



Let's Learn about Diabetes and Prediabetes

Adapted for Upstate Medical University by:
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How Your Body Works

- Your body changes much of the food you eat into glucose (sugar)
 - Your blood carries sugar to the cells
 - The cells use the sugar for energy or store it for later
 - This lets you walk, work, play, think, talk and run
- The cells cannot use glucose without insulin
 - Insulin is a hormone
 - Insulin is made in the pancreas
 - Your blood carries the insulin to the cells to let the glucose enter the cells. Then the cells can use it for energy



How Diabetes Changes the Way Your Body Works

- Diabetes is a disease in which your body is unable to properly use and store glucose
- Glucose backs up in the bloodstream causing high blood sugar
- Two main types of diabetes: type 1 and type 2



True or False

- Diabetes is caused by eating too much sugar?




Myth or Fact?



Myth
Diabetes is caused by eating too much sugar.

Fact
Type 1 diabetes is caused by **genetics** and **unknown factors** that trigger its onset.
Type 2 diabetes is caused by **genetics** and **lifestyle factors**.



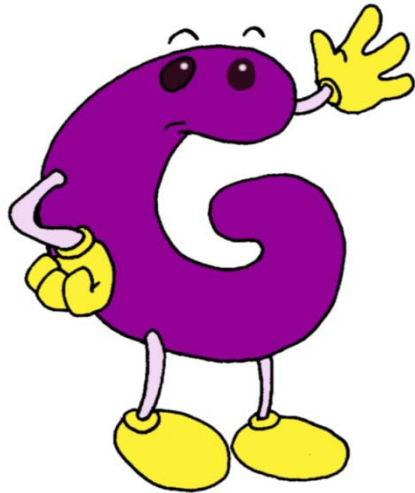
Type 1 and Type 2 Diabetes

- Type 1 diabetes:
 - Used to be called juvenile-onset or insulin-dependent
 - The body completely stops making insulin
 - Usually develops in children or young adults but can be any age
- Type 2 diabetes:
 - Used to be called adult-onset or non insulin-dependent
 - The body produces insulin, but not enough to properly convert food into energy
 - Usually occurs in people over age 40, overweight, and family history

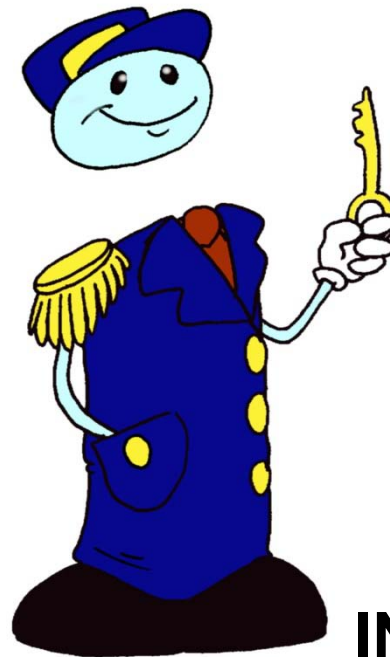


How things work:

- glucose is a type of sugar
- insulin is needed to let the body use glucose
- insulin is made in the PANCREAS



GLUCOSE



INSULIN

How things work:

For someone **without diabetes**

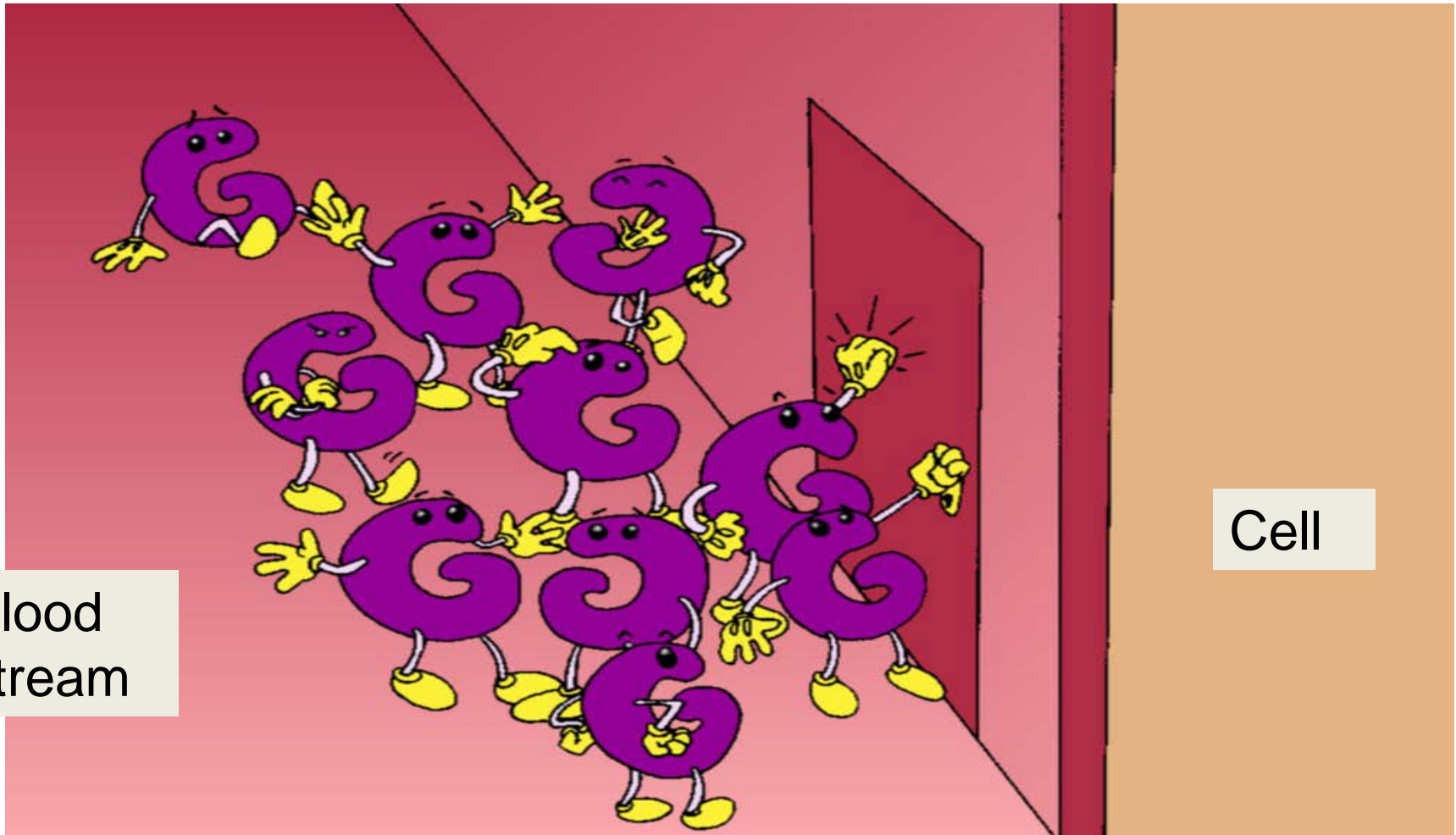
Blood stream



Cell

How things work:

For someone **with Type 1 diabetes**



Blood
stream

Cell

How things work:

For someone **with Type 2 diabetes**



True or False

- It is possible to have “a touch of sugar”



Myth or Fact?

MYTH

It's possible to have
"just a touch" or
"a little" diabetes.



FACT

There is no such thing.
Everyone who has
diabetes runs the risk of
serious complications.



High Blood Sugar

- When sugar cannot get into the cells, it stays in your blood. Lots of sugar in the blood is called high blood sugar
- You may:
 - feel tired
 - be hungry a lot and thirsty
 - go to bathroom often.
 - lose weight
 - have blurred vision.
 - heal slowly
 - get infections



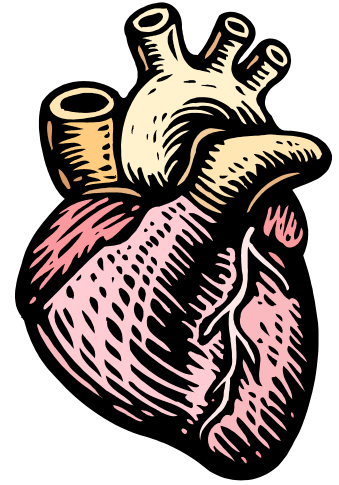
High Blood Sugar

- Short term risks:
 - Increases chance of getting sick
 - People with type 1 diabetes are at risk of DKA
 - People with type 2 diabetes also can get very sick when blood sugars stay very high

DKA- Diabetic Ketoacidosis



High Blood Sugar



- Long term risks:
 - Increase chances for health problems
 - If high for years, can damage eyes, kidneys, nerves, heart and blood vessels, and feet
 - You will learn more about high blood sugars as you continue these sessions




True or False

- As we get older the risk for type 2 diabetes increases



Risk factors for type 2 diabetes include:

- 
- Having prediabetes, which may be called impaired glucose tolerance (IGT) and/or impaired fasting glucose (IFG)
 - Being 45 or older
 - Having a family history of diabetes
 - Being overweight
 - Not exercising regularly
 - Having high blood pressure
 - Having low HDL, also known as "good" cholesterol and/or high levels of triglycerides
 - Certain racial and ethnic groups (e.g., Non-Hispanic Blacks, Hispanic/Latino Americans, Asian Americans and Pacific Islanders, and American Indians and Alaska Natives)
 - Women who had gestational diabetes, or who have had a baby weighing 9 pounds or more at birth

If you feel like you may have diabetes, talk with your medical provider about getting tested.

ADA, 2013



Joslin Diabetes Center



MYTH: Diabetes is not a serious disease.



FACT: Diabetes is a growing epidemic with a devastating physical, emotional and financial toll on our country.

It kills more Americans each year
than AIDS and breast cancer

COMBINED.

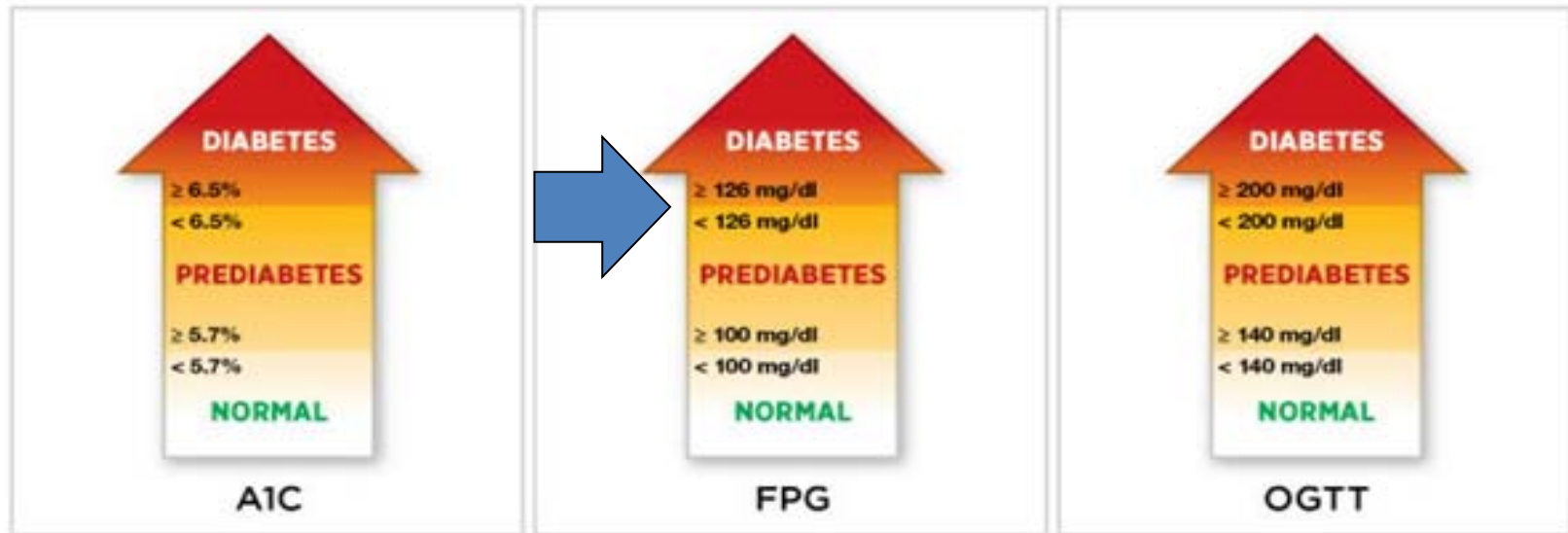


True or False

- Diabetes is diagnosed if the fasting blood glucose is above 140 mg/dl when tested at least twice.



How to Know if You Have Diabetes

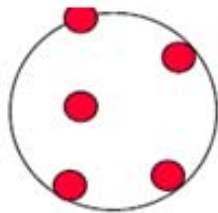


A1C- Hemoglobin A1C

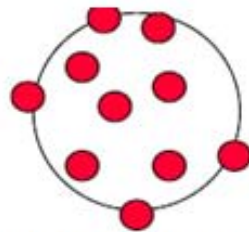
FPG- Fasting Plasma Glucose

OGTT- Oral Glucose Tolerance Test

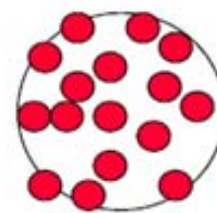
Understanding the Relationship Between Prediabetes and Diabetes



Non diabetes range: 4 - 6%



Goal A1C: less than 7%



High A1C: 7% or higher

You will learn more about A1C in the next session

Caring for Your Diabetes

- Goal: Keep blood glucose in a range that prevents or delays diabetes health problems
- For many, this is between 80 and 130 before meals. Two-three hours after a meal, the goal is less than 180 mg/dl.



Prediabetes



What It Means and How to Manage It



Prediabetes vs. Diabetes

Prediabetes puts you at risk to develop diabetes. Blood glucose levels are increased, but not high enough for the diagnosis of diabetes.

Blood
stream



Cell



People at high risk of developing diabetes can prevent or delay the onset of the disease by losing ___ percent of their weight, if they are overweight.

5-7%

Myth or Fact?

MYTH

You have to lose a lot of weight for your diabetes to improve.

FACT

Losing just 7% of your body weight can offer significant health benefits - about 15 pounds if you weigh 200.



American Diabetes Association



Joslin Diabetes Center

Harvard Medical School

Why change now?



Lower the risk of diabetes by **58%**
with lifestyle changes



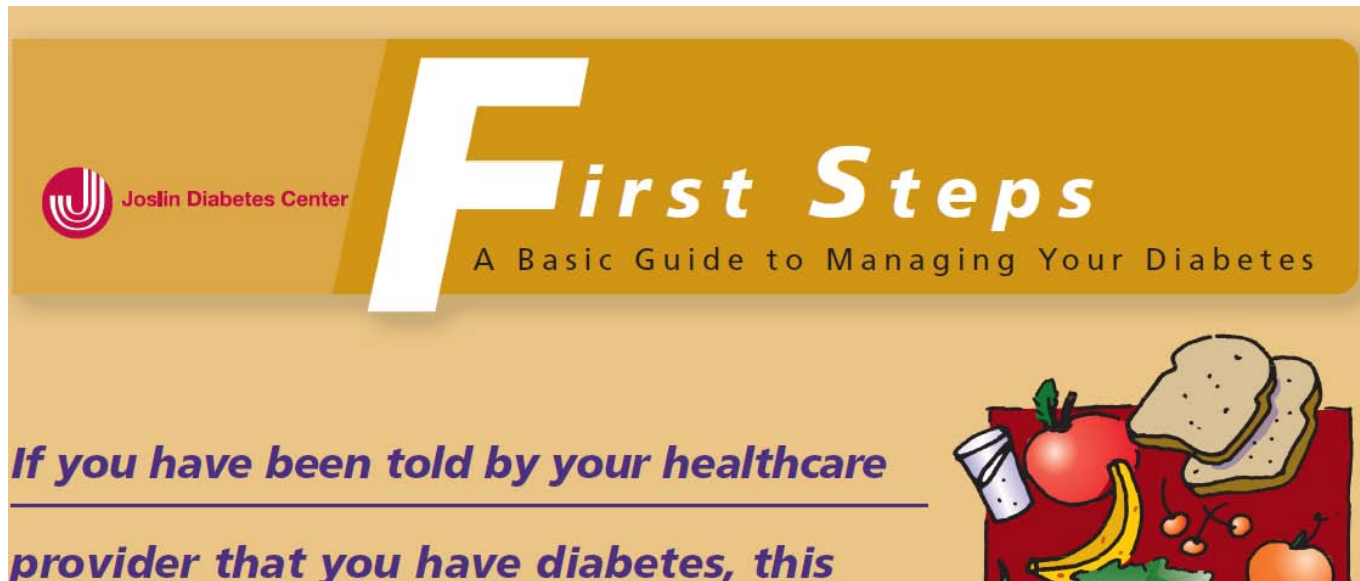
Go to the Patient Education link on the internal Upstate website




Select the Diabetes/Joslin Adult category



Check out all the great education materials!




 Joslin Diabetes Center

First Steps

A Basic Guide to Managing Your Diabetes

If you have been told by your healthcare provider that you have diabetes, this



Online Diabetes Resources to Learn More:

1. **National Diabetes Education Program** 1-888-693-NDEP (1-888-693-6337) www.YourDiabetesInfo.org
2. **Diabetes HealthSense**: An online library of resources for living well. www.YourDiabetesInfo.org/HealthSense
3. **Academy of Nutrition and Dietetics** 1-800-877-1600 www.eatright.org
4. **American Association of Diabetes Educators** 1-800-338-3633 www.diabeteseducator.org
5. **American Diabetes Association** 1-800-DIABETES (1-800-342-2383) www.diabetes.org
6. **American Heart Association** 1-800-AHA-USA1 (1-800-242-8721) www.americanheart.org
7. **Centers for Disease Control and Prevention** 1-800-CDC-INFO (1-800-232-4636) www.cdc.gov/diabetes
8. **Centers for Medicare & Medicaid Services** 1-800-MEDICARE (1-800-633-4227) www.medicare.gov
9. **JDRF** 1-800-533-CURE (1-800-533-2873) www.jdrf.org



Week #1: Diabetes Education at Work

Tips to Remember About Diabetes and Prediabetes

- **Don't be overwhelmed:** take small steps by making healthy food choices & adding more activity to your day. You can do this!
- **Know the risks:** visit the ADA website to take the *Diabetes Risk Test*. If you are at risk, talk with your medical provider.
- **Know your numbers:** talk to your doctor about an A1c and fasting blood glucose test.
- **Myth or fact:** avoid listening to old theories and beliefs. Learn the facts about diabetes.
- **Knowledge is power:** seek opportunities to learn how to delay the progression and ways to effectively manage diabetes or prediabetes.

Questions? Contact Kristi Shaver, Inpatient Joslin Diabetes Nurse Educator
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