

NEW RESEARCH

Weight Affects Risk of Type 2 Diabetes More Than Activity Level

When it comes to reducing the risk of type 2 diabetes, which is more important: fitness or fatness? According to a new study, weight plays a far greater role than exercise.

The study involved 37,878 participants in the Women's Health Study who were free from diabetes and cardiovascular disease. Researchers classified the women as normal weight, overweight, or obese based on body mass index (BMI), and as active if they burned more than 1,000 calories a week on activities such as walking, swimming, bicycling, and climbing stairs.

After an average of nearly seven years, 1,361 of the women had developed diabetes. Compared with women of normal weight, those who were overweight had more than three times the risk of diabetes, and those who were obese had more than nine times the risk. By contrast, women who were active reduced their risk of diabetes by just 15% compared with the inactive women.

The authors of an accompanying editorial point out that although body weight has a far greater effect than activity on diabetes risk, exercise is still a key component of weight loss. In addition, research suggests that exercise is more important than weight in relation to cardiovascular disease.

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Heredity also plays an important role in type 2 diabetes. In a study of more than 200 people with type 2 diabetes (ages 35 to 74), 66% reported at least one relative with diabetes and 46% had at least two relatives with the disease. In particular, people whose mother had diabetes were two times more likely to get the disease than those whose father had it—33% vs. 17%. Of the women with diabetes, 11% had at least one child with diabetes, whereas only 4% of the men with diabetes had a child with the disorder.

Other causes of diabetes. A small number of people develop diabetes because they have another disorder. For example, diabetes can result from diseases that destroy the pancreas—such as hemochromatosis (excessive absorption and storage of iron) or chronic pancreatitis (inflammation of the pancreas)—or from surgical removal of the pancreas, for instance, in people with pancreatic cancer. Tumors of certain organs can cause diabetes as a result of overproduction of hormones that interfere with insulin action. For example, growth hormone produced by some tumors of the pituitary gland, cortisol or epinephrine from adrenal tumors, and glucagon from pancreatic tumors can all raise blood glucose levels. Corticosteroids, commonly used to treat asthma and arthritis, and thiazide diuretics, typically used in the treatment of high blood pressure and heart failure, may also bring on diabetes in people who are predisposed to the illness.

PREVENTION OF DIABETES

Although researchers have been unable to identify ways to prevent type 1 diabetes, people can take measures to reduce their risk of type 2 disease.

Prevention of type 1 diabetes. The Diabetes Prevention Trial—Type 1 looked at whether insulin injections or oral insulin might prevent type 1 diabetes in people at increased risk for the disease. The results revealed that neither treatment protects against the disease. Other researchers have studied immunosuppressive drugs for the prevention of type 1 diabetes, but the results have not been encouraging.

Prevention of type 2 diabetes. Efforts to prevent type 2 diabetes are especially important for people at high risk for developing the disease—those who have prediabetes, are overweight, have a family history of the disorder, belong to a high-risk ethnic group (such as blacks, Hispanics, Asians, or Native Americans), or have a history of diabetes during pregnancy (gestational diabetes).