

TYPE 2 DIABETES

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ABSTRACT

Type 2 diabetes is a metabolic disorder that causes your blood sugar levels to increase. The severity of diabetes can vary quite a bit: Some people get the disease well under control, and in others, it leads to other health problems over time. There are two main types of diabetes: Type 1 diabetes usually develops in childhood or the teenage years. This disease is a result of damage to the pancreas that leaves it producing either very little insulin or none at all. Things are different in type 2 diabetes, where insulin is made by the pancreas but the body's cells gradually lose the ability to absorb and use the insulin. In the past, type 2 diabetes was often referred to as "adult-onset" diabetes because it is commonly diagnosed later in life. Type 2 diabetes is much more common than type 1 diabetes. About 90% of people who have diabetes have type 2 diabetes.

Key Words: diabetes, insulin, pancreas.

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INTRODUCTION

Diabetes mellitus (DM) is one of the most common metabolic disorders in the world and the prevalence of diabetes in adults. The 2010 world prevalence of diabetes among adults aged 20 – 79 is 6.4% (approximately 285 million adults) and is projected to increase to 7.7% (approximately 439 million adults) by 2030.

[Shaw JE et al 2010]

The International Diabetes Federation (IDF) has produced estimates of diabetes prevalence since the year 2000 and has demonstrated a large and increasing burden, with significant regional variability. [Guarigauta L et al 2014, Whiting DR et al 2011, Atlas D 2006]

In the United States of America, the prevalence of DM increased by 75% from 1988 – 1994 to 2005 – 2010. [Cheng YJ et al 2013] Many other countries have reported an increase in the prevalence of DM including 12.4% in the United Kingdom, [Holden SE et al 2013] and 5.5% in France. [Eschwege E et al 2015] In the Middle East and North African region (MENA), the current prevalence was reported at 9.2% which translates to 34 million people. [Majeed A et al 2014] In the Gulf area, the estimated prevalence was projected at 23.1% in the United Arab Emirates, 7.5% in Yemen, and 27.1% in Saudi Arabia by the year 2035.

The rapid urbanization has driven rapid transitions in lifestyle thereby increasing the risk factors for obesity, hypertension, and type 2 diabetes (T2DM). [Hu FB 2011]

The burden of the increasing prevalence of T2DM significantly affects the allocation of resources, health-promoting policies, and the prevention of the disease. [Schofield D et al 2014] In Saudi Arabia alone, patients with diabetes have medical healthcare expenditures that are ten times higher (\$3,686 vs. \$380) than patients without diabetes. [Alhowaish AK 2013]

Risk factors with Type 2 Diabetes

You can develop type 2 diabetes at any age, even during childhood. You are more likely to develop type 2 diabetes if you

- are overweight or have obesity.
- are age 35 or older. Children and teens can also develop type 2 diabetes, but the risk increases as a person gets older.
- have a family history of diabetes.
- are African American, American Indian, Asian American, Hispanic/Latino, or Pacific Islander.
- are not physically active, because of physical limitations, a sedentary lifestyle, or a job that requires sitting for long periods of time.
- have prediabetes.
- have a history of gestational diabetes, a type of diabetes that develops during pregnancy, or gave birth to a baby weighing 9 pounds or more.

Children and teens are also at higher risk of developing type 2 diabetes if, in addition to the previous risk factors, they were born with a low birth weight or if their parent had gestational diabetes while pregnant with the child. You are encouraged to talk with a doctor about any of the health conditions listed above that may require medical treatment. Managing health problems may help reduce your chances of developing type 2 diabetes. Also, ask your doctor about any medicines you or your child take that might increase your risk. You can also take the Diabetes Risk Test to learn more about your risk for type 2 diabetes. [Knowler WC et al 2002]

Symptoms

Signs and symptoms of type 2 diabetes often develop slowly. In fact, you can be living with type 2 diabetes for years and not know it. When signs and symptoms are present, they may include:

- Increased thirst
- Frequent urination
- Increased hunger
- Unintended weight loss
- Fatigue
- Blurred vision
- Slow-healing sores
- Frequent infections
- Numbness or tingling in the hands or feet
- Areas of darkened skin, usually in the armpits and neck

TREATMENT

Treatments for diabetes depend on your type of diabetes, how well managed your blood glucose level is and your other existing health conditions. (<https://my.clevelandclinic.org/health/diseases/7104-diabetes-mellitus-an-overview>)

- **Type 1 diabetes:** If you have this type, you must take insulin every day. Your pancreas no longer makes insulin.
- **Type 2 diabetes:** If you have this type, your treatments can include medications (both for diabetes and for conditions that are risk factors for diabetes), insulin and lifestyle changes such as losing weight, making healthy food choices and being more physically active.
- **Prediabetes:** If you have prediabetes, the goal is to keep you from progressing to diabetes. Treatments are focused on treatable risk factors, such as losing weight by eating a healthy diet (like the Mediterranean diet) and exercising (at least five days a week for 30 minutes). Many of the strategies used to prevent diabetes are the same as those recommended to treat diabetes (see prevention section of this article).
- **Gestational diabetes:** If you have this type and your glucose level is not too high, your initial treatment might be modifying your diet and getting regular exercise. If the target goal is still not met or your glucose level is very high, your healthcare team may start medication or insulin.
 - Oral medications and insulin work in one of these ways to treat your diabetes:
 - Stimulates your pancreas to make and release more insulin.
 - Slows down the release of glucose from your liver (extra glucose is stored in your liver).
 - Blocks the breakdown of carbohydrates in your stomach or intestines so that your tissues are more sensitive to (better react to) insulin.
 - Helps rid your body of glucose through increased urination.

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