



[KidsHealth.org/classroom](http://KidsHealth.org/classroom)

## Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

## Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to use goal-setting skills to enhance health.
- Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
- Demonstrate the ability to advocate for personal, family, and community health.

National Health Education Standards: [www.cdc.gov/healthyschools/sher/standards/index.htm](http://www.cdc.gov/healthyschools/sher/standards/index.htm)

Your students might have trouble grasping everything about diabetes, but understanding the experiences of friends with diabetes and preventing type 2 diabetes are important goals, even for the youngest students. These activities will introduce diabetes to your students using clear and simple language.

## Related KidsHealth Links

### Articles for Kids:

#### Diabetes Center

[KidsHealth.org/Yb#\\_Xg#WbhYf#XJUVYhYgWbhYf](http://KidsHealth.org/Yb#_Xg#WbhYf#XJUVYhYgWbhYf)

#### 8JUVYhYg a cj JYg

[?Xg<YU'h\"cf\[#\\_#Yb#\\_Xg#XJUVYhYg a cj JYg](http://?Xg<YU'h\)

#### HndY %8JUVYhYg 'K \Uhi'g #3

[?Xg<YU'h\"cf\[#\\_#X#YU'h SdfcV Ya g#\[`UbX#hndY%`ha`](http://?Xg<YU'h\)

#### HndY %8JUVYhYg <ck 'g' h'fYUHYX3

[?Xg<YU'h\"cf\[#\\_#X#YU'h SdfcV Ya g#\[`UbX#hFYUhb\[ShndY%`ha`](http://?Xg<YU'h\)

#### HndY & 8JUVYhYg 'K \Uhi'g #3

[?Xg<YU'h\"cf\[#\\_#X#YU'h SdfcV Ya g#\[`UbX#hndY&`ha`](http://?Xg<YU'h\)

#### HndY & 8JUVYhYg <ck 'g' h'fYUHYX3

[?Xg<YU'h\"cf\[#\\_#X#YU'h SdfcV Ya g#\[`UbX#hFYUhb\[ShndY&`ha`](http://?Xg<YU'h\)

#### Can Diabetes Be Prevented?

[KidsHealth.org/kid/health\\_problems/gland/prevention.html](http://KidsHealth.org/kid/health_problems/gland/prevention.html)

### Resources for Teachers

#### Diabetes Special Needs Factsheet

[KidsHealth.org/en/parents/diabetes-factsheet.html](http://KidsHealth.org/en/parents/diabetes-factsheet.html)

#### Diabetes and Sports Special Needs Factsheet

[KidsHealth.org/en/parents/diabetes-sports-factsheet.html](http://KidsHealth.org/en/parents/diabetes-sports-factsheet.html)

## Discussion Questions

*Note: The following questions are written in language appropriate for sharing with your students.*

1. Our bodies need energy to keep us moving. How do we get energy for our bodies? What does this energy help us do?
2. What do you know about diabetes? What does diabetes have to do with the food we eat? Do you have a friend or family member with diabetes? Talk about his or her experiences.



## Activities for Students

*Note: The following activities are written in language appropriate for sharing with your students.*

### Insulin Is Key!

#### Objectives:

Students will:

- Learn about the role of glucose and insulin in the body
- Discover what happens to glucose in the body of a person with type 1 diabetes

#### Materials:

- Hula hoops, sidewalk chalk, masking tape (something to make circles on the ground – one per student)
- Insulin Is Key! handout (available at: [KidsHealth.org/classroom/prekto2/problems/conditions/diabetes\\_handout1.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/diabetes_handout1.pdf))
- Scissors

#### Class Time:

45 minutes

#### Activity:

*Note: Prior to activity, create one circle for each student on the ground in an open space using hula hoops, sidewalk chalk, or masking tape. The concepts necessary for this activity are difficult. Take time to discuss them with your class before and after the simulation.*

Pizza, peanut butter, and pancakes aren't just yummy; these foods give us sugar called glucose that fuels our bodies with energy. To use this energy, we need to get the glucose into our cells. Think of it this way: Each of our cells has a lock on it, and it needs a special key called insulin to let the glucose in. When kids have the type of diabetes called type 1 diabetes, their bodies don't make insulin, so they have trouble getting glucose into their cells to use it as energy.

Now that you know the basics, let's play a game to see how it all works. Before you get started, you need to make an insulin key. Cut out the insulin key found on the Insulin Is Key! handout. Now you're ready to be glucose! Follow your teacher to an open area with a bunch of circles on the ground. In the first round, these circles are cells in a body WITHOUT diabetes. Stand in a line with your classmates. When your teacher says, "Go," run to a cell and use your key to pretend to open the lock on the cell and step inside. As glucose, you've just used insulin to enter a cell and give your body energy. This is how a body without diabetes uses insulin to get energy from food.

Now it's time to see what it's like to be a body WITH diabetes. Go stand in the line again, but this time, put your insulin key down on the ground behind you. Now run to your cell circle. What happens? Glucose can't get into the cell because there's no insulin to unlock it. But wait! What if the body was just given an insulin shot? Run and grab your insulin key from the line, and enter your cell! Now you can do an energy dance inside your cell circle, because the insulin shot helped you get energy from the food you ate!



## Healthy Hands

### Objective:

Students will:

- Learn about how type 2 diabetes can be prevented

### Materials:

- Construction paper
- Art supplies (crayons, markers, scissors, glue)
- Healthy Hands handout (available at: [KidsHealth.org/classroom/prekto2/problems/conditions/diabetes\\_handout2.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/diabetes_handout2.pdf))

### Class Time:

35 minutes

### Activity:

*Note: Younger students may need help cutting out their handprints. Also, instead of writing five healthy tips on their handprints, younger students could just color a picture of themselves being healthy on the palm.*

Sometimes diabetes can be prevented. That means if you take care of yourself by eating good-for-you foods, limiting fat and sugar, and staying active, you might be able to avoid getting the type of diabetes known as type 2 diabetes. With your class, brainstorm a list of ways that you can eat well and get lots of exercise. When you have a good list, then you're ready to make a Healthy Hand! Trace your hand on a piece of construction paper. Cut out your handprint. On each finger, write one way that you can stay healthy and avoid getting type 2 diabetes. Draw a picture of your healthy self on the palm of the hand. When you're all finished, you and some of your classmates can glue your handprints on the wreath outline found on the Healthy Hands handout. Now you're ready to hang your Healthy Hands wreaths in the hallway!

## Reproducible Materials

### Handout: Insulin Is Key!

[KidsHealth.org/classroom/prekto2/problems/conditions/diabetes\\_handout1.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/diabetes_handout1.pdf)

### Handout: Healthy Hands

[KidsHealth.org/classroom/prekto2/problems/conditions/diabetes\\_handout2.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/diabetes_handout2.pdf)

### Quiz

[KidsHealth.org/classroom/prekto2/problems/conditions/quiz.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/quiz.pdf)

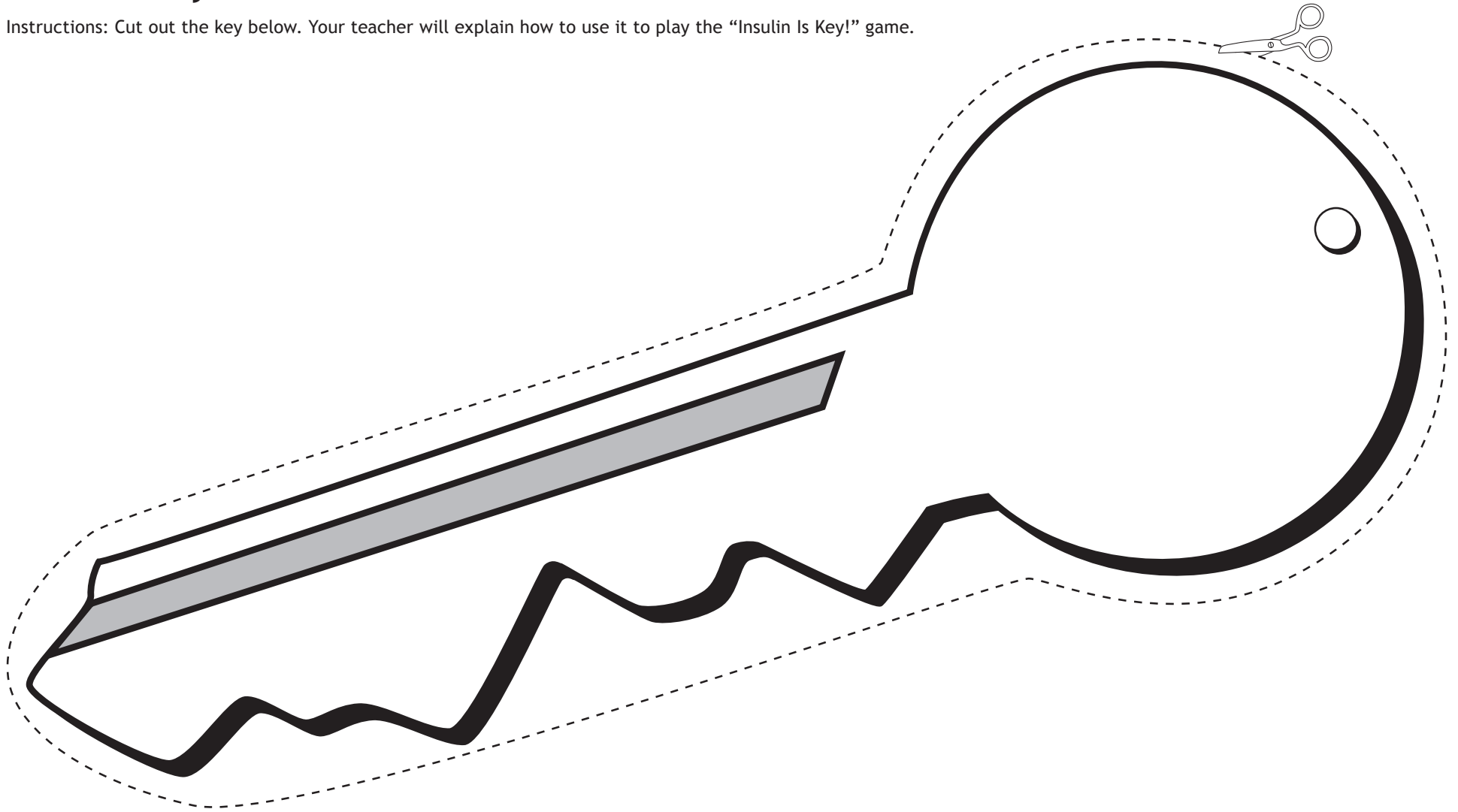
### Quiz: Answer Key

[KidsHealth.org/classroom/prekto2/problems/conditions/diabetes\\_quiz\\_answers.pdf](http://KidsHealth.org/classroom/prekto2/problems/conditions/diabetes_quiz_answers.pdf)



## Insulin Is Key!

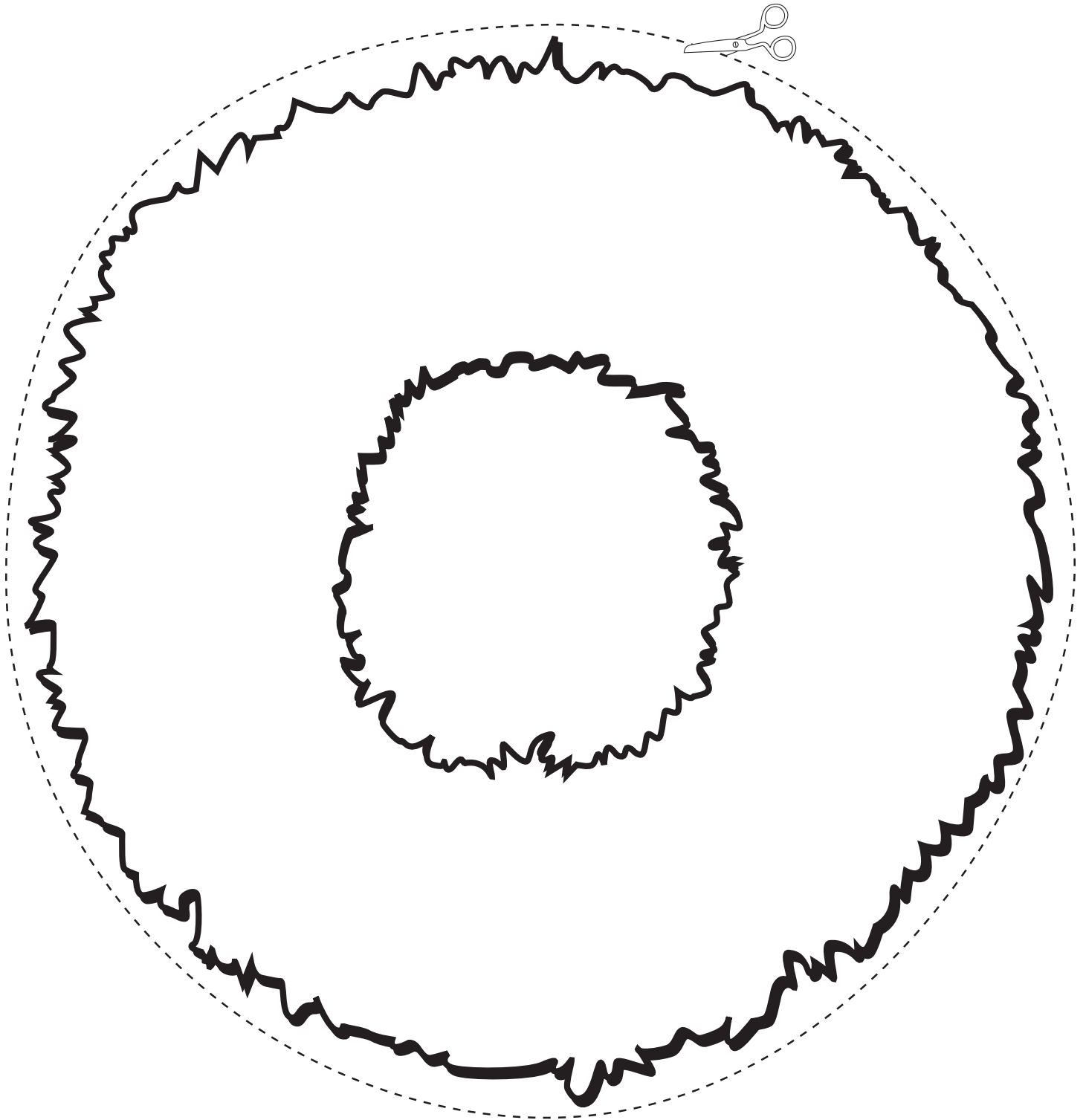
Instructions: Cut out the key below. Your teacher will explain how to use it to play the “Insulin Is Key!” game.





## Healthy Hands

Instructions: Cut out the wreath and glue your Healthy Hand and some of your classmates' Healthy Hands to it.





Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Quiz

Instructions: Answer each question.

1. True or False: You can catch diabetes like a cold. T F
2. The sugar that is the body's main source of energy is called:
  - a. glucose
  - b. insulin
  - c. cell
3. \_\_\_\_\_ helps glucose get into your cells. It's like a key that opens the doors to the cells of the body.
4. List three ways you can help prevent getting type 2 diabetes.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. True or False: Kids with diabetes can run, jump, and play like any other kid. T F



## Quiz Answer Key

1. True or False: You can catch diabetes like a cold. T **(F)**
2. The sugar that is the body's main source of energy is called:  
**(a.)** glucose  
b. insulin  
c. cell
3. Insulin helps glucose get into your cells. It's like a key that opens the doors to the cells of the body.
4. List three ways you can help prevent getting type 2 diabetes.  
eating good-for-you foods, limiting fast foods and sugary drinks, exercising
5. True or False: Kids with diabetes can run, jump, and play like any other kid. **(T)**F