

# SMOKING AND DIABETES



**This fact sheet is for public health officials and others who are interested in learning about the impact of smoking on diabetes. People who want to lower their risk for diabetes, and people who already have diabetes, should not smoke.**

## WHAT YOU NEED TO KNOW ABOUT SMOKING AND DIABETES

The 2014 Surgeon General's Report has found that smoking is a cause of type 2 diabetes, which is also known as adult-onset diabetes. Smokers have a greater risk of developing type 2 diabetes than do nonsmokers. The risk of developing diabetes increases with the number of cigarettes smoked per day.

Diabetes is a disease that causes blood sugar levels in the body to be too high and puts the body at risk for many serious health conditions. More than 25 million adults suffer from diabetes in the United States, where the disease is the seventh leading cause of death. It is also a growing health crisis around the world.

## HOW SMOKING CAUSES TYPE 2 DIABETES

Smoking increases inflammation in the body. Inflammation occurs when chemicals in cigarette smoke injure cells, causing swelling and interfering with proper cell function. Smoking also causes oxidative stress, a condition that occurs as chemicals from cigarette smoke combine with oxygen in the body. This causes damage to cells. Evidence strongly suggests that both inflammation and oxidative stress may be related to an increased risk of diabetes.

The evidence also shows that smoking is associated with a higher risk of abdominal obesity, or belly fat. Abdominal obesity is a known risk factor for diabetes because it encourages the production of cortisol, a hormone that increases blood sugar. Smokers tend to have higher concentrations of cortisol than nonsmokers.

## WHAT SMOKING MEANS TO PEOPLE WITH DIABETES

Studies have confirmed that when people with type 2 diabetes are exposed to high levels of nicotine, insulin (the hormone that lowers blood sugar levels) is less effective. People with diabetes who smoke need larger doses of insulin to control their blood sugar.

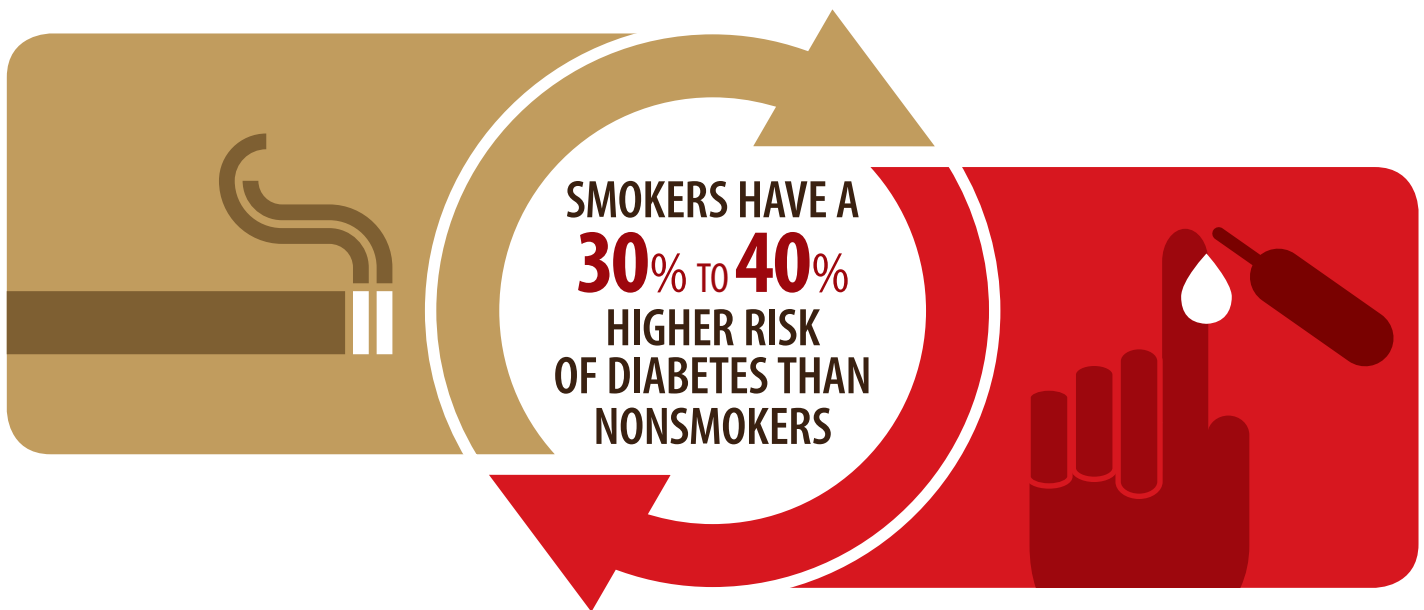
Smokers who have diabetes are more likely to have serious health problems, including:

- heart and kidney disease;
- poor blood flow in the legs and feet that can lead to foot infections, ulcers, and possible amputation of toes or feet;
- retinopathy (an eye disease that can cause blindness); and
- peripheral neuropathy (damaged nerves to the arms and legs that cause numbness, pain, weakness, and poor coordination).



Even though we don't know exactly which smokers will develop type 2 diabetes, we do know that all diabetic smokers should quit smoking or using any type of tobacco product immediately. The health benefits of quitting begin right away. People with diabetes who quit have better control of their blood sugar. Studies have shown that insulin can start to become more effective at lowering blood sugar levels eight weeks after a smoker quits.

People who want to quit smoking can get help from their doctors. Free help is also available at 1-800-QUIT-NOW and at [smokefree.gov](http://smokefree.gov) and [cdc.gov/tips](http://cdc.gov/tips).



Most people find a combination of resources works best. Many smokers do not quit on their first attempt. Many need several tries to successfully quit. But the benefits are well worth it. Keep trying.

### RESOURCES FOR QUITTING

- Call 1-800-QUIT-NOW.
- [www.smokefree.gov](http://www.smokefree.gov)
- [www.cdc.gov/tips](http://www.cdc.gov/tips)



Centers for Disease  
Control and Prevention  
Office on Smoking  
and Health