

Chapter 5: Chronic Diseases

Chapter 5: Chronic Diseases

Teacher's Guide

Learning Objectives:

- Students will be able to define chronic disease
- Students will be able to explain why regular checkups are important in identifying chronic diseases
- Students will be able to describe the following chronic diseases: asthma, diabetes, and heart disease
- Students will be able to identify signs that a chronic disease is worsening and a person should call the doctor

CASAS Competencies:

- 3.1.3** Identify and utilize appropriate health care services and facilities, including interacting with providers
- 4.9.3** Identify sources of information and assistance, and access resources within a system
- 7.4.4** Identify and utilize appropriate informational resources, including the Internet

Section 1: Discussing & Reading About Chronic Diseases

Suggestions for Discussing Theme Picture

1. Show theme picture to introduce topic.

"What do you see?"

"What is she doing?"

"Why is she doing this?"

"Why?"

2. Ask questions to stimulate discussion.

"Does anyone you know have diabetes?"

"What do they do to take care of their diabetes?"



This chapter is about chronic diseases in general, although three common chronic diseases (asthma, diabetes and heart disease) are used as examples. It emphasizes the importance of healthy habits and seeing a doctor to keep a chronic disease from getting worse.

Suggestions for Teaching Key Vocabulary

Key vocabulary words are bolded in the text. Most are listed with some visual clue in vocabulary boxes, and listed again with more detail in the glossary. Help students locate and pronounce the key vocabulary before reading the text.

Suggestions for Teaching Health Content

- Before reading, discuss the pictures on the page.
- Have students take turns reading select paragraphs out loud.
- Discuss vocabulary. Have students use context clues to define key words.
- More advanced students may want to underline or highlight new information.
- Ask what chronic diseases people tend to have most often in the students' home countries. How do they find out if they have them? How does having the disease affect their life? Do they know anyone who has asthma, diabetes or heart disease? What are the issues that the people they know must deal with? What kinds of things do they do to manage their disease?

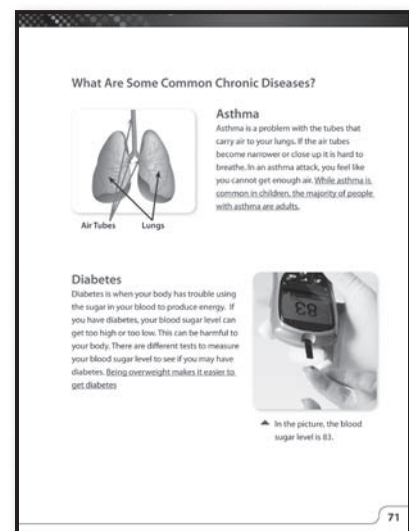
Key Vocabulary

heart disease
cancer
diabetes
high blood pressure
asthma
acute disease
arteries
risk factors
treatment plan
chronic disease

Issues to Address

Asthma

- Asthma is becoming more common among children in the U.S.
- Poor air quality may contribute to asthma.
- Different people with asthma have different “triggers”, which are things in the air that cause an asthma attack (like dust, pet hair, chemicals). Learning how to avoid these is part of the treatment plan.



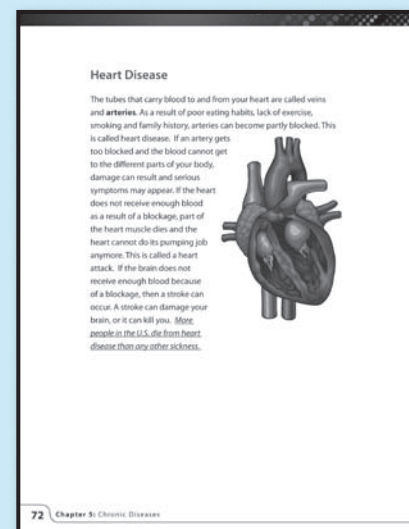
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Diabetes

- A person with diabetes really must understand how food and activity affect their blood sugar. Each day they have to keep track of their blood sugar, diet, and activity level. It is very intense disease management!
- Diabetes is quickly getting widespread in the U.S. It is not uncommon for immigrants who already have risk factors to become diabetic because of a change in eating habits, once they switch to an American diet.
- Eating lots of sugary food and being overweight make a person more likely to get diabetes. Encourage people to stick to the healthy parts of their traditional diet.

Heart Disease

- Heart disease is the biggest cause of death in the U.S. It is often caused by a gradual blockage of the arteries that bring blood to the heart. Risk factors that contribute to heart disease include: family history, level of exercise, diet, and smoking.
- Family history makes a person more likely to get heart disease, but a person can help prevent heart disease by keeping cholesterol and blood pressure under control, and keeping the heart working efficiently by exercising.
- A heart attack is usually caused when an artery to the heart muscles gets so blocked that not enough blood gets to the heart. This causes a part of the heart muscle to die, which is a heart attack. This can be very minor, or big enough to kill a person.
- A heart attack often feels like a crushing, suffocating pressure on the chest. The person may also feel out of breath. There might also be tingling or pain in one arm, more often the left arm. But a small heart attack might feel as minor as heartburn or indigestion. If students notice symptoms like this, they should call 911.



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Chronic Disease	Risk Factors	Warning Signs	Examples of Treatments
Asthma 	<ul style="list-style-type: none"> Family history Air pollution Smoking Obese/overweight Low body weight Overweight/Obesity Exposure to chemicals Dust animal hair or pollen Allergies 	<ul style="list-style-type: none"> Wheezing sound when you breathe Trouble breathing Tight feeling in your chest 	<ul style="list-style-type: none"> Use an inhaler
Diabetes 	<ul style="list-style-type: none"> Family history 45+ years old Smoking Overweight/Obesity High blood pressure Not enough exercise 	<ul style="list-style-type: none"> Thirsty and hungry all the time Fatigue or irritability Frequent thirst Upright stomach Weight loss Blurred vision Itchy skin Slow healing wounds Sores that don't heal 	<ul style="list-style-type: none"> Take insulin when needed
Heart Disease 	<ul style="list-style-type: none"> Family history Diabetes Smoking Overweight/Obesity High blood pressure High cholesterol Not enough exercise 	<ul style="list-style-type: none"> Sweating pain in your chest or arm Trouble breathing when active Sometimes warning signs at all Extreme fatigue when active 	<ul style="list-style-type: none"> Lower cholesterol Take medicines to control your blood pressure

NOTE: These are only examples. There are many other chronic diseases to know about. A doctor can tell you about the risk factors, warning signs, and treatments for these and other chronic diseases.

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Section 2: Activities

Pick and use as needed to develop skills.

Pronunciation Activity: Tap the Stress (X = LOUD tap, x = softer tap)

Teaching Steps:

1. **Tap or clap the rhythm of the group being studied.** Tap loudly for a big **X** and softly for a small **x**. Have students join you in tapping the rhythm.
2. **Say each word in time to the tapping.** Have students continue the beat as they repeat each word in unison after you. Repeat each word until students' rhythm and pronunciation are acceptable. Do not drag, keep up the tempo.

x X
about
above
acute
appear
again
attack
away
because
before
cannot
disease
enough
exact
obese
increased

X x
almost
active
answer
asthma
better
body
breathing
cancer
checkup
children
chronic
clearly
damaged
normal
greater

x X x
appointment
example
important
infections
inhaler
pollution
too much of
a lot of
We need it.
digestive
more veggies
more water
less candy
or greater
is less than

X x x
animal
arteries
chemicals
exercise
healthier
history
managing
medical
medicine
recognize
regular
energy
translator
very high
equal to

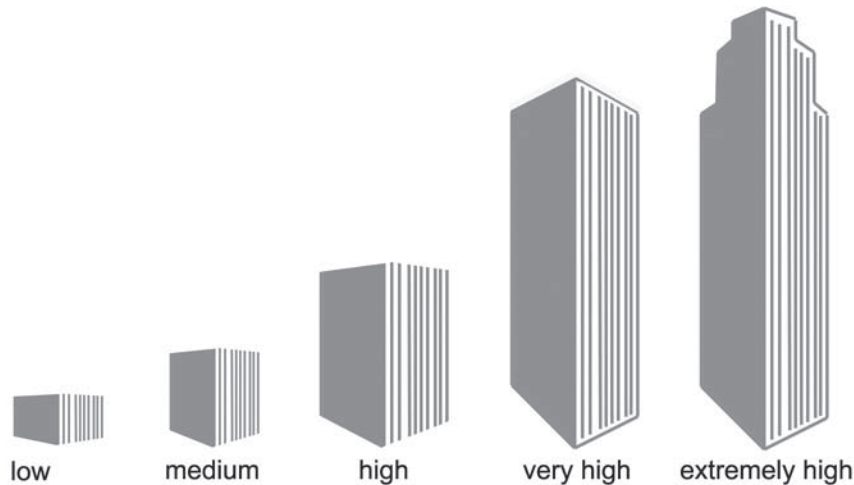
x x X x
diabetes
indigestion
for example
information
conversation

x X x x
emergency
obesity
activity
especially
anemia
extremely high



Grammar Activity: Low, Medium, High, Very High, Extremely High

This activity reviews terms needed in the math activities suggested below. Put this or a similar chart on the board to teach low, medium, high, very high, and extremely high.



Then put numbers on the board that also illustrate the concepts.

3 50 134 555 987



Grammar Activity: Equals, Less Than, Greater Than

Teach this similarly to how you taught Grammar Activity 1:

$1 + 2 = 3$ 50 is greater than 3 50 is less than 134

$25 + 25 = 50$ $50 > 3$ $50 < 134$

Check comprehension by asking questions such as:

- What numbers are greater than 134?
- What numbers are less than 555?



Math Activity: Know Your Body Mass Numbers

This activity will model self-checking of three important health factors-- height, weight, and waist measurement--while giving students practice in saying, reading, and understanding numbers in English. Be mindful that many students might have difficulty with this activity, as they have used the metric system most of their lives.

You will need a scale, a tape measure, and a BMI chart for everyone in the class. Use the two related charts that can be downloaded from www.consumer.gov/weightloss/bmi.html because it includes the waist measurement factor and how it affects the risk factor.

CAUTION: Sharing personal information such as weight carries some cultural taboos. Consider using yourself as the person to be weighed and measured.

Step 1: Help students find and write down their

- Height
- Weight
- Waist measure

Step 2: Help students find their BMI on the Determining Your Body Mass Index (BMI) chart.

Step 3: Help students study the Risk of Associated Disease According to BMI and Waist Size chart.

- Review the meaning of less than, equal to, and greater than.
- Point out that men and women use different waist measures.
- Show how to find the correct BMI range on the Risk chart.
- Emphasize that persons with a high, very high, or extremely high risk factor need to share this information with their doctor, so the doctor can help them work to lower their risk.

Here's another BMI Chart to use: <http://www.nhlbisupport.com/bmi>



Math Activity: Know Your Blood Sugar Numbers

Most people probably do not know their cholesterol and blood sugar numbers, unless they have had a recent checkup or suffer from a chronic disease. For this activity, therefore, students will refer to a table of ranges of numbers to determine the health status of some hypothetical people, as indicated by their blood sugar level. Before doing the exercise, be sure students know what the word **between** means.

Blood Sugar (Glucose) Levels	
70 to 110	= Low or Normal (OK)
110 to 125	= Borderline or Pre-Diabetes (eat less sugar)
126 & higher	= Diabetes (dangerous – needs treatment)

Put the Blood Sugar chart on the board then read the following to your class. For each person, the class tells what the number means (ie, normal, pre-diabetes, diabetes).

Alex has a blood sugar level of 232. _____

Barbara has a blood sugar level of 73. _____

Charles has a blood sugar level of 102. _____

Donna has a blood sugar level of 115. _____

Eduardo has a blood sugar level of 126. _____

Felicia has a blood sugar level of 111. _____



Hands-on Activity: Family History and Family Tree

Show an example of a family tree or draw a brief version of your own on the board. Explain each person: “This is me. I have three sisters and two brothers. My mother is Louise and my father is Franklin.”

Discuss the term “family tree;” point out that families are defined differently in different cultures and the purpose of this activity is to identify “blood-related” family members.

Explain that a family tree is a way to help you learn about your family health history. Have students make their family trees. This could take various formats, such as:

- On paper with boxes and lines -- hand out blank family trees.
- A more hands-on version with index cards, plastic straws and tape -- use stickers or the icons provided to cut out and paste on their trees next to the names of relatives who have had these diseases.
- Or have students do their family health history tree online at <http://www.familyhistory.hhs.gov/>. Available in Spanish and English.

Sample Family Health History Trees

Take some time exploring the following websites and familiarizing yourself with the different kinds of Family Health History Forms you could create with your students.

Sample 1

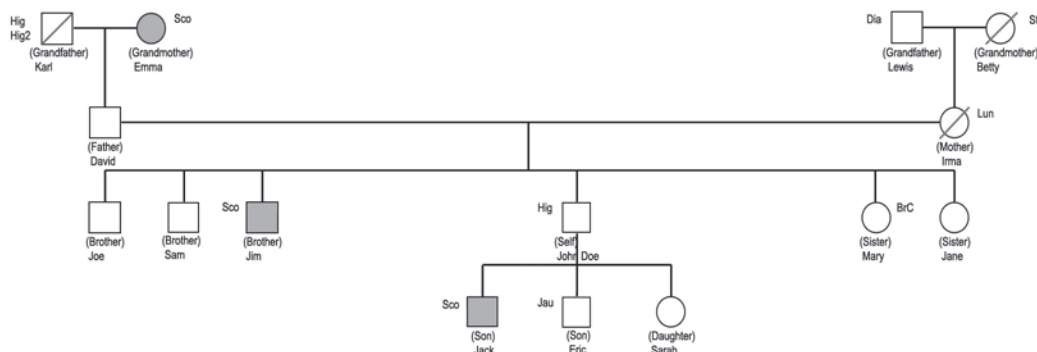
Source: <http://www.familyhistory.hhs.gov>

My Family Health Portrait- Drawing Report

John Doe November 15, 2007

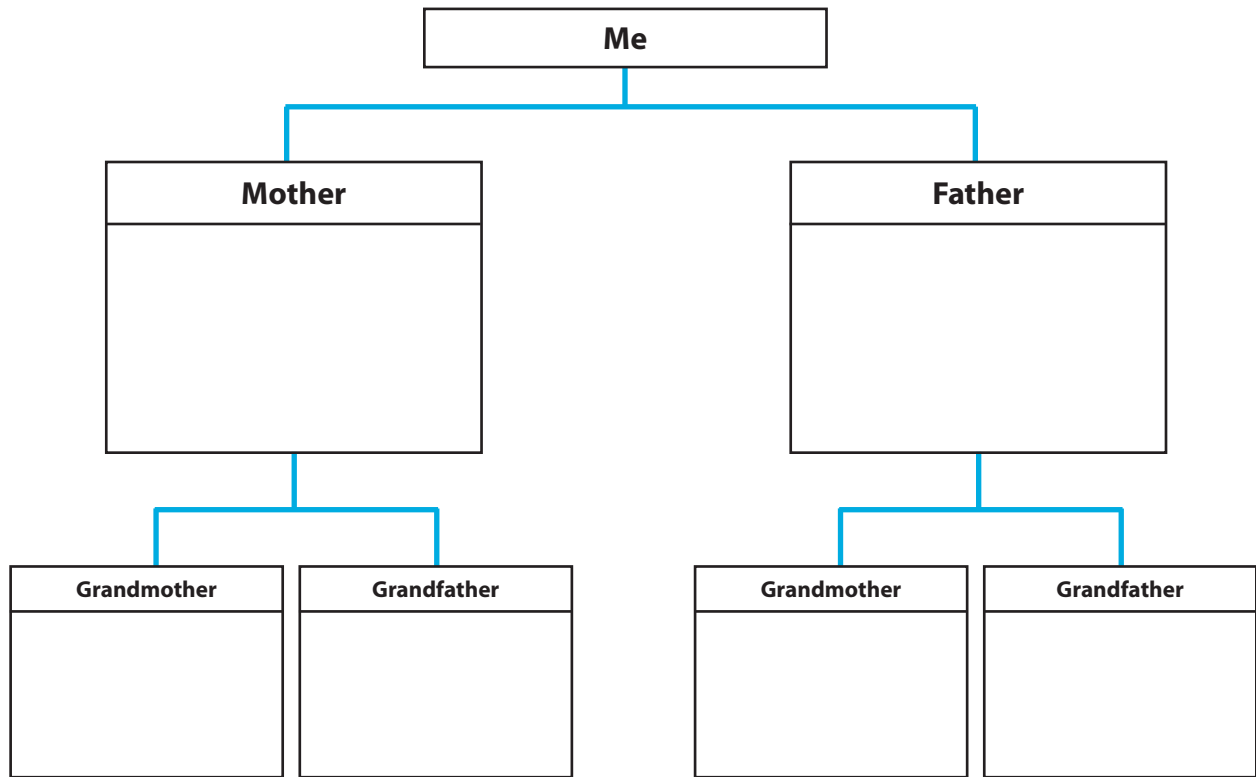
Highlighted Disease: Scoliosis

-Male Family Member	-Family Members with a History of Disease	
-Female Family Member	-Deceased Family Member	
HD -Heart Disease	Str -Stroke	Dia -Diabetes
Col -Colon Cancer	BrC -Breast Cancer	OvC -Ovarian Cancer



Sample 2

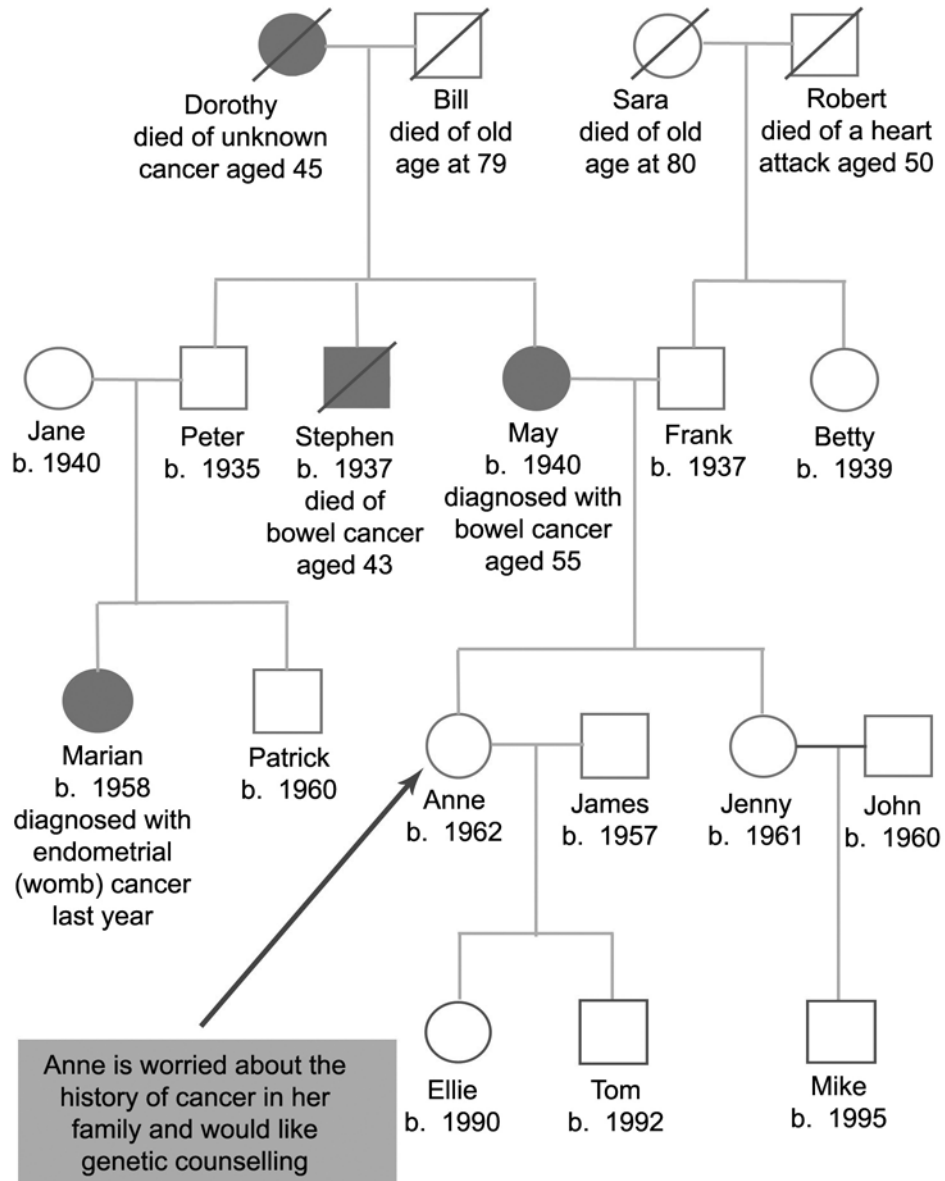
Source: http://www.oprah.com/presents/lluminari/medhistory/llum_medhistory_tree.jhtml



Sample 3

Source:

<http://www.cancerbackup.org.uk/Aboutcancer/Genetics/Cancergenetics/Geneticconsultationgeneticcounselling>





Technology Activity: Chronic Disease Research Online

If you have an ESL class that speaks Spanish as their first language and they have strong literacy skills in Spanish, have them go to <http://medlineplus.gov/spanish> and look up information on a chronic disease in their own language. For information in languages other than Spanish try <http://www.healthyroadsmedia.org>. They may want to pick a chronic disease that affects them or someone close to them. Students should partner with a classmate who speaks the same language. Ask students to read about the disease and make notes in their own language. Then have them answer the questions on the handout in English. They should also be prepared to tell the class what they learned. See student worksheet at the end of this teaching unit.

As a follow-up, you can combine the information that everyone collects to make a big chart and display it in your classroom.

Name of Chronic Disease	What is happening inside the body	Symptoms or warning signs	Health habits to manage the disease	Treatment plan to manage the disease

Section 3: Dialogs

Suggestions for Teaching the Dialogs

Help students read the dialog. Then have them practice the roles in pairs. To change the dialog, substitute other appropriate words for the underlined words. Finally, encourage chain drills and free conversations on the topic. The dialogs are listed by degree of difficulty. Beginning ESL students may only be able to do Dialog 1, but they will benefit from listening to classmates practice the others.

Dialog 1

Doctor: Your blood pressure is too high.

Patient: What can I do about it?

Doctor: Eat less salt, exercise, and take your medicine.

Dialog 2

Doctor: It's a good thing you came in for a checkup.

Patient: Why?

Doctor: Because you have diabetes. Your blood sugar is too high. That's very dangerous.

Patient: What now? What must I do?

Doctor: You must develop a treatment plan for diabetes.

Dialog 3

Doctor: I'm glad you made this appointment.

We found out about your heart disease before it got too bad.

Patient: How can I keep it from getting worse?

Doctor: Don't smoke, eat healthy foods, exercise, and don't forget to take your medicine.

Patient: OK. And when do I need to see you again?

Doctor: Next month. Make an appointment. Then we can see how the treatment plan is working.







Patient: OK, thanks. I'll make an appointment on my way out.

Section 4: Check Your Learning

Suggestions for Checking Learning

Quiz: Have students look at the table on page 76 of their student books and answer the questions. See student worksheet at the end of this teaching unit.

- What is a warning sign for asthma?
 - Wheezing sound when you breathe**
 - Thirsty all the time
 - Squeezing pain in your chest or arm
 - All of the above
- Taking insulin when needed is a treatment for what chronic disease?
 - Asthma
 - Diabetes**
 - Heart disease
 - High blood pressure
- Taking medications to control blood pressure is a treatment for what chronic disease?
 - Asthma
 - Diabetes
 - Heart disease**
 - High blood sugar
- Why is heart disease sometimes called the silent killer?
 - You cannot speak when you have this disease.
 - You may not have any symptoms when you have this disease.**
 - You cannot be silent when you have this disease.
 - You always have symptoms when you have this disease.
- What should you do if you have any of the warning signs for asthma, diabetes, or heart disease?
 - Wait to see if the warning signs last.
 - Do nothing until you have a severe problem.
 - Call your doctor the next day.
 - Call your doctor right away.**

Chronic Disease Risk Factors & Warning Signs			
Chronic Disease	Risk Factors	Warning Signs	Examples of Treatments
 <p>Asthma</p>	<ul style="list-style-type: none"> • Family history • Air pollution • Smoking • Cigarette smoke • Low birth weight • Overweight/Obesity • Exposure to chemicals • Tick animal hair at home • Allergies 	<ul style="list-style-type: none"> • Wheezing sound when you breathe • Hoarse breathing • Tight feeling in your chest 	<ul style="list-style-type: none"> • Use an inhaler 
 <p>Diabetes</p>	<ul style="list-style-type: none"> • Family history • Age over 60 • Smoking • Overweight/Obesity • High blood pressure • Not enough exercise 	<ul style="list-style-type: none"> • Thirsty and hungry all the time • Have to urinate a lot • Feeling tired • Upset stomach • Weight loss • Blurred vision • Slow-healing (cuts) • Sores that don't heal 	<ul style="list-style-type: none"> • Take insulin when needed 
 <p>Heart Disease</p>	<ul style="list-style-type: none"> • Family history • Diabetes • Smoking • Overweight/Obesity • High blood pressure • High cholesterol • Not enough exercise 	<ul style="list-style-type: none"> • Squeezing pain in your chest or arm • Hoarse breathing when active • Sometimes no warning signs at all • Extreme fatigue when active 	<ul style="list-style-type: none"> • Lower cholesterol • Take medicines to control your blood pressure 

NOTE: These are only examples. There are many other chronic diseases to know about. A doctor can tell you about the risk factors, warning signs, and treatments for these and other chronic diseases.

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Sharing with Others: Having students share what they've learned with others helps them check and reinforce their learning. One idea is to have students interview their relatives to find out if anyone has had a chronic disease or they could interview a friend who has a chronic disease and share with the class what they learned.

Section 5: Additional Resources

Visit these websites for more information on chronic diseases.

Information

American Heart Association

<http://www.americanheart.org>

National Heart, Lung, and Blood Institute (in English, Spanish, Vietnamese, and Filipino)

http://www.nhlbi.nih.gov/health/pubs/pub_gen.htm

Easy-to-Read English/Spanish Booklets on Heart Health

<http://www.nhlbi.nih.gov/health/public/heart/other/sp-page.htm>

Diabetes Easy-to-Read Publications in English and Spanish

<http://www.diabetes.niddk.nih.gov/dm/ez.asp>

KidsHealth (Health information for kids, parents, and teenagers)

<http://www.kidshealth.org>

National Cancer Institute (in English and Spanish)

<http://www.cancer.gov>

Cancer Information Service (in English and Spanish)

<http://cis.nci.nih.gov> or call 1-800-4-CANCER (1-800-422-6237)

Activities

The Asthma Wizard (in English and Spanish)

<http://asthma.nationaljewish.org/disease-info/diseases/asthma/kids/wizard-index.aspx>

Asthma - Tutorial with Pictures and Sound.

<http://www.healthsystem.virginia.edu/internet/pediatrics/patients/Tutorials/asthma/home.cfm>

Canadian Lung Association: Especially For Kids

<http://www.lung.ca/children>

Hypertension (High Blood Pressure) - (in English and Spanish)

<http://www.nlm.nih.gov/medlineplus/tutorials/hypertension/htm/index.htm>

Free or Low Cost Services

Florida Department of Health Chronic Disease Resources

<http://www.doh.state.fl.us/Family/chronicdisease/>

As you work through the chapter with your students, keep a list of other resources you find are helpful.

Other Resources

- _____
- _____
- _____
- _____
- _____
- _____

Section 6:

Student Worksheets

Student Worksheet: Chronic Disease Research Online

Go to <http://www.nlm.nih.gov/medlineplus/languages/languages.html> and look up information on a chronic disease in your language. Read about the disease and then answer the questions below in English.

1. I am looking for information about _____ (name of chronic disease in English).

2. In my language the disease is called _____ (name of chronic disease in your language).

Answer these questions in English:

3. What happens to your body when you have this disease?

4. What are the symptoms?







5. If you have this disease, how must you change your health habits?

6. What kind of treatment helps this disease?

Student Worksheet: Check Your Learning

Read the chart on page 76 in your student book and answer the questions.

- What is a warning sign for asthma?
 - Wheezing sound when you breathe
 - Thirsty all the time
 - Squeezing pain in your chest or arm
 - All of the above
- Taking insulin when needed is a treatment for what chronic disease?
 - Asthma
 - Diabetes
 - Heart disease
 - High blood pressure
- Taking medications to control blood pressure is a treatment for what chronic disease?
 - Asthma
 - Diabetes
 - Heart disease
 - High blood sugar
- Why is heart disease sometimes called the silent killer?
 - You cannot speak when you have this disease.
 - You may not have any symptoms when you have this disease.
 - You cannot be silent when you have this disease.
 - You always have symptoms when you have this chronic disease.
- What should you do if you have any of the warning signs for asthma, diabetes, or heart disease?
 - Wait to see if the warning signs last.
 - Do nothing until you have a severe problem.
 - Call your doctor the next day.
 - Call your doctor right away.

Chronic Disease Risk Factors & Warning Signs			
Chronic Disease	Risk Factors	Warning Signs	Examples of Treatments
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 <p>Diabetes</p>	<ul style="list-style-type: none"> • Family history • 45+ years old • Smoking • Overweight/Obesity • High blood pressure • Not enough exercise 	<ul style="list-style-type: none"> • Thirsty and hungry all the time • Have to urinate a lot • Feeling tired • Spontaneous weight loss • Blurred vision (vision coming & going) • Slow-healing sores 	<ul style="list-style-type: none"> • Take insulin when needed 
 <p>Heart Disease</p>	<ul style="list-style-type: none"> • Family history • Diabetes • Smoking • Overweight/Obesity • High cholesterol • Not enough exercise 	<ul style="list-style-type: none"> • Squeezing pain in your chest or arm • Hoarse breathing when active • Sudden loss of warning signs at all • Extreme fatigue when active 	<ul style="list-style-type: none"> • Lower cholesterol • Take medicines to control your blood pressure 

NOTE: These are only examples. There are many other chronic diseases to know about. A doctor can tell you about the risk factors, warning signs, and treatments for these and other chronic diseases.

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