

## Glucose

Glucose is an important type of sugar that acts as a source of energy in the body. Every cell uses this energy to fuel internal reactions that are constantly taking place. After a meal, food that contains carbohydrates is broken down into glucose, which gets absorbed from the intestines into the bloodstream. From the bloodstream, it can be delivered to all the cells in the body with the help of insulin.

## Insulin

Insulin is a hormone that opens glucose channels in cells. It allows glucose to go from the bloodstream and into cells so that they can fuel their internal reactions. Without insulin, glucose cannot enter cells and stays in the blood. This deprives cells of the energy they require.

## In Case of Emergency

If a person living with diabetes ever loses consciousness, it is considered an emergency.

- **Call 9-1-1.**
- Call the student's emergency contact(s).
- Do not force-feed.

Remember, if a person with diabetes says they are feeling low or high, this is not an emergency. They need to be able to treat this by resting and eating something or delivering insulin, but generally are able to manage it by themselves.

## Diabetic Thoughts

"Having type 1 diabetes does not mean we are limited, and we do not want to be treated any differently. The only difference between a person living with type 1 diabetes and a person without it is that the person's body can no longer produce their own insulin. We can do everything a non-diabetic can as long as we openly communicate and work together.

Every person's body reacts and adapts differently to diabetes. If something goes wrong, we know what to do to treat ourselves. If we say we need a fifteen minute break, then there is a reason and we would like to be trusted in our decisions.

We request respect and support in our situation so that we can live our lives to their full potential, having the same opportunities as everyone else. We understand respect is a two way street and would like to thank you for working with us."

# A Teacher's Guide For Students with Type 1 Diabetes

## Created by Young and T1

*A network of young adults living with type 1 diabetes in the lower mainland who are passionate about finding a cure*

YOUNG AND

This guide will outline the ideal relationship between a student living with type 1 diabetes and their teacher. We are not medical professionals and do not give medical advice because every individual is unique, however we will do our best to teach you the basics of this disease, its management, and address various myths surrounding type 1 diabetes.

For more information, visit  
[youngandt1.com](http://youngandt1.com)

Or find us on Facebook, Twitter, and Instagram

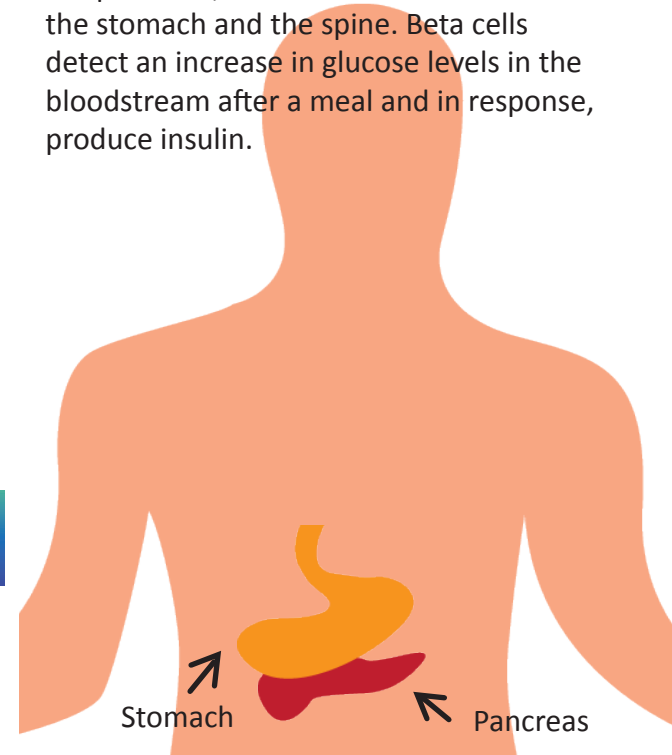
## Type 1 Diabetes: The Basics

### Autoimmune Diseases

An autoimmune disease results when one's immune system goes haywire. Instead of protecting one's body, the immune system actually turns against the body and kills important cells. There are many different kinds of autoimmune diseases, each classified by the type of cells that get destroyed.

### Beta Cells

In type 1 diabetes, the important cells that the immune system destroys are called beta cells. They are located in an organ known as the pancreas, which is sandwiched between the stomach and the spine. Beta cells detect an increase in glucose levels in the bloodstream after a meal and in response, produce insulin.



Insulin  
Pen



## Type 1 vs. Type 2 Diabetes

Type 1 diabetes and type 2 diabetes are very different diseases. In type 2 diabetes, the beta cells of the pancreas have not been destroyed by the immune system. Instead, the beta cells are unable to produce enough insulin or the insulin they produce does not work properly. Lifestyle choices and genetics can play a role in the development of type 2 diabetes.

### Your Student's Needs

In order to be healthy and succeed in class a student living with type 1 diabetes needs to be able to:

- Test their blood with their glucose meter
- Sit out from physical activities if “low”
- Leave class to treat their blood glucose
- Use their insulin pump during class
- Give an injection of insulin during class
- Drink juice or eat food during class
- Reschedule a test or assignment due date in extreme cases

### Blood Glucose Levels aka “Blood Sugar”

Maintaining a normal blood glucose level is critical for a person living with type 1 diabetes to remain healthy. People with type 1 diabetes will routinely check their blood glucose levels with a glucose meter throughout the day.

#### Hyperglycemia: High blood sugar

- too much glucose.
  - not enough insulin.
- Glucose cannot enter the cells and builds up in the bloodstream.
  - A “high” must be treated with a specific dose of insulin in order to lower glucose levels back down to normal.
  - Your student may ask to leave the classroom to do this or pull out their insulin pump, pen or syringe in the middle of class to deliver the insulin.

#### Hypoglycemia: Low blood sugar

- not enough glucose.
  - too much insulin.
- There is not enough glucose in the bloodstream to provide energy for cells.
  - A “low” must be treated immediately by eating simple carbohydrates, such as juice, or glucose tablets, which can be broken down into glucose quickly.



Glucose Meter

\* During physical activity, our bodies use more energy. Therefore cells use more glucose from the bloodstream and deplete glucose levels just as too much insulin would. To make sure they stay within the normal blood glucose range, students may eat snacks, decrease their insulin intake, and check their glucose levels more often.

## FAQ

**Q:** Can a person living with type 1 diabetes eat sugar?

**A:** Of course! As long as blood glucose levels are maintained there are no dietary restrictions.

**Q:** Did you get diabetes from eating too much sugar?

**A:** No, this is a common misconception. Nobody knows exactly what causes type 1 diabetes. However, recent research indicates that type 1 diabetes may be linked to genetics and environmental factors.

**Q:** Is that a cell phone?

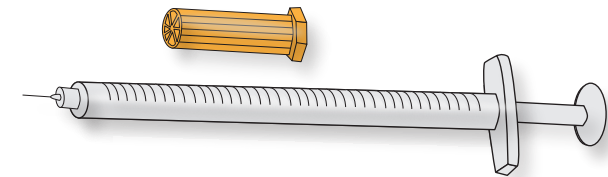
**A:** No! Many glucose meters and insulin pumps resemble cell phones and other electronic devices. Make sure you take the time to study what these necessary medical devices look like if you have trouble distinguishing them from other electronic devices. We can assure you that they have no other functions.

**Q:** If you are testing your glucose levels or delivering insulin, do you need help?

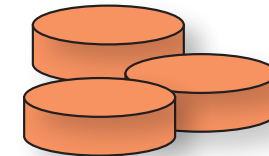
**A:** Most teenagers are self-reliant with their diabetes management and most younger children have set up some form of adult supervision to monitor their testing and insulin intake at school. If there is ever a problem that can be addressed by a teacher, make sure your student knows that they are always welcome to ask for your assistance.

## Summary

People living with type 1 diabetes no longer have functioning beta cells. Their bodies are unable to produce their own insulin, which is necessary to use glucose as a source of energy. Instead, they rely on external insulin injections—with a syringe, insulin pen, or insulin pump—to mimic the natural pancreas on a daily basis.



Syringe



Glucose Tablets



Insulin Pump