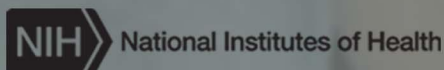


# Our Cells our Selves

## Viewing Guide



The Partnership in Education

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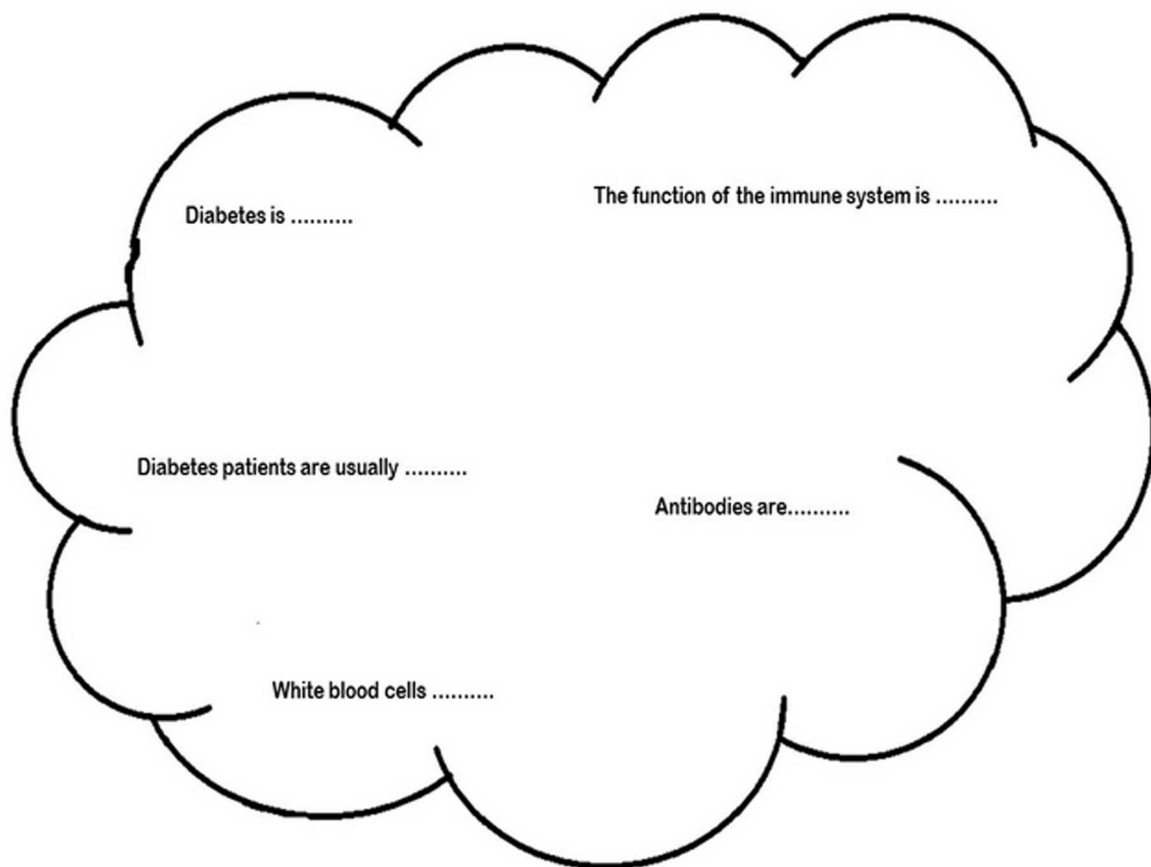
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Funding Provided By:  
Science Education Partnership Award  
National Institutes of Health  
Duquesne University

# Our Cells our Selves

**Before you view the video answer the following questions:**

1. Using what you have learned before, make a few notes on the thinking cloud about diabetes and the immune system.



2. The immune system protects your body from “unknown particles.” Predict what would happen if a group of body cells is labeled as an unknown particle by the immune system.

# Our Cells our Selves

**As you watch the video answer the following questions:**

1. Where was Sylvie the night before and why was she there?
  
  
  
  
  
  
  
  
  
  
2. According to the doctors, Sylvie has been diagnosed with diabetes and must make a few changes to her lifestyle. State one change she must make.
  
  
  
  
  
  
  
  
  
  
3. Where are Islets cells found, and what is their main function?
  
  
  
  
  
  
  
  
  
  
4. Draw a diagram to show how complex organisms are made from single cells.
  
  
  
  
  
  
  
  
  
  
5. Arrange the following statements in correct order.
  - a. Nutrients are distributed and absorbed by all cells in the body.     \_\_\_
  - b. Food from the outside environment is swallowed.     \_\_\_
  - c. Nutrients are used by cells to perform body functions     \_\_\_
  - d. Food is broken down into simple molecules in one specialized part of the body.     \_\_\_

# Our Cells our Selves

6. Explain the job of blood vessels in a complex organism.

7. Illustrate a T cell and a B cell, then write a sentence or 2 describing their similarities and differences.

8. If a person gets a disease like chickenpox, he or she may never get that disease again. Why is that? Explain the phenomena using the following terms; T cells, B cells, and immune system.

9. Identify the reason why Sylvie can no longer control her own blood sugar levels. Make a quick sketch of what is happening inside her body.

**After viewing the video answer the following question:**

1. Take a look at your answer for the 2nd question, was your prediction correct? Explain why or why not.

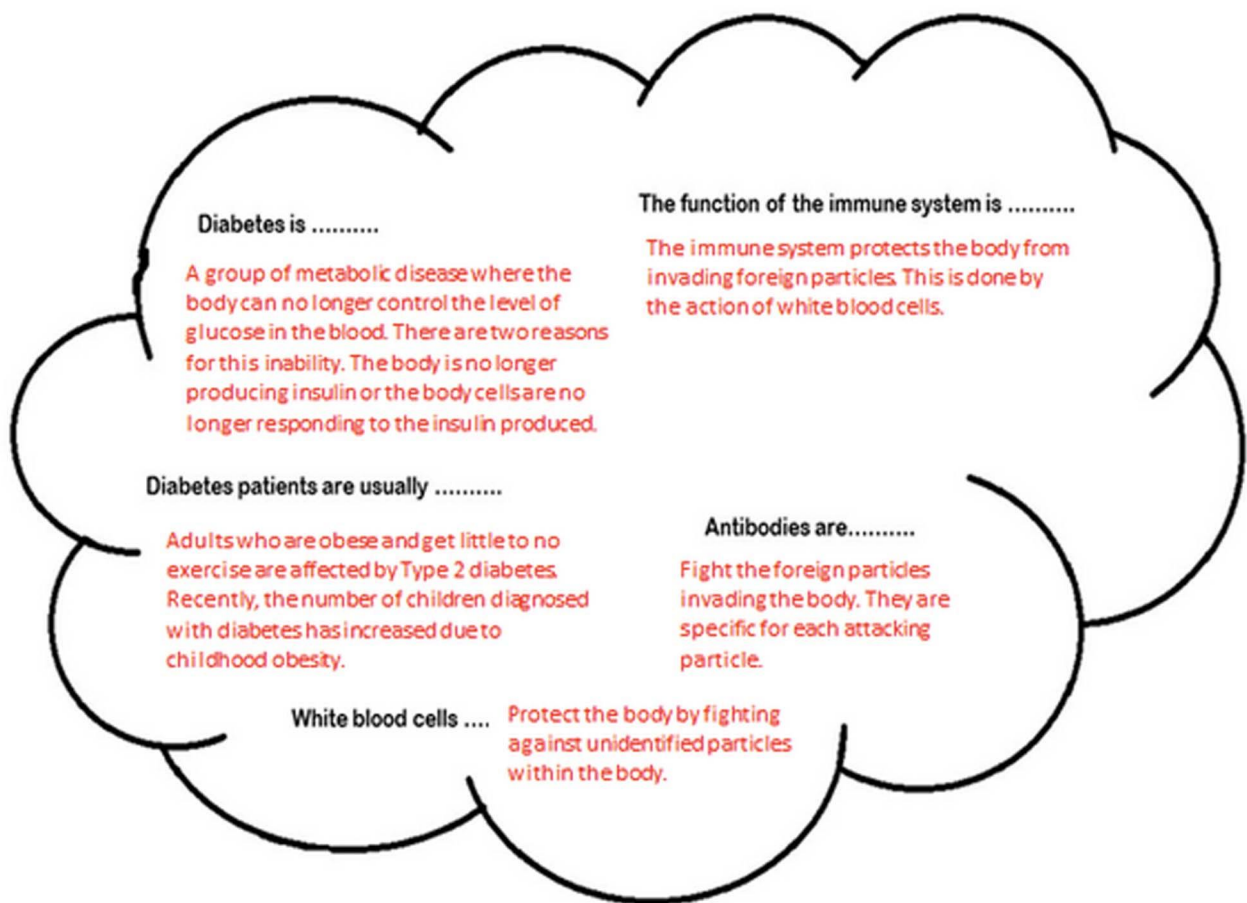


# Our Cells our Selves

## ANSWER KEY

### Pre-Viewing Questions

1. Using what you have learned before, make a few notes on the thinking cloud about diabetes and the immune system.



2. The immune system protects your body from “unknown particles.” Predict what would happen if a group of body cells is labeled as an unknown particle by the immune system.

Any particles labeled as an unknown particle, regardless of being a body cell, will be attacked by the white blood cells to protect the body.

# Our Cells our Selves

## ANSWER KEY

**As you watch the video answer the following questions:**

3. Where was Sylvie the night before and why was she there?

Sylvie was in the hospital because her doctor found out she has diabetes.

4. According to the doctors, Sylvie has been diagnosed with diabetes and must make a few changes to her lifestyle. State one change she must make.

- Keep a healthy diet with the correct amount of sugar.
- Keep taking insulin so the body can produce the correct amount of energy.

5. Where are Islets cells found, and what is their main function?

Islets cells are found in the pancreas.  
Their main function is produce insulin.

6. Draw a diagram to show how complex organisms are made from single cells.

Students should draw a diagram to show the small individual cells coming together to form one large organism made up of many small cells.

7. Arrange the following statements in correct order.

Nutrients are distributed and absorbed by all cells in the body.	3
Food from the outside environment is swallowed.	1
Nutrients are used by cells to perform body functions.	4
Food is broken down into simple molecules in one specialized part of the body.	2

8. Explain the job of blood vessels in a complex organism.

Blood vessels carry food and oxygen from the outside environment, and immune cells all to all the cells around the body.

# Our Cells our Selves

## ANSWER KEY

9. Illustrate a T cell and a B cell, then write a sentence or 2 describing their similarities and differences.

Students should illustrate the following important points:

- T cells display the broken up pieces of the swallowed particles and are able to read and recognize those particles if they encounter it again.
- B cells acts like swallowing cells, but can only swallow one type of cell. If the unknown cell is labeled as harmful then the B cell activate to release antibodies to fight the unknown harmful cells.

10. If a person gets a disease like chickenpox, he or she may never get that disease again. Why is that? Explain the phenomena using the following terms; T cells, B cells, and immune system.

The first time a person gets chickenpox, the immune system is activated. The B cells swallow the particle, and release antibodies to fight the disease. The T cells will display the broken up particle and will also remember the particle. If the chicken pox particle invades the body again the T cell will recognize it and destroy it before it affects the other cells of the body.

11. Identify the reason why Sylvie can no longer control her own blood sugar levels. Make a quick sketch of what is happening inside her body.

The sketch should show Sylvie's Islet cells being attacked by the T and B cells. Thus, her body is unable to produce insulin which controls her blood sugar level.

**After viewing the video answer the following question:**

1. Take a look at your answer for the 2nd questions, was your prediction correct? Explain why or why not.

Students should first mention if their prediction was correct or incorrect, they explain their answer using examples from the video.