

Why is Diabetes Important To Your Company?

An estimated 8% of the Wisconsin adult population has diabetes.

It should not be a surprise that employees with diabetes are found at all levels of a company, from the mailroom to the boardroom. These hard-working men and women do not want diabetes to interfere with their jobs and, with your company's and/or labor union's support of their efforts to manage their disease, they can remain productive and contribute significantly to your organization's success.

When a person has diabetes, his or her body cannot properly use the energy it gets from the food eaten. This is because the body either is no longer producing insulin, is not producing enough insulin, or the insulin is not working. Insulin is a natural hormone produced by the pancreas and its job is to keep blood sugar levels normal. There are three different types of diabetes, as well as a condition known as pre-diabetes:

- **Type 1 diabetes** (formerly known as insulin-dependent or juvenile-onset diabetes) is usually diagnosed before the age of 30. With this type of diabetes, the pancreas produces little or no insulin, which the body needs to control the amount of sugar (glucose) in the blood. People with type 1 diabetes must take insulin to live. They manage their diabetes by taking insulin, monitoring blood sugar levels, eating healthy foods, and engaging in regular physical activity, all of which helps control blood sugar levels.
- **Type 2 diabetes** (formerly known as non-insulin-dependent or adult-onset diabetes) is usually diagnosed after the age of 40, but it is becoming increasingly more common among younger people. With type 2 diabetes, insulin is produced in insufficient amounts and/or cannot be used by the body to control blood sugar levels. People with type 2 diabetes control blood sugar levels by eating healthy foods, engaging in regular physical activity, taking their medications (by mouth or injection), and monitoring their blood sugar levels. Sometimes multiple medications and even insulin are needed to control blood sugar levels.
- **Gestational diabetes** is a condition unique to pregnancy in which the blood sugar levels become elevated because of the mother's insufficient production of insulin or her body's inability to use insulin properly. During pregnancy, the woman manages the disease by monitoring blood sugar levels, eating healthy foods, engaging in regular physical activity, and taking medications (by mouth or

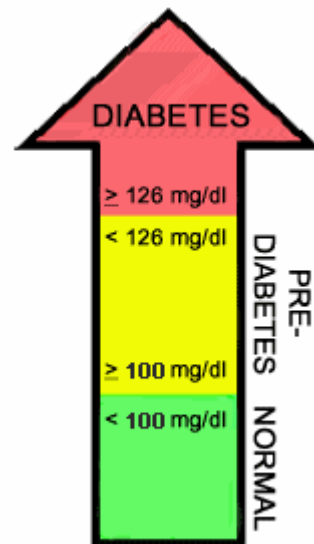


Illustration of blood glucose levels following a Fasting Plasma Glucose test (FPG)

injection) when necessary. Women with gestational diabetes are at increased risk for developing type 2 diabetes later in life.

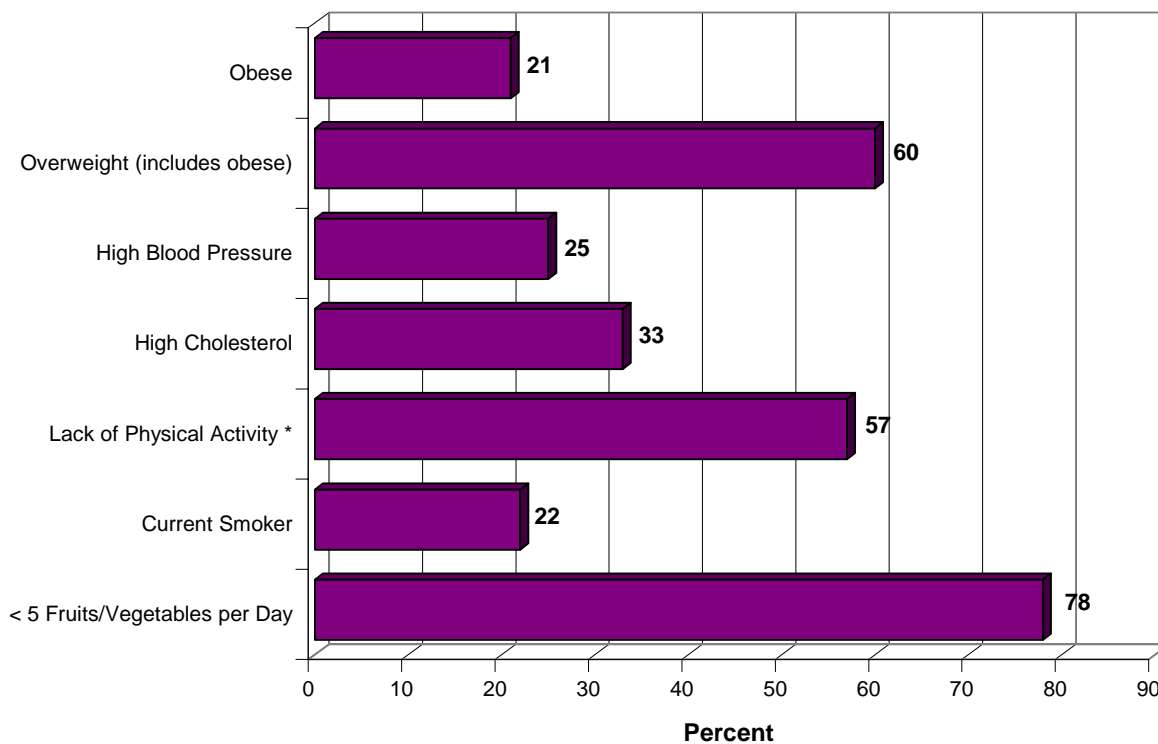
- **Pre-Diabetes** is a condition in which blood glucose levels are higher than normal but are not high enough for a diagnosis of diabetes. People with pre-diabetes are at increased risk for developing type 2 diabetes and for heart disease and stroke. Other names for pre-diabetes are impaired glucose tolerance and impaired fasting glucose.

The ultimate goal is to prevent type 2 diabetes through the encouragement of a healthy lifestyle that includes healthy eating and physical activity. People at risk for diabetes need information on making lifestyle changes.

The goal of diabetes management after diagnosis is to keep blood sugar levels as normal as possible to prevent complications. This involves learning how to manage and control blood sugar levels and requires ongoing support and education from multiple sources. Complications of diabetes include: high blood pressure, stroke, eye disease/blindness, kidney disease, heart disease, foot problems and amputations, complications of pregnancy, and dental disease. The risk of these complications increases if blood sugar levels are not managed effectively.

Percent of Wisconsin Adults with Risk Factors Related to Diabetes

Wisconsin Behavioral Risk Factor Survey, 2003



* Lack of physical activity is defined here as not meeting the recommendations for moderate physical activity.

What is Diabetes' Impact?

Potentially, any one of your employees could have diabetes now or develop the disease in the future. Diabetes does not discriminate; it can affect anyone, regardless of race, ethnicity, or gender. The statistics on diabetes are staggering:

Nationally

- Estimated total medical expenditures in 2002 incurred by persons with type 1 or type 2 diabetes were \$13,243 per capita per year versus \$2,560 for persons without diabetes (*American Diabetes Association, 2003*).
- Diabetes is the leading cause of adult blindness, kidney failure, and non-traumatic lower-limb amputations.
- People with diabetes are 2 to 4 times more likely to develop heart disease and stroke than people without the disease.
- Diabetes is on the rise. Between 1980 and 2000 the number of persons diagnosed with diabetes rose by 6 million, an increase of 50%. As with other chronic illnesses, this increase is due to the aging of the U.S. population, lack of physical activity especially among women and minority populations, the rising rate of obesity, and a greater incidence of diabetes found among minority groups.

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In Wisconsin

- An estimated 329,000 Wisconsin adults (8%) have diabetes (94,000 undiagnosed). That's two of every 25 adults you meet.
- An estimated 836,000 Wisconsin adults aged 40-74 years have pre-diabetes.
- Many other persons are at increased risk of developing type 2 diabetes because of the risk factors of age, weight, and sedentary lifestyle.
- Members of Wisconsin's African-American population are more likely to have diabetes than whites. American Indians are more than five times more likely to have diabetes than whites.
- People with diabetes suffer from many diabetes-related complications or conditions. In 2002, this included 1,409 lower extremity amputations.
- There were 85,130 hospitalizations in 2002 that were diabetes-related (14% of all hospital discharges). Hospital charges for these admissions totaled about \$1.35 billion (20% of all hospital charges).

No matter how large or small your workforce, your company will be increasingly affected by diabetes. Employees need continued education about diabetes and management strategies along with support as they make lifestyle changes. Better diabetes control and healthier lifestyles can lead to confident, productive employees.

What Can My Company Do?

Because most employees spend more than a third of their waking hours, on average, at the work site, your company has a unique opportunity to provide them with diabetes education and support. Your company need not be large; organizations of all sizes can do something to help their employees. Specifically, your company can assist both employees with diabetes and those without diabetes by considering the following steps:

- Develop a supportive work environment so that employees with diabetes feel comfortable adopting and performing the behaviors that promote good diabetes management.
- Provide encouragement and opportunities for all employees to adopt healthier lifestyles that reduce risk for several chronic diseases, including diabetes.
- Demand the highest quality medical care for people with diabetes, including clear information about covered benefits, services and supplies needed to control diabetes.

The key component of any company's diabetes intervention should be the promotion of effective glycemic (blood sugar) management among its employees with diabetes. Why is effective glycemic management critical? Keeping glycemic levels near normal will be a major factor in improving your employees' quality of life and reducing your company's human and economic costs from diabetes and its complications.

Components of a company's diabetes initiative should include:

- General, simple education related to prevention and early detection.
- Increased awareness of the importance of blood sugar control and essential care to reduce the risk of complications for employees with diabetes.
- Supportive education to keep motivation high for further lifestyle changes that help control blood sugar levels in employees with diabetes, as well as prevent diabetes in employees without it.

Two studies have looked specifically at the effect of glycemic management and diabetes interventions for employees. A 12-week double-blind study (*Testa et al., 1998*) of 569 male employees who had type 2 diabetes found that those who improved their glycemic (blood sugar) management:

- were more productive on the job (99% versus 87%) and able to remain employed longer (97% versus 85%) than employees who did not effectively manage and lower their blood sugar levels.
- lowered their absenteeism rate by 1% compared with an 8% increase in employees with poor glycemic management. Lost earnings due to absenteeism were estimated at only \$24 per worker per month for employees who improved their glycemic management in comparison with \$115 for those with uncontrolled blood sugar levels.
- had fewer days of restricted activity and bed rest than those who did not improve their glycemic management. Lost earnings due to restricted activity were \$2,660 per 1,000 person-days for employees with good glycemic management versus \$4,275 for those with poor management.

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For those restricted to bed rest, lost earnings were \$1,539 per 1,000 person-days for employees with good glycemic management compared with \$1,843 for those with poor glycemic management.

Another study (*Burton et al., 1998*), performed at the First Chicago NBD Corporation, found that after three months of attending a work site diabetes education program, employees with diabetes had:

- lowered their mean fasting blood sugar levels from 198 mg/dL to 180 mg/dL.
- reduced their mean hemoglobin A1c from 9.0% to 8.3%. The hemoglobin A1c test indicates average blood sugar control over a 90-day period and is essential for monitoring blood glucose control.

Although the values in this study were still higher than the ideal blood sugar range, any improvement in glycemic control has been shown to reduce the risk for diabetes-related complications.



The Help: www.DiabetesAtWork.org

This online diabetes and health resource kit can help your company assess the impact of diabetes in the workplace. It also provides easy-to-understand information for your company to help your employees manage their diabetes and take steps toward reducing the risk for diabetes-related complications such as heart disease.

Resources contained on the DiabetesAtWork.org web site include:

- **Planning Guide** ~ This planning guide will help a company to more easily and quickly determine the specific resources that best meet their needs. It also provides suggestions on developing health education programs using the lesson plans and fact sheets.
- **Assessment Tools** ~ This assessment tool can help human resource managers, occupational health staff, health plan benefit specialists, corporate chief executive officers and chief operations officers, health care providers, and other senior managers concerned with reducing medical costs, increasing worker productivity, and improving their companies' bottom lines get a general estimate of the potential prevalence and costs associated with diabetes among their employees.
- **Choosing a Health Plan** ~ Employees may have the opportunity to select from a variety of health plans. If an employee (or someone in their family) has diabetes, it is important to choose the plan that would best allow them to manage their condition and to prevent the onset of complications, such as heart and kidney disease, and blindness.
- **Lesson Plans** ~ These lesson plans address a wide range of diabetes-related topics such as nutrition and physical activity, general medical care, emotional well-being, and cardiovascular health. They can be used for a variety of health education activities, such as a lecture series on health issues, a diabetes support group, and "lunch and learn" sessions. Categories include general diabetes education; managing diabetes complications; cardiovascular disease; nutrition, weight control and physical activity; and, emotional wellbeing.
- **Fact Sheets** ~ Fact sheets can be used for a variety of health and wellness education needs. They are resources that provide employers with educational materials that can be quickly accessed and disseminated.
- **Resources** ~ This page provides additional resources for helping businesses bring diabetes education and awareness into the workplace.
- **Frequently Asked Questions (FAQ's)** ~ Not sure if you can photocopy and distribute materials on diabetesatwork.org? Wondering if you can get your URL posted on www.DiabetesAtWork.org? Answers to these questions and more are provided in this area.

DiabetesAtWork.org is a program of the National Diabetes Education Program, a partnership of the National Institutes of Health, the Centers for Disease Control and Prevention, and more than 200 public and private organizations. It is sponsored by the Diabetes Prevention & Control Program, part of the Wisconsin Division of Public Health (<http://dhfs.wisconsin.gov/health/diabetes/>).

Additional Resources . . .

Access these web sites for additional information on diabetes:

Wisconsin Diabetes Prevention & Control Program	www.dhfs.wisconsin.gov/health/diabetes
American Diabetes Association	www.diabetes.org
American Heart Association	www.americanheart.org/haw
National Kidney Foundation	www.kidney.org/kls/public/
Prevent Blindness America	www.diabetes-sight.org
National Diabetes Education Program	www.ndep.nih.gov/
Wellness Council of Wisconsin	www.wellnesscouncilwi.org
National eye Institute – NIH	www.nei.nih.gov/
Centers for Disease Control	www.cdc.gov/diabetes/
Nat'l. Inst. of Diabetes & Digestive & Kidney Disease	www.niddk.nih.gov/
Office of Minority Health Resources	www.omhrc.gov/
Shape Up America!	www.shapeup.org
Work site Accommodations	www.jan.wvu.edu/media/diabetes.html
Partnerships for a Healthy Workforce	www.prevent.org/phw.htm
Systems Change for Better Diabetes Care	www.BetterDiabetesCare.nih.gov
Health Workforce 2010: An Essential Health Promotion Sourcebook for Employers Large and Small	www.prevent.org/publications/Healthy_Workforce_2010.pdf

Diabetes Dictionaries

Here are two dictionaries to help you to better understand the many diabetes-related terms:

Take Charge of Your Diabetes
www.cdc.gov/diabetes/pubs/tycd

National Diabetes Information Clearinghouse
<http://diabetes.niddk.nih.gov/index.htm>