or bad cholesterol

WHAT IS THE DIFFERENCE BETWEEN GOOD AND BAD CHOLESTEROL?

HDL or "good" cholesterol helps keep the blood vessels from getting clogged. The higher it is the better.



Laura and Pedro can lower their cholesterol, but they need to work together to eat healthy foods, be more active, and get to a healthier weight. It is good that Laura does not smoke because smoking also raises total cholesterol levels.



Laura, your lab results show that your total cholesterol is 245, but it should be less than 200. Your "bad" cholesterol is 168, but it should be less than 100. Your "good" cholesterol is 55, so I am not worried about it.



Olivia, can help you to make your diet healthy and get enough physical activity also she has some cooking tips and recipes that will help you and your family along the way.



Thank you for your help. We will make the time and effort to drop our "bad" cholesterol.

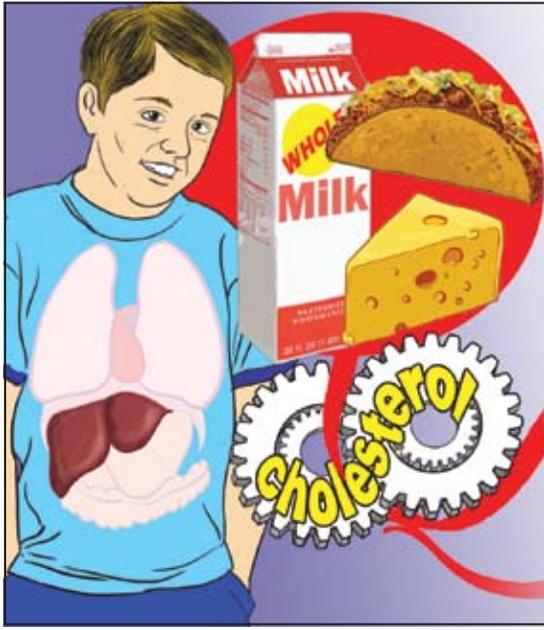
Great! I will see you in six months to check your weight and cholesterol again.



Hello, I have been working with kids and adults for the past 15 years. I'm sure that with your support, we will be able to help Pedro and you make healthy choices.



Olivia, can you tell us what cholesterol is and why my family should be worried about high cholesterol?



Cholesterol is a natural waxy, fat-like matter that is in our food, and it is also made by our liver. Your body makes all of the cholesterol it needs to do important things, like breaking down fatty foods and making hormones and vitamins.

HORMONES

VITAMINS

But too much cholesterol from some foods, like fatty meat, organ meats like liver and kidney, cheese, and dairy desserts like ice cream may raise the amount of cholesterol in the blood.



One egg yolk a day does not increase the risk of heart attack in healthy people.

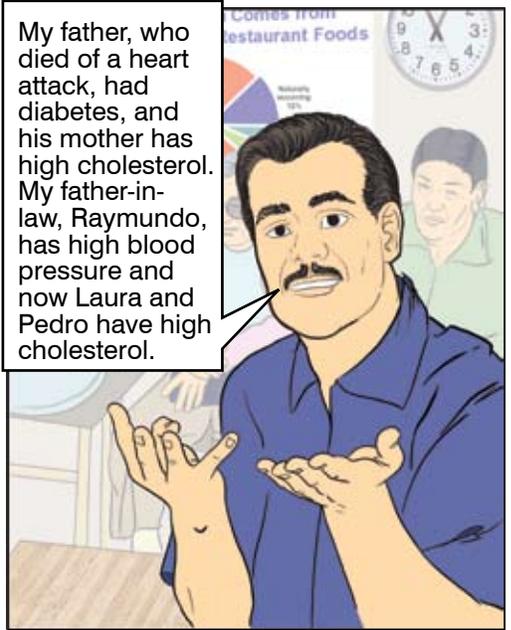
Olivia, what causes someone to have high cholesterol?



Many things can cause high LDL, or bad cholesterol...

...does anyone in your family have high cholesterol?

My father, who died of a heart attack, had diabetes, and his mother has high cholesterol. My father-in-law, Raymundo, has high blood pressure and now Laura and Pedro have high cholesterol.



WHAT IS THE DIFFERENCE BETWEEN GOOD AND BAD CHOLESTEROL?

Many things can cause high LDL, or bad cholesterol, but having a family history of high cholesterol, diabetes, high blood pressure or heart problems, not being active, eating an unhealthy diet, being at an unhealthy weight, and being of older age increases the risks and makes it especially hard for your family to have a healthy life style.



● Relatives with history of high cholesterol, diabetes, high blood pressure or heart problems.



Luis, I suggest that you meet with your family doctor and get your cholesterol checked.



High cholesterol has no warning signs. Many times people have it without even knowing about it. It is important to have your cholesterol tested because if it's high you can talk to your family doctor and control it by making changes in what you eat and how active you are.

Luis, as a community health worker I will help you and your family to keep your **heart healthy!**

Healthy children should have their cholesterol checked between ages:



9 and 11 years

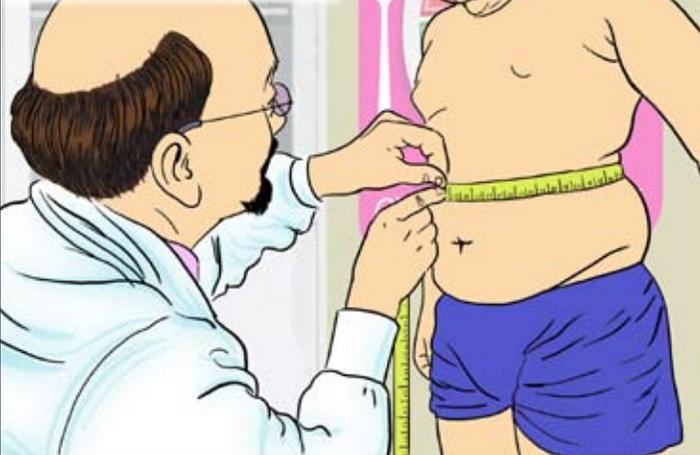


17 and 20 years



Everyone age 20 years and older should have their cholesterol checked at least once every five years.

Your doctor may advise checking your child's cholesterol before age 9, between ages 12 and 16 years, or more often if your child already has high cholesterol or other risk factors for heart diseases.



The first steps to control high cholesterol are to make changes like eating healthy foods...



...getting more physical activity, and either losing weight if needed or maintaining a healthy weight. The doctor, nurse or I can help you find your healthy weight.



Please come to one of my monthly group classes to learn more about how to manage cholesterol and live a healthy life. Everyone will welcome you.



The following week...



We are ready to start the session. Thanks everyone for coming. Let me introduce you to Luis, Laura, and their son Pedro. They will be taking part in our classes.

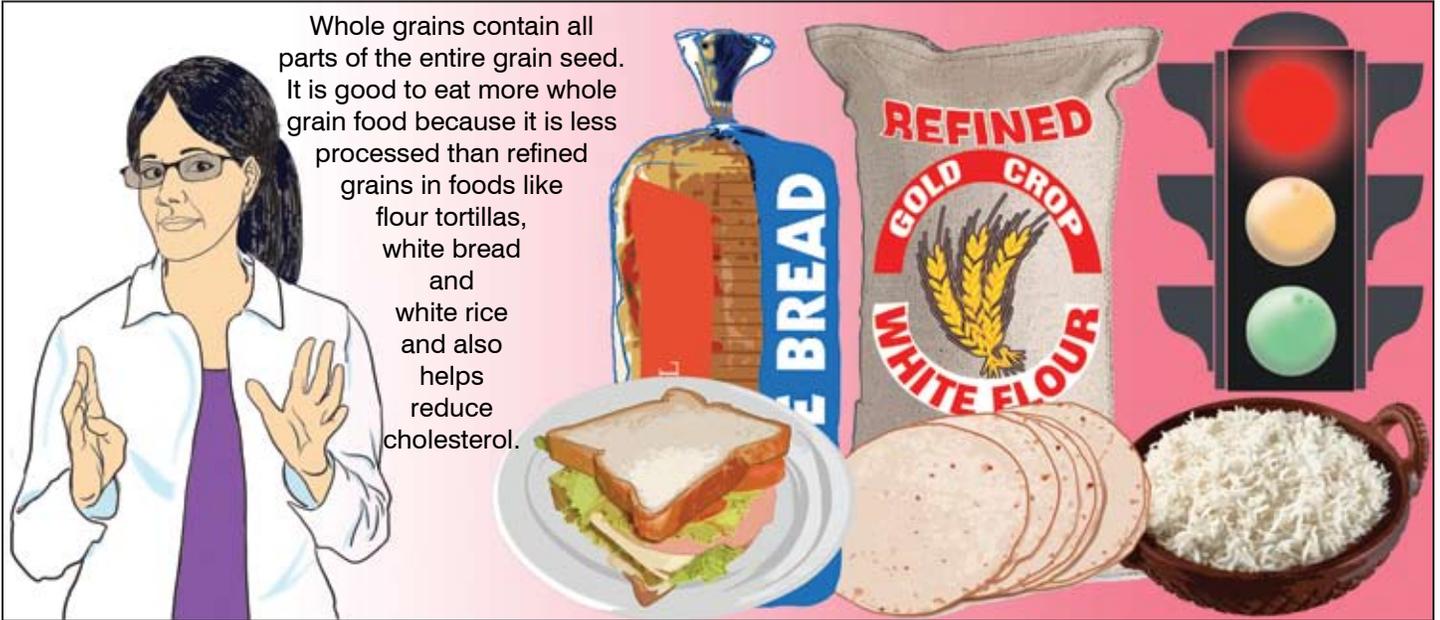


We will be talking about how to lower your cholesterol levels. A healthy and balanced diet is a very important step in managing high cholesterol.

I have questions about what makes up a healthy diet.



What foods have grains and why do we need to eat more whole grain? What is saturated fat?



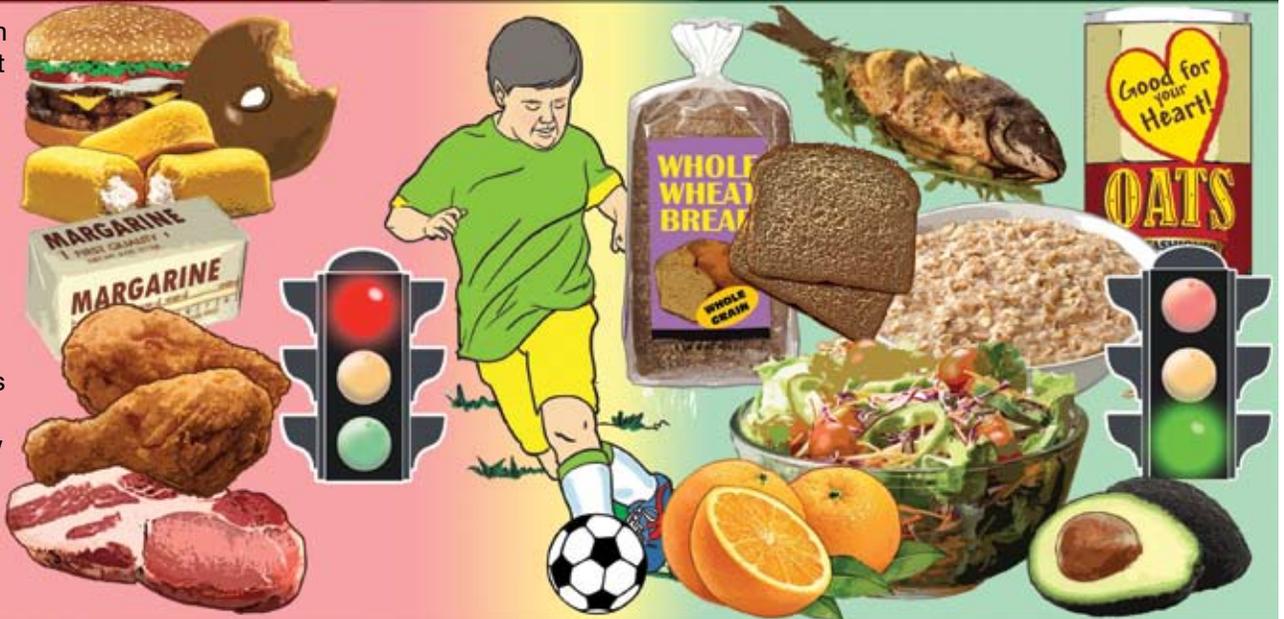
Whole grains contain all parts of the entire grain seed. It is good to eat more whole grain food because it is less processed than refined grains in foods like flour tortillas, white bread and white rice and also helps reduce cholesterol.



Examples of foods with whole grains include: brown rice, wild rice, oats, whole-wheat bread, whole-wheat tortillas, whole-grain crackers, and whole wheat pasta. Look for the “whole grain” label on food.



Often, when people start to eat less cholesterol and increase their physical activity, their cholesterol level begins to drop within a few weeks.



Saturated fats and cholesterol are found in foods that come from animals.

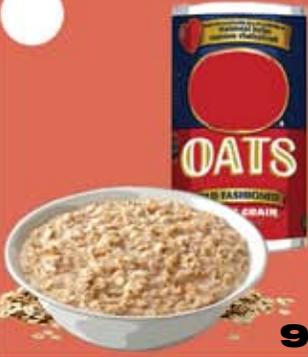
They can be found in foods like whole fat milk and cheeses, butter, cream, ice cream, fatty meat, fatty poultry, lard, and pork fat. Tacos, sausages, bologna, hot dogs, and beef burgers may contain a lot of saturated fat.



Activity Sheet: Write in the white circle an "R" if it is a food high in cholesterol or a "G" if it is a food low in cholesterol.

We need to learn to identify foods high and low in cholesterol, because the food we choose daily defines in a major way our health and the health of our family.



 1	 2	 3	 4
 5	 6	 7	 8
 9	 10	 11	 12
 13	 14	 15	 16

I thought foods from animals are high in protein. If these foods are also high in cholesterol what kinds of foods with protein should we be eating?



You can choose fish, lean cuts of meat and poultry and beans. In addition, you can trim fat from meat and poultry and remove the skin from poultry before you cook them.



I replace animal fats such as lard and butter in my cooking with 1 teaspoon of oils such as canola, olive, soybean, safflower, corn, sunflower, or flaxseed.



But, stay away from packaged food with palm and coconut oils since they are very high in **saturated fats**. It is also very important to try to avoid foods with **trans fats**.



The amount for **trans fat** in a food is listed on the **Nutrition Facts** label.

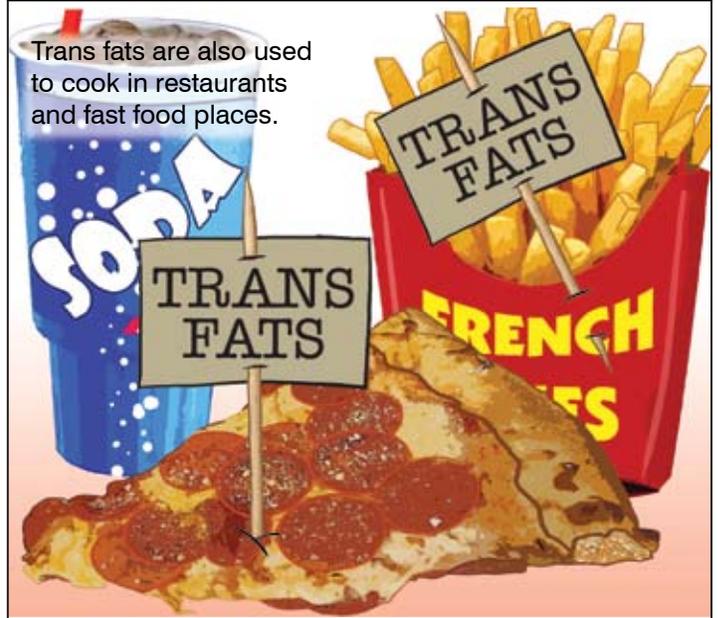


Trans fats come from foods that contain partially hydrogenated oil and can sometimes be found in store-bought baked goods like cakes, cookies, and pies, and canned frosting.

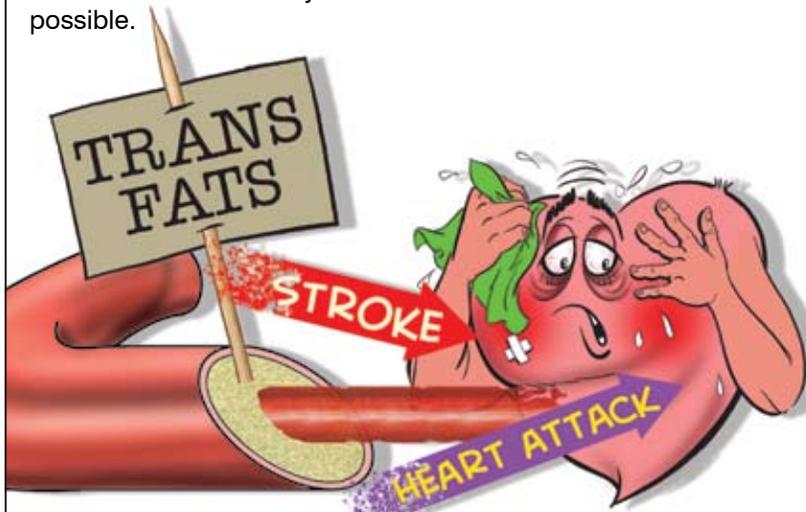
They are also in stick margarines, some fried foods, and may be in snack foods like chips and popcorn.



Trans fats are also used to cook in restaurants and fast food places.



Trans fats can raise your bad cholesterol levels in your blood and damage your blood vessels, which can lead to heart attack or stroke. You should try to eat foods with **trans fats** as little as possible.



You said to use different kinds of cooking oils and whole grains. What other changes can I make when I'm cooking?

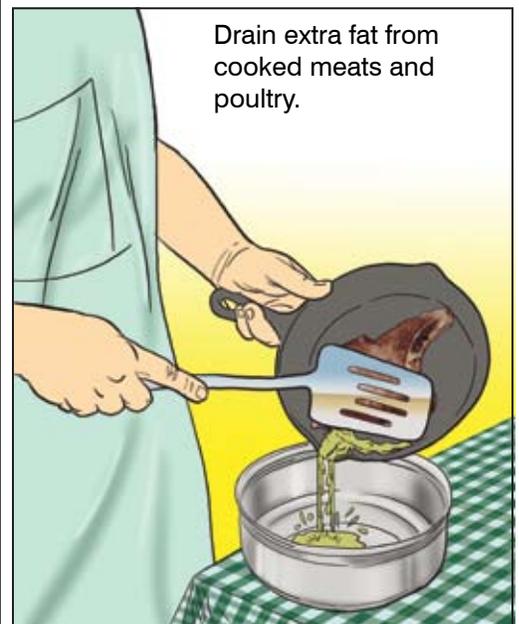
There are many things you can do.



Instead of frying meat, fish or potatoes, try baking, broiling, or grilling.



Drain extra fat from cooked meats and poultry.



Cooking and eating at home more often saves money, and it is better than the high-fat food at fast food places.

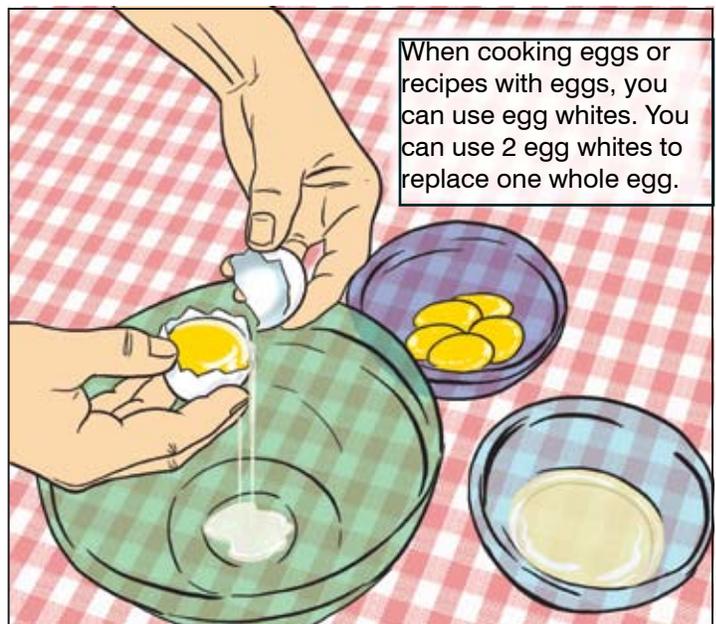
If you cook and eat at home, you can control the amount of fat in your food.



You can also use non-stick or vegetable oil spray to grease your cooking pans.



When cooking eggs or recipes with eggs, you can use egg whites. You can use 2 egg whites to replace one whole egg.



You can add flavor to foods with herbs and spices. Use low-fat instead of high-fat cheese. Also, serve smaller portions, especially when eating higher-fat dishes.



Start a new tradition. When you go to big family dinners bring healthy dishes. Don't be surprised when family members and friends ask for your recipes.



Also, use smaller plates than you are using now.



And eat more vegetables and fruits and limit the foods you eat with added sugars.



When eating out at restaurants, eat smaller amounts of food, share a meal, or take part of your meal home.



You should:
 1. Fill one half of your plate with fruits and vegetables
 2. Make at least half of your grains whole grains



3. Pick a variety of high-protein foods that are low in saturated fat and cholesterol
 4. Switch from full-fat (regular) to low-fat (1%) or fat-free milk products



Today I want to finish the class by teaching you to read a Nutrition Facts label.



Next week, I invite you all to attend my Low-Fat Cooking class. We will be making a low fat chicken and rice (arroz con pollo) recipe. I hope you will all be able to come.



Activity Sheet: Fill in your plate, choosing healthy foods, write the numbers you select in my Food Plate below "ChooseMyPlate.gov." See page 18 for grouping foods with "ChooseMyPlate.gov."

Answers

2, 4	1, 12, 13, 17, 18	15	9, 16, 20
	3, 8		

On today's class we'll learn how to read a Nutrition Facts label.

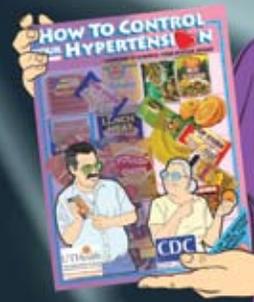
Knowing how to read a Nutrition Facts label is the BEST tool for choosing healthy foods.

Nutrition Facts			
Amount/Serving	%DV*	Amount/Serving	%DV*
Serving Size ½ block			
Servings Per Container 2			
Amount Per Serving			
Calories 190			
Calories from Fat 70			
Total Fat 8g	12%	Total Carbohydrate 26g	9%
Saturated Fat 4g	20%	Dietary Fiber 1g	4%
Trans Fat 0g		Sugars 1g	
Cholesterol 0mg	0%	Protein 5g	
Sodium 820mg	34%		
Vitamin A 2%	•	Vitamin C 2%	
Calcium 2%	•	Iron 6%	

Today we're focusing on items to eat less of as shown on the **Nutrition Facts** label. The items to eat less of include: **calories, total fat, saturated fat, trans fat, cholesterol, sodium and sugars.**

Nutrition Facts			
Amount/Serving	%DV*	Amount/Serving	%DV*
Serving Size ½ block			
Servings Per Container 2			
Amount Per Serving			
Calories 190			
Calories from Fat 70			
Total Fat 8g	12%	Total Carbohydrate 26g	9%
Saturated Fat 4g	20%	Dietary Fiber 1g	4%
Trans Fat 0g		Sugars 1g	
Cholesterol 0mg	0%	Protein 5g	
Sodium 820mg	34%		
Vitamin A 2%	•	Vitamin C 2%	
Calcium 2%	•	Iron 6%	

Check out our fotonovela "How to Control your Hypertension: Learning to Control Your Sodium Intake," which explains how we have used the Nutrition Facts labels to teach people how to control sodium in their diet.



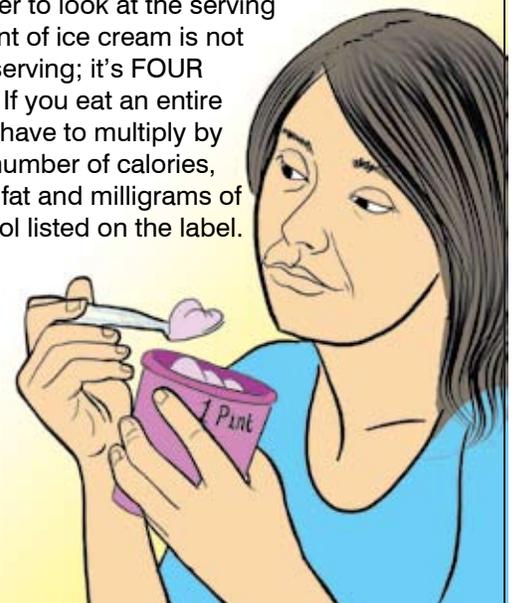
Start by looking at the "**Serving Size**" printed right under "**Nutrition Facts.**" The Nutrition Facts label tells us the numbers of servings there are in the package or can. It tells us the amount of calories, saturated fats, trans fats, cholesterol, sodium and sugar for one serving.

Nutrition Facts			
Amount/Serving	%DV*	Amount/Serving	%DV*
Serving Size ½ block			
Servings Per Container 2			
Amount Per Serving			
Calories 190			
Calories from Fat 70			
Total Fat 8g	12%	Total Carbohydrate 26g	9%
Saturated Fat 4g	20%	Dietary Fiber 1g	4%
Trans Fat 0g		Sugars 1g	
Cholesterol 0mg	0%	Protein 5g	
Sodium 820mg	34%		
Vitamin A 2%	•	Vitamin C 2%	
Calcium 2%	•	Iron 6%	

Many packages and cans have more than one serving. Check the serving size and how many servings you are actually eating. If you eat double the serving size, you will also eat double the amount of calories, saturated fat, cholesterol, sodium and sugar.

Nutrition Facts			
Amount/Serving	%DV*	Amount/Serving	%DV*
Serving Size ½ block			
Servings Per Container 2			
Amount Per Serving			
Calories 190			
Calories from Fat 70			
Total Fat 8g	12%	Total Carbohydrate 26g	9%
Saturated Fat 4g	20%	Dietary Fiber 1g	4%
Trans Fat 0g		Sugars 1g	
Cholesterol 0mg	0%	Protein 5g	
Sodium 820mg	34%		
Vitamin A 2%	•	Vitamin C 2%	
Calcium 2%	•	Iron 6%	

Remember to look at the serving size. A pint of ice cream is not a single serving; it's **FOUR** servings. If you eat an entire pint, you have to multiply by four the number of calories, grams of fat and milligrams of cholesterol listed on the label.



Activity Sheet: Fill in the blank sheet comparing Nutrition Facts labels per serving.

Nutrition Facts	
Serving Size 1/4 cup (58g) Servings Per Container About 7	
Amount Per Serving	
Calories 50	Calories from Fat 30
% Daily Value*	
Total Fat 3.5g	5%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 15mg	5%
Sodium 260mg	11%
Total Carbohydrate 4g	1%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 2g	4%

Nutrition Facts	
Serving Size 1/2 oz. (14g) Servings Per Container About 6	
Amount Per Serving	
Calories 80	Calories from Fat 45
% Daily Value*	
Total Fat 5g	7%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 20mg	6%
Sodium 140mg	6%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 9g	Not a significant source of protein.

1. Which label has the highest cholesterol? _____

How much? _____

2. Which label has the least cholesterol? _____

How much? _____

3. Which food has the most saturated fat? _____

How much? _____

4. Which label has the highest amount of total fat? _____

How much? _____

5. How much total fat is 1 serving of the food in label # 1? _____

Nutrition Facts		
Serving Size 1 oz (28g/About 11 chips) Servings Per Container About 2		
Amount Per Serving		
Calories	1 oz	Entire Pkg
	140	290
Calories from Fat	70	140
% Daily Value*		
Total Fat 8g, 17g	12%	26%
Saturated Fat 1g, 2.5g	6%	12%
Trans Fat 0g, 0g		
Cholesterol 0mg, less than 5mg	0%	1%
Sodium 210mg, 440mg	9%	18%
Total Carbohydrate 16g, 34g	5%	11%
Dietary Fiber 1g, 2g	4%	9%
Sugars 0g, less than 1g		
Protein 2g, 4g		

Nutrition Facts	
Serving Size 1 Tbsp (13g) Servings Per Container about 33	
Amount Per Serving	
Calories 90	Calories from Fat 90
% Daily Value*	
Total Fat 10g	15%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Polyunsaturated Fat 6g	
Monounsaturated Fat 2.5g	
Cholesterol 5mg	2%
Sodium 90mg	4%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%

Nutrition Facts			
Serving Size 2/3 cup (156g) Servings 1 can			
Calories 150			
Fat Cal 45			
Amount/serving		%DV*	
Total Fat 5g	8%	Sodium 550mg	23%
Saturated Fat 3.5g	17%	Total Carb 10g	3%
Cholest 3500mg	1170%	Protein 16g	
Vitamin A 0%	Vitamin C 10%	Calcium 0%	
Not a significant source of fibers and sugars			

Answers:
 (1.) Label 5, 3 500 mg;
 (2.) Label 3, 0 mg;
 (3.) Label 5, 3.5 g;
 (4.) Label 4, 10 g;
 (5.) 3.5 g.

Look for: Total Fat, Saturated Fat, Trans Fat and Cholesterol: Under Total Fat, you'll find Saturated Fat and Trans Fat, then Cholesterol listed in bold. These all raise your cholesterol levels.

Compare brands to pick foods that have the least saturated fat and cholesterol and 0 grams trans fat, if you can.



Nutrition Facts

Serving Size ½ block
Servings Per Container 2

Amount Per Serving
Calories 190
Calories from Fat 70

Amount/Serving	%DV*	Amount/Serving	%DV*
Total Fat 8g	12%	Total Carbohydrate 26g	9%
Saturated Fat 4g	20%	Dietary Fiber 1g	4%
Trans Fat 0g		Sugars 1g	
Cholesterol 0mg	0%	Protein 5g	
Sodium 820mg	34%		
Vitamin A 2%	•	Vitamin C 2%	
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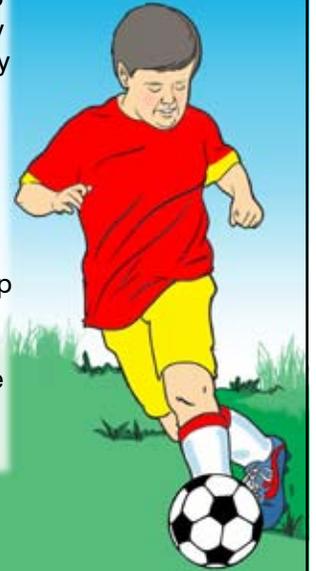
Keep in mind that fat-free doesn't mean a food is calorie-free. Some lower-fat items have the same number of calories as the full-fat item because they may have more added sugar. You also need to eat foods lower in sodium.



And how can we become more active?



You can go to a nearby park to play games like soccer or basketball, go for evening walks as a family, jump rope, ride a bicycle, roller blade or go dancing.



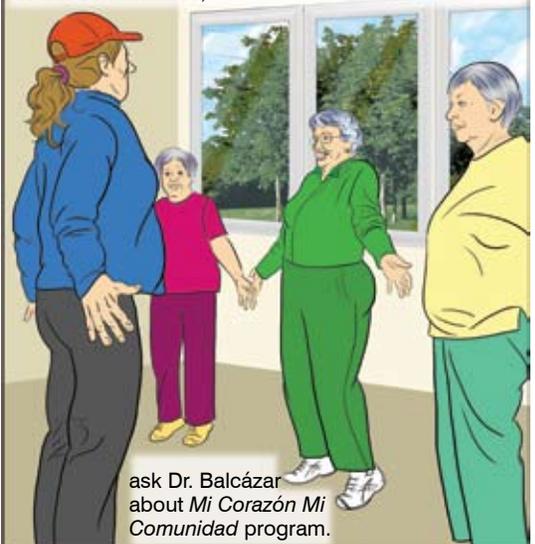
The community center has free Zumba and Salsa classes that are fun.



Adults should be active at moderate intensity for at least 150 minutes per week. Children and teenagers should be active at least 60 minutes each day.



The program *Mi Corazón, Mi Comunidad* in El Paso, Texas is working in parks to bring health promotion to our communities,



ask Dr. Balcázar about *Mi Corazón Mi Comunidad* program.



I'll be home from work earlier. If I can't, I will go with you to a dancing class in the evening and to the park on the weekend.

Luis and Laura: if you don't have any other questions...



...it was very nice to see you all. We'll see you in one month!



Thank you Olivia.... You'll see. We're going to do exactly what you told us. You won't be disappointed.



Laura, how everything is going?

Doña Fela, everything is going great! We've been eating healthier foods, eating smaller portions, and going to the park several days a week to walk laps or play soccer. And we are having fun at the Zumba classes at the community Center.



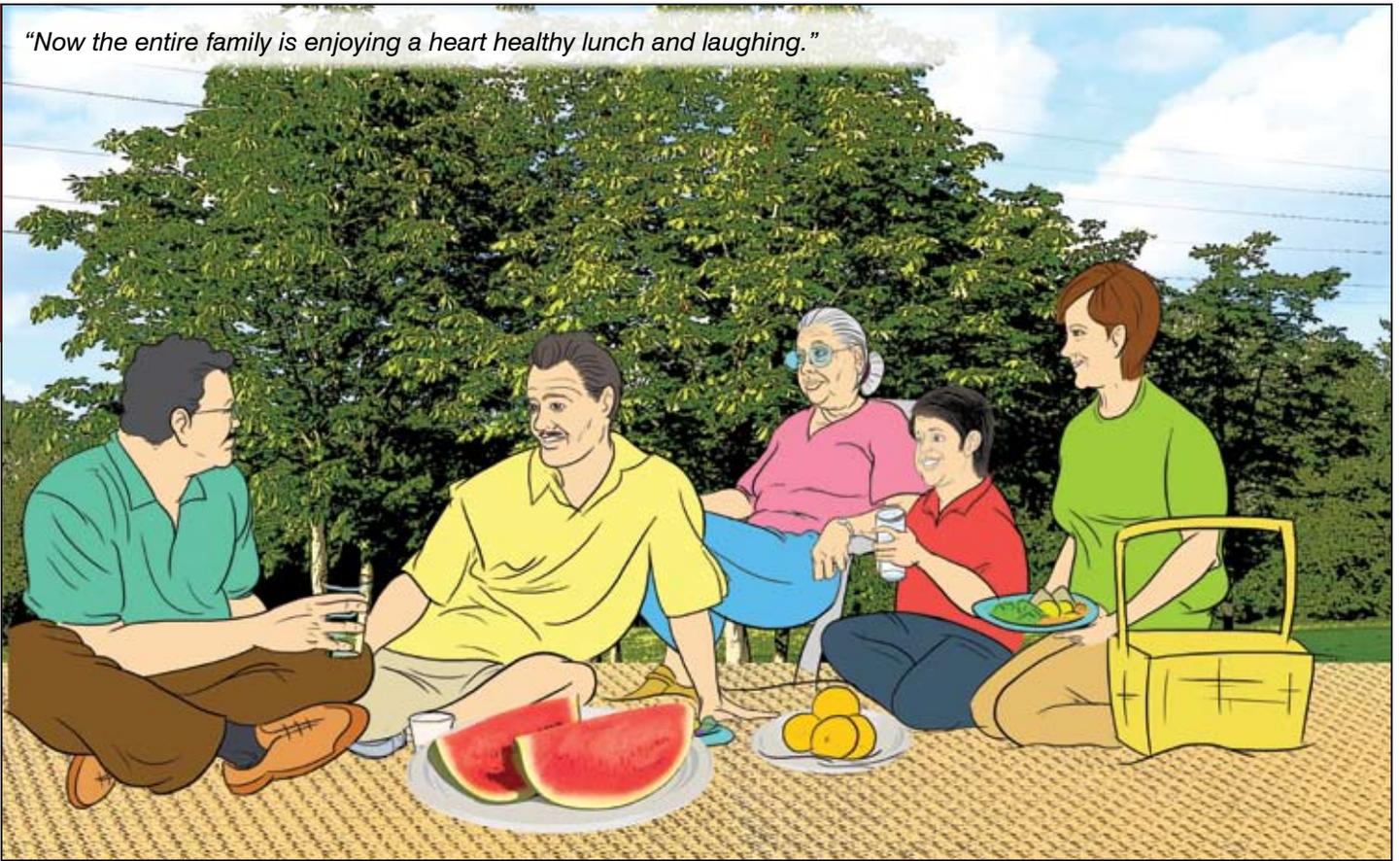
I have lost 10 pounds since we started making all of these changes.

That is great news!



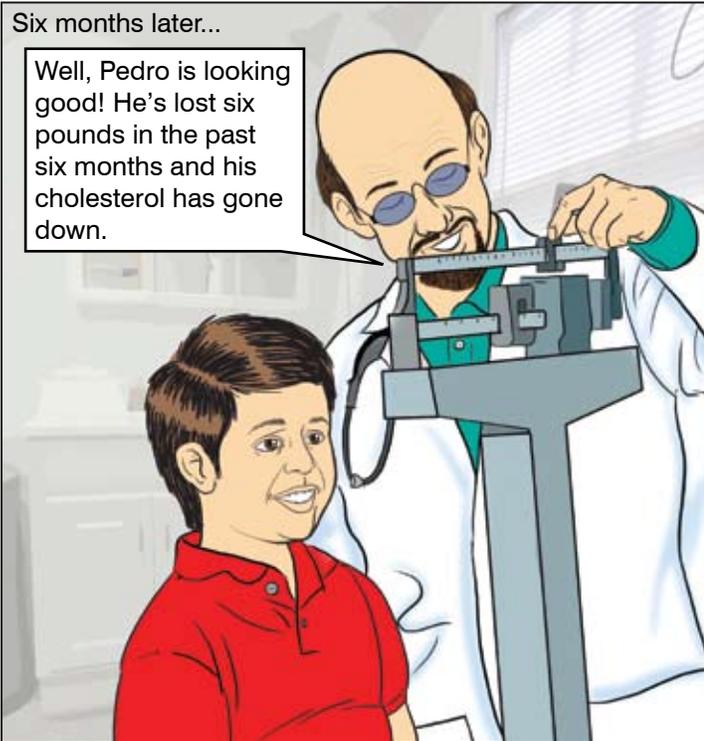
We've gone back to see Dr. Rosales and Olivia twice since our first visit, and Pedro has already lost five pounds.

"Now the entire family is enjoying a heart healthy lunch and laughing."



Six months later...

Well, Pedro is looking good! He's lost six pounds in the past six months and his cholesterol has gone down.



We are doing everything you and Olivia advised. We feel better, have more energy, and we will continue with our healthy changes.



These fotonovelas were done through a CDC-ASPH grant program. We hope you and your family learn through the fotonovelas how to have a healthier lifestyle.

