

Diabetes: The Importance of Exercise

Why is exercise important if you have diabetes?

Exercise helps keep your blood sugar under control. Many of the people with the best controlled diabetes are those who exercise regularly. Exercise helps in the following ways:

- **Exercise helps your body burn more sugar.** Insulin is more effective during exercise. More sugar and insulin flows in the blood to the muscles during exercise, which causes more sugar to be burned. Exercise usually helps lower the blood sugar.
- **Exercise makes you feel better.** You will have more energy and tire less easily. Exercise can help you feel healthier and happier.
- **Exercise helps keep the body in good shape.** Lack of activity leads to health problems such as obesity and heart trouble. Exercise helps burn excess calories and helps you keep a normal weight. It keeps your muscles and bones strong.
- **Exercise helps keep the heart rate (pulse) and blood pressure lower.** People who exercise have healthier hearts. Their hearts don't have to pump as hard. Normal blood pressure helps prevent heart problems as well as other complications of diabetes such as eye and kidney problems.
- **Exercise helps keep blood fat levels normal.** Many people with diabetes have high levels of blood fats (cholesterol and triglycerides). High blood fat levels can lead to early aging of blood vessels. Exercise and a healthy diet are the best ways to try to reduce blood fat levels.
- **Exercise helps the body become more sensitive to insulin.** Regular exercise increases the number of insulin receptors on your cells. The receptors are the places where insulin attaches to cell membranes to allow sugar to pass into the cells. Having more receptors makes the body more sensitive to insulin. As a result, insulin works more efficiently.
- **Exercise helps normal blood circulation to the feet.** Exercise can help maintain good blood circulation to your feet and help prevent diabetic foot problems.

Exercise is particularly important if you have type 2 diabetes or if you have a high risk of developing type 2 diabetes. If you are overweight (a risk factor for type 2 diabetes), you can lose weight by eating less (particularly less fast food and high-fat food) and exercising more. The risk of developing type 2 diabetes can be reduced by more than half if you maintain a normal weight and exercise regularly.

Which kinds of exercise are best?

The best exercise is exercise you enjoy. It is easier to form a habit of exercising if you enjoy the activity. The exercise needs to be aerobic. Only aerobic exercise helps heart fitness. Aerobic exercises include most continuous activities that are done for a period of 30 minutes or longer. Examples of such activities are jogging, walking, swimming, and bicycling. When activities, are done in short bursts with rests in between (such as weight lifting), they are considered strength-building exercises, not aerobic exercises.

People with diabetes participate in almost every sport. Boxing is the only activity that is discouraged. This is because eye injuries are common in boxing, and eye problems are a possible complication of diabetes. Also, the high risk of brain damage makes boxing dangerous for anyone.

Strenuous activities, such as weight lifting and jogging, are discouraged if you have severe eye problems related to diabetes because they increase the pressure on the eyes. If you have eye problems, talk to us before beginning a new exercise program.

When should I exercise?

The best time to exercise will vary with your schedule. Think ahead and make changes in insulin doses and snacks to help prevent low blood sugar that might result from exercise. When possible, pick an exercise time, preferably the same time each day, and adjust your snacks and insulin dose to fit the exercise. Adjust your diabetes management to suit your lifestyle. Your lifestyle does not have to be adjusted to fit your diabetes.

When should I not exercise?

If your urine ketone level is high or moderate, exercise can raise your ketone level even more. It is not good for you to exercise when you have ketones in your urine. Remember to check urine ketones before starting if you are not feeling well.

How often should I exercise?

To improve the health of your heart, you should have at least 30 minutes of aerobic exercise 5 times a week. The more exercise you get, the more fat you will burn. If weight loss is one of the goals, it may be necessary to exercise harder or for a longer period to reach the desired goal.

How do I get started?

Make exercise a normal daily routine. When beginning a new exercise program, it is always best to start slowly and gradually extend the time and amount of exercise.

- Make sure you discuss plans for a new exercise program with us before you begin it.
- If you are taking insulin, discuss how to adjust your insulin dose before and after exercise.
- Stretch for 5 to 10 minutes before and after the exercise to help prevent cramps and stiffness.

How can I prevent low blood sugar (hypoglycemic) reactions during exercise?

You can plan your exercise after a meal, reduce the insulin dose, or take extra snacks to help prevent low blood sugar during exercise. This will take some experimenting with dosages and record keeping. You should always carry a source of sugar and have a longer lasting snack nearby. Remember, it is wise to THINK AHEAD about the day's schedule and plan accordingly.