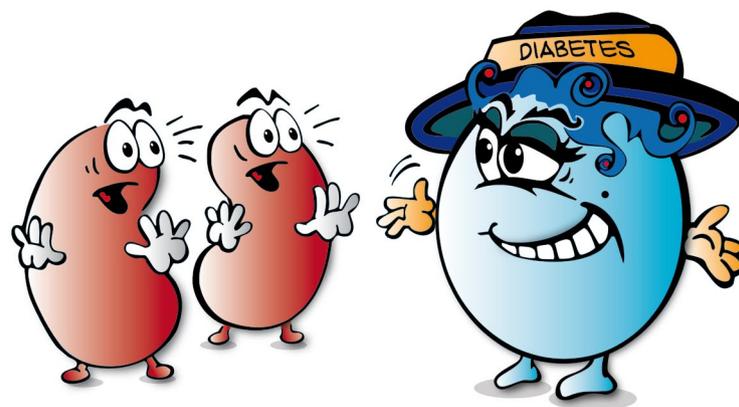




1. WHO (2009): Fact Sheet – Diabetes, Online under:  
<http://www.who.int/mediacentre/factsheets/fs312/en/>  
from 7/10/2009.

## Amazing Kidneys!

# Protect your kidneys – control diabetes!



# What is diabetes and why is it a threat to my kidneys?

## Where does our energy come from?

Our body gets energy from food. Chemical reactions in the body cells convert food into the energy needed to do everything from moving to thinking to growing.

## How is food turned into energy?

An important energy source is sugar that is usually broken down to a simple sugar, known as glucose. Glucose circulates in your blood where it waits to enter body cells to be used as fuel. In this process, insulin is essential for glucose to enter the cells.

## What is Insulin?

Insulin is a hormone that regulates the amount of sugar in your blood. Without insulin, our body cannot obtain the necessary energy from our food.

## What is Diabetes?

Diabetes is a disease in which your body does not produce enough insulin or cannot use normal amounts of insulin properly. As a result the amount of glucose in the blood is increasing and can lead to serious conditions.

## Are there different types of diabetes?

Yes, the most common ones are called type 1 and type 2.

## What is the difference?

In type 1, the pancreas does not make enough insulin and insulin injections are needed.

In type 2, the pancreas makes insulin but the body does not use it properly.

## Who gets type 1?

The disease can affect people of any age, but usually occurs in children or young adults.

## Who is at risk for type 2?

The diagnosis of type 2 diabetes usually occurs after the age of 40 years but could occur earlier, especially in populations with a high diabetes prevalence.

## Does diabetes affect also other parts of the body?

Too much glucose in the blood for a long time can cause severe problems. A common complication is damage to the small blood vessels in the body.

## How does this relate to kidneys?

Millions of tiny blood vessels act as filters inside a kidney. Their job is to remove waste products from the blood. When blood vessels in the kidneys are injured, kidneys cannot clean the blood properly. The body will retain more water and salt than it should, which can result in weight gain and ankle swelling. Also waste materials will not be filtered out of the blood any longer.

## Are kidneys important?

Kidneys are extremely important to your health and quality of life. Not only do they filter and excrete waste products from our bodies, they help regulate blood pressure, help keep your bones strong and stimulate the production of red blood cells, which carry oxygen around the body.

## Is it common that the kidneys are affected in diabetic patients?

Yes - diabetes is among the leading causes of kidney failure.<sup>1</sup>

## What happens when diabetes affect the kidneys?

The tiny filters in the kidney are damaged, and the kidneys can slowly fail. If permanent kidney failure develops, this would be fatal unless the affected person receives a kidney transplant or long term dialysis treatment.

## Will I feel ill?

In the early stages of kidney disease people usually do not feel unwell, so it may go undetected for many years unless the condition of the kidneys is checked with urine and blood tests.

## What can I do to prevent this?

Although there is no cure for diabetes, good control of diabetes makes a big difference, and helps to avoid kidney damage. Good diabetes control means keeping your blood glucose levels as close to normal as possible in order to prevent further damage. This can be achieved by a combination of controlled diet, physical exercise, and medications.

## How can I make sure I am healthy?

If you have diabetes regular kidney tests will help to identify problems early. The good news is that, kidney damage from diabetes can be slowed down if it is detected early.

