1. **Student Research and Discussion Questions**
   a. What is diabetes? Explain why untreated diabetes is dangerous.
   b. Why don’t all carbohydrates affect blood glucose (sugar) in the same way?
   c. What is the difference between a simple carbohydrate and a complex carbohydrate?
   d. How can people decrease their chances of developing diabetes?

2. **Diabetes Vocabulary Words (English and Spanish)** –

3. **Diabetes Overview Video**
   CDC - [https://www.youtube.com/watch?v=wmOW091P2ew](https://www.youtube.com/watch?v=wmOW091P2ew)
   UK Government - [https://www.youtube.com/watch?v=wZAjVQWbMLE](https://www.youtube.com/watch?v=wZAjVQWbMLE)

4. **Class Activities Relating to Diabetes**
   a. **Blood Sugar Math Activity** – page 87 Staying Healthy Teacher’s Guide (Blue Book)
   b. **Technology Activity** – page 97 Staying Healthy Teacher’s Guide (Blue Book)
   c. **Classroom Toolkit** – Great plain language handouts and activities. Some of this is geared to small children but the majority is appropriate for adults as well.

5. **Diabetes Articles for student reading and discussion**

6. **50 Ways to Prevent Type 2 Diabetes** – This list is a good conversation starter. Have students pick a few factors to they can improve.

7. **Prediabetes Video explaining how to calculate personal risk** –
   [https://www.youtube.com/watch?v=n2VyBnEAx7E](https://www.youtube.com/watch?v=n2VyBnEAx7E)

8. **Personal Story of a Woman’s Journey to Health after being diagnosed with prediabetes** – 3 ½ minute video
   [https://www.youtube.com/watch?v=uyHuEG3ZegU](https://www.youtube.com/watch?v=uyHuEG3ZegU)
9. Infographics (See below)
   a. Choosing Whole Grains over Refined Grains
   b. Prediabetes
   c. Diabetes short version and Long Version
Diabetes is a disease that affects how the body uses glucose, a sugar that is the body's main source of fuel. Your body needs glucose to keep running. Here's how it should work.

1. You eat.

2. Glucose from the food gets into your bloodstream.

3. Your pancreas makes a hormone called insulin.
4. Insulin helps the glucose get into the body's cells.

5. Your body gets the energy it needs.

The pancreas is a long, flat gland in your belly that helps your body digest food. It also makes insulin. Insulin is kind of like a key that opens the doors to the cells of the body. It lets the glucose in. Then the glucose can move out of the blood and into the cells.

But if someone has diabetes, the body either can't make insulin (this is called type 1 diabetes) or the insulin doesn't work in the body like it should (this is called type 2 diabetes). The glucose can't get into the cells normally, so the blood sugar level gets too high. Lots of sugar in the blood makes people sick if they don't get treatment.

Can Type 1 Diabetes Be Prevented?

Type 1 diabetes can't be prevented. Doctors can't even tell who will get it and who won't.

In type 1 diabetes, a person's immune system attacks the pancreas and destroys the cells that make insulin. No one knows for sure why this happens, but scientists think it has something to do with genes. Genes are like instructions for how the body should look and work that are passed on by parents to their kids. But just getting the genes for diabetes isn't usually enough. In most cases, something else has to happen — like getting a virus infection — for a person to get type 1 diabetes.

Type 1 diabetes isn't contagious, so you can't catch it from another person or pass it along to your friends. And stuff like eating too much sugar doesn't cause type 1 diabetes.
Can Type 2 Diabetes Be Prevented?

Type 2 diabetes is different. Sometimes, type 2 diabetes can be prevented.

In type 2 diabetes, the pancreas can still make insulin, but the body doesn't respond to it in the right way. This problem is usually related to being overweight. In the past, mainly overweight adults developed type 2 diabetes. Today, more kids and teens have type 2 diabetes, probably because more kids and teens are overweight. Getting to a healthy weight is one way to help prevent type 2 diabetes. Making healthy food choices and getting enough exercise are other good steps to take. If a person makes better food choices and becomes more physically active, it can help prevent diabetes from becoming a problem.

Some people are more likely to get type 2 diabetes than others based on things that can't be changed. For example, people with a Native American, African, Hispanic/Latino, or Asian/Pacific Islander racial/ethnic background are at higher risk for getting type 2 diabetes. And people who have family members with type 2 diabetes are also more likely to develop it.

How Can I Protect Myself From Getting Type 2 Diabetes?

If you want to help keep yourself from getting type 2 diabetes — or just be healthier in lots of other ways — take these steps:

- **Eat good-for-you foods.** Try to eat foods that are low in fat and high in other nutrients — like whole-grain cereals and breads, fruits, vegetables, dairy products, and lean proteins. These super foods provide you with the nutrition you need to grow, but are also great for helping you get to or stay at a healthy weight, which can help prevent type 2 diabetes.

- **Limit fast food and sugary sodas.** Eating lots of calorie-laden fast food and sugar-filled beverages — like sodas, juices, and iced teas — can lead to a lot of weight gain.

- **Get up and go.** Staying active and decreasing the amount of time spent in sedentary activities (like watching TV, being online, or playing video or computer games) can also help to prevent type 2 diabetes. You don't need to join a gym or commit to three sports every school year — being active can be as simple as walking the dog or mowing the lawn. Try to do something that gets you moving every day.

- **If you have questions about your weight, ask.** If you think you may be overweight or you're just wondering what being healthy is all about, a doctor or a registered dietitian can help. These health care pros can help you find out what your weight goals should be and how to get there — and stay there.
84.1 million American adults — more than 1 out of 3 — have prediabetes.

9 out of 10 people with prediabetes don't know they have it.

Prediabetes is when your blood sugar level is higher than normal but not high enough yet to be diagnosed as type 2 diabetes.

Prediabetes increases your risk of:

- Type 2 Diabetes
- Heart Disease
- Stroke

If you have prediabetes, losing weight by eating healthy and being more active can cut your risk of getting type 2 diabetes in half.
Ignore prediabetes and type 2 diabetes risk goes up — and so does risk for serious health complications:

**BLINDNESS**

**KIDNEY FAILURE**

**HEART DISEASE**

**STROKE**

**LOSS OF TOES, FEET, OR LEGS**

---

**YOU CAN PREVENT TYPE 2 DIABETES**

**FIND OUT IF YOU HAVE PREDIABETES —**
See your doctor to get your blood sugar tested

**JOIN A CDC-RECOGNIZED diabetes prevention program**

- eat healthy
- be more active
- lose weight

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**LEARN MORE FROM CDC AND TAKE THE PREDIABETES RISK QUIZ AT**
www.cdc.gov/diabetes/basics/prediabetes.html

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**REFERENCES**


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CDC’s Division of Diabetes Translation works toward a world free of the devastation of diabetes.
30.3 million people have diabetes
That’s about 1 out of every 10 people don’t know they have diabetes

30.3 MILLION

1 OUT OF 4

84.1 million people — more than 1 out of 3 adults — have prediabetes

84.1 MILLION

9 OUT OF 10 don’t know they have prediabetes

If you have prediabetes, losing weight by:
EATING HEALTHY & BEING MORE ACTIVE can cut your risk of getting type 2 diabetes in HALF

$245 BILLION
Total medical costs and lost work and wages for people with diagnosed diabetes

RISK OF DEATH FOR ADULTS WITH DIABETES IS 50% HIGHER THAN FOR ADULTS WITHOUT DIABETES

Medical costs for people with diabetes are more than twice as high

2X

People who have diabetes are at higher risk of serious health complications:
BLINDNESS KIDNEY FAILURE HEART DISEASE STROKE LOSS OF TOES, FEET, OR LEGS
### Types of Diabetes

#### Type 1

**Body Doesn’t Make Enough Insulin**
- Can develop at any age
- No known way to prevent it

**Nearly 18,000 youth diagnosed each year in 2011 and 2012**

In adults, type 1 diabetes accounts for approximately 5% of all diagnosed cases of diabetes.

#### Type 2

**Body Can’t Use Insulin Properly**
- Can develop at any age
- Most cases can be prevented

**In adults, type 2 diabetes accounts for approximately 95% of all diagnosed cases of diabetes**

More than 5,000 youth diagnosed each year in 2011 and 2012.

### Risk Factors for Type 2 Diabetes:

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>People 18 years and older diagnosed in 2015</th>
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<tbody>
<tr>
<td>Having a family history</td>
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<tr>
<td>Being physically inactive</td>
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<td>Being 45 and older</td>
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<td>Being overweight</td>
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1.5 million

### What Can You Do?

You can **prevent** or **delay** type 2 diabetes

- Lose weight if needed
- Eat healthy
- Be more active

Learn more at [www.cdc.gov/diabetes/prevention](http://www.cdc.gov/diabetes/prevention) or speak to your doctor.

You can **manage** diabetes

- Work with a health professional
- Eat healthy
- Stay active

Learn more at [www.cdc.gov/diabetes/ndep](http://www.cdc.gov/diabetes/ndep) or speak to your doctor.

### References


CDC’s Division of Diabetes Translation works toward a world free of the devastation of diabetes.
Use Whole Grains Instead of Refined Grains

Whole Grains include all parts of the grain. Refined grains remove the germ and bran and only use the starchy inside part of the grain. The germ and the bran are full of fiber, iron and vitamins.

**RICE**
Use brown rice instead of white rice

**HOT BREAKFAST**
Choose oatmeal instead of white grits or Cream of Wheat

**BREAD**
Choose 100% whole grain bread instead of white bread or sweet bread

**TORTILLAS**
Choose 100% whole grain corn or whole wheat tortillas instead of flour

**SET YOUR GOAL!**
Make sure at least 50% of the grains you eat are Whole Grain. Not sure if it's Whole grain? Check the Dietary fiber on the nutrition label. Good sources of grains have at least 4 grams of fiber per serving.

**TRY A NEW WHOLE GRAIN**
Homemade Popcorn
Quinoa
Bulger (cracked wheat)
Wheat Berries
Amaranth
Farro
Freekeh
Teff
Black Rice

**KNOW THE LINGO**
- Multigrain - a food that contains more than one type of grain. May not be whole grain.
- Refined grains - contain only the kernel's innermost part.
- Fortified products - contain added nutrients that weren’t in the original product.
- Enriched products - have had some of the original nutrients lost during processing added back in. This is not as healthy as eating the original food.

For more info, visit the Florida Literacy Coalition at floridaliteracy.org
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