

# Press Room

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Type 2 Diabetes

# **Profile of Type 2 Diabetes and the Patient**

Type 2 diabetes is a progressive disease that develops when the body does not produce enough insulin and/or does not efficiently use the insulin it produces. People at risk for type 2 diabetes include those over the age of 45; those who are overweight; those from Hispanic, African–American, Native–American, or Asian–American communities; and those with a history of diabetes in their families. People with type 2 diabetes often are characterized as:

- Being insulin resistant (9 out of 10 people with diabetes have insulin resistance).
- Being obese (approximately 50 percent of men and 70 percent of women who have diabetes are obese).
- Having a lifestyle that does not involve significant physical activity.
- Having low HDL-C ("good") cholesterol levels and high triglyceride levels.
- Having an increased prevalence of high blood pressure.

# Prevalence

### Globally

- There are currently more than 194 million people with diabetes worldwide. If nothing is done to slow the epidemic, the number will likely exceed 333 million by 2025.
- Type 2 diabetes constitutes about 85% to 95% of all diabetes cases in developed countries and accounts for an even higher percentage in developing countries.
- Diabetes is the fourth main cause of death in most developed countries.
- The populations of most countries are aging. Diabetes is particularly common in aging populations and is increasing in proportion to the number of people living longer.

#### In Europe

- Approximately 33 million people have type 2 diabetes in Europe. The prevalence in specific countries includes:
  - France: approximately 1.7 million
  - Germany: approximately 2.6 million
  - Italy:approximately 4.2 million
  - United Kingdom: approximately 1.7 million

## In the United States

- More than 18 million people have type 2 diabetes in the U.S.
- Diabetes was the sixth leading cause of death listed on U.S. death certificates in 2000. This is based on the 69,301 death certificates in which diabetes was listed as the underlying cause of death. Altogether, diabetes contributed to 213,062 deaths.

## Signs and Symptoms Include:

- increased thirst and a need to urinate often
- extreme hunger
- unusual weight loss
- increased fatigue
- irritability
- blurred vision

## **Associated Complications**

Insulin resistance is considered to be a core metabolic defect in type 2 diabetes. Insulin resistance occurs when the body can't use insulin efficiently, which can ultimately lead to raised blood glucose (sugar) levels and full–blown diabetes. Complications associated with diabetes include:

- Heart disease and stroke Heart disease accounts for approximately 50% of all deaths among people with diabetes in industrialized countries. In fact, individuals with diabetes are two to four times more likely to develop cardiovascular disease than people without diabetes. Additionally, people with type 2 diabetes have the same risk of heart attack as people without diabetes who have already had a heart attack, and strokes occur twice as often in people with diabetes and high blood pressure as in those with high blood pressure alone.
- Eye disease Diabetes is the leading cause of blindness and visual impairment in adults in developed countries. Research suggests that, after 15 years of diabetes, approximately 2% of people become blind, while about 10% develop severe visual handicap.
- Kidney disease Diabetes is the leading cause of end–stage renal disease (ESRD), accounting for approximately 43% of new cases.
- Nerve damage More than 60 percent of nontraumatic lower–limb amputations in the U.S. occur among people with diabetes. People with diabetes are 15 to 40 times more likely to require a lower–limb amputation compared to the general population.

## **The Economics**

- The World Health Organization (WHO) estimates that 2.5% to 15% of annual health budgets are spent on diabetes-related illnesses.
- In general, a person with diabetes incurs medical costs that are two to five times higher than those of a person without diabetes. This is due to more frequent medical visits, purchase of supplies and medication, and the higher likelihood of being admitted to a hospital.

## Treatment

• The goal of type 2 diabetes therapy is to control blood glucose, and according to the American Diabetes Association, good control means getting as close to normal (nondiabetic) blood glucose level as you safely can. Ideally this means levels between 90–130 milligrams per deciliter (mg/dL) before meals, and less than 180 mg/dL two hours after meals.

Prospective randomized trials, including the Diabetes Control and Complications Trial (DCCT) and the United Kingdom Prospective Diabetes Study (UKPDS) showed conclusively that improved glycemic control can reduce complications associated with the disease, including sustained decreased rates of retinopathy, nephropathy and neuropathy.

- A diabetes treatment plan is likely to require adjustment over time. Insulin resistance increases with age, and the cells in the pancreas that make insulin are likely to wear out as the pancreas tries to keep up with the body's extra insulin needs. After the first few years of treatment, the majority of patients with type 2 diabetes require more than one medicine to keep their blood glucose controlled.
- The options for managing type 2 diabetes vary for each individual over time and can include:
  - o a healthy diet
  - exercise and weight management
  - oral anti-diabetic agents
  - o taking insulin
  - combination therapies

## The Thiazolidinedione Class (TZD)

- Thiazolidinediones (TZDs) are one of several classes of oral medications for type 2 diabetes. TZDs work to reduce insulin resistance, a core metabolic dysfunction associated with type 2 diabetes. Insulin resistance is a condition in which the body cannot efficiently use insulin, a hormone that helps the body use glucose for energy.
- Thiazolidinediones are commonly referred to as insulin sensitizers because they help make body tissues more sensitive to insulin and keep your liver from overproducing glucose.

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