

Background **Basics**



What is Diabetes?

Diabetes is a chronic health condition in which the body cannot produce or use insulin effectively. Insulin is made in the pancreas, and it is released after a meal to deliver glucose (energy) to the cells.

When the body does not have insulin (or cannot use it effectively), glucose begins to build up in the bloodstream. Over time, high blood glucose levels can lead to complications, including retinopathy, peripheral neuropathy, albuminuria and nephrothapy.

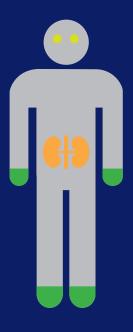
Diabetes Mellitus. The Merck Manual Home Edition. 2013. http://www.merckmanuals.com/home/hormonal_and_metabolic_disorders/ diabetes_mellitus_dm/diabetes_mellitus.html. Accessed February 7, 2015.

Normal use of glucose Healthy balance of glucose and **Glucose enters** Insulin leaves In response to insulin, cell takes bloodstream bloodstream from bloodstream up glucose, which is used as a fuel digestive system and binds to cell from pancreas and liver in bloodstream Cell **Cell nucleus**

did you know?

1 in 4 people with diabetes DO NOT KNOW they have it.

Complications caused by diabetes:



- Retinopathy
- Peripheral Neuropathy
- Albuminuria and Nephropathy

"Diabetes Mellitus." *The Merck Manual Home Edition.* Merck Sharp & Dohme Corp., July 2013. Web. 07 Feb. 2015.



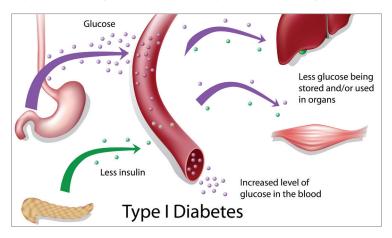
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Types of Diabetes Mellitus (DM):

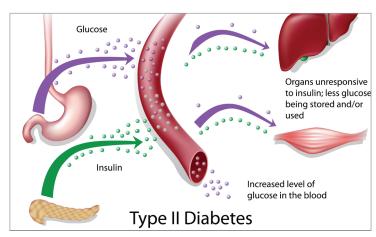
■ Type 1 - the pancreas does not produce insulin and is usually diagnosed in children and young adults.

Approximately 5% of diabetes patients have Type 1 DM.



■ Type 2 - the pancreas does not make enough insulin to support the body and/or the body does not use insulin effectively.

Approximately 95% of diabetes patients have Type 2 DM.



Type 1 Diabetes. *American Diabetes Association*. http://www.diabetes.org/diabetes-basics/type-1/. Accessed February 7, 2015.

Facts About Type 2. American Diabetes Association. http://www.diabetes.org/diabetes-basics/type-2/facts-about-type-2.html. Accessed February 4, 2015.

did you know?

A third type of diabetes, Gestational Diabetes, develops in the mother during pregnancy

Standards of Medical Care in Diabetes-2015. Standards of Medical Care in Diabetes-2015. 2015. Accessed January 5, 2015.

Pre-Diabetes

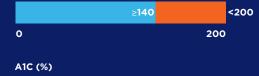
Pre-diabetes (also known as impaired glucose tolerance or impaired fasting glucose), is a term used to describe patients who have higher than average blood glucose but don't yet qualify for a diabetes diagnosis.

The criteria for pre-diabetes are shown in the chart below:

FASTING BLOOD GLUCOSE (mg/dL)



ORAL GLUCOSE TOLERANCE TEST (mg/dL)



Diagnosing Diabetes and Learning About Prediabetes. American Diabetes Association. http://www.diabetes.org/diabetes-basics/diagnosis

Accessed February 9, 2015.



86 million American adults
-more than 1 out of 3have prediabetes.

Center for Disease Control and Prevention. *National Diabetes Statistics Report*, 2014. National Diabetes Statistics Report, 2014. http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf. Accessed February 9, 2015.

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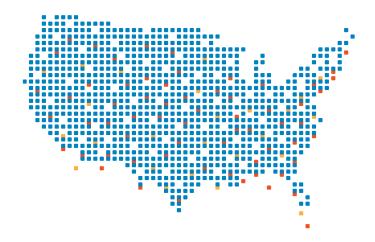
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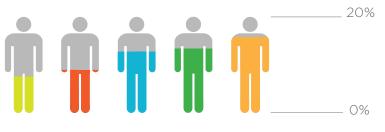
National Diabetes Statistics

The CDC estimates 9.3% of the U.S. population has diabetes

- 21 million diagnosed
- 8.1 million undiagnosed



Distribution of diabetes among the U.S. population by race/ ethnicity



- Non-Hispanic white 7.6%
- Asian 9%
- Hispanic 12.8%
- Non-Hispanic Black 13.2%
- American Indian/ Alaska natives 15.9%

did you know?

% of diagnosed >20 y/o

Center for Disease Control and Prevention. *National Diabetes Statistics Report, 2014.*National Diabetes Statistics Report, 2014.

http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf. Accessed February 9, 2015.

It is estimated that 1 of 3 U.S. adults will have diabetes by 2050, with the current trend.

Diabetes. Chronic Disease Prevention and Health Promotion. 2011. http://www.cdc.gov/chronicdisease/resources/publications/aag/ddt.htm. Accessed February 7, 2015.

Worldwide Diabetes Statistics

4 of 5 people with diabetes live in low to middle-income countries



- Diabetes caused
 4.9 million
 deaths in 2014
- 387 million people living with diabetes worldwide
- The International Diabetes
 Foundation estimates
 592 million
 people will be living with
 diabetes in 2035
- >79,000 children develop DM Type 1 every year

IDF DIABETES ATLAS 2014 Sixth Edition.; 1818. http://www.idf.org/sites/default/files/atlas-poster-2014_en.pdf. Accessed February 9, 2015.

10 facts about diabetes. World Health Organization. http://www.who.int/features/factfiles/diabetes /facts/en/index7.html. Accessed February 9, 2015.