“We know from research that 30 minutes of physical activity a day, at least five days a week, can help in delaying or preventing the onset of Type 2 diabetes. We also know that many people want to start a program for increasing their level of physical activity but simply don’t know where to begin.”
– Lynn Nicholas, FACHE, CEO of the American Diabetes Association

Despite the proven benefits of physical activity, more than 50 percent of American adults do not get enough physical activity to provide health benefits.

The Role of Physical Activity in Diabetes Prevention and Control

What can a physically active lifestyle do for me?
Research has shown that physical activity can
• Lower your blood glucose and your blood pressure
• Lower your bad cholesterol and raise your good cholesterol
• Improve your body’s ability to use insulin
• Lower your risk for heart disease and stroke
• Keep your heart and bones strong
• Keep your joints flexible
• Lower your risk of falling
• Help you lose weight
• Reduce your body fat
• Give you more energy
• Reduce your stress.

Physical activity also plays an important part in preventing Type 2 diabetes. A major government study, the Diabetes Prevention Program (DPP), showed that a healthful diet and a moderate exercise program resulting in a 5 to 7 percent weight loss can delay and possibly prevent Type 2 diabetes.

What kinds of physical activity can help me?
Four kinds of activity can help. You can try
• Being extra active every day
• Doing aerobic exercise
• Doing strength training
• Stretching.

Be Extra Active Every Day
Being extra active can increase the number of calories you burn. There are many ways to be extra active, including the following:
• Walk around while you talk on the phone.
• Play with the kids.
• Take the dog for a walk.
• Get up to change the TV channel instead of using the remote control.
• Work in the garden or rake leaves.
• Clean the house.
• Wash the car.
• Stretch out your chores. For example, make two trips to take the laundry downstairs instead of one.
• Park at the far end of the shopping center lot and walk to the store.
• At the grocery store, walk down every aisle.
• At work, walk over to see a co-worker instead of calling or e-mailing.
• Take the stairs instead of the elevator.
• Stretch or walk around instead of taking a coffee break and eating.

• During your lunch break, walk to the post office or do other errands.

Do Aerobic Exercise
Aerobic exercise is activity that requires the use of large muscles and makes your heart beat faster. You will also breathe harder during aerobic exercise.
Doing aerobic exercise for 30 minutes a day, most days of the week, provides many benefits. You can even split up those 30 minutes into several parts. For example, you can take three brisk 10-minute walks, one after each meal.

See your doctor first to make sure it’s OK for you to increase your level of physical activity. Talk with your doctor about how to warm up and stretch before exercise and how to cool down after exercise. Then start slowly with 5 to 10 minutes a day. Add a little more time each week, aiming for 150 to 200 minutes per week. You could try:

- Walking briskly
- Hiking
- Climbing stairs
- Swimming or taking a water-aerobics class
- Dancing
- Riding a bicycle outdoors or a stationary bicycle indoors
- Taking an aerobics class
- Playing basketball, volleyball or other sports
- In-line skating, ice skating or skateboarding
- Playing tennis
- Riding a bicycle outdoors or a stationary bicycle indoors.

Do Strength Training

Doing exercises with hand weights, elastic bands or weight machines two or three times a week builds muscle. When you have more muscle and less fat, you’ll burn more calories because muscle burns more calories than fat, even between exercise sessions. Strength training can help make daily chores easier, improving your balance and coordination, as well as your bones’ health. You can do strength training at home, at a fitness center, or in a class. Your healthcare team can tell you more about strength training and what kind is best for you.

Stretch

Stretching increases your flexibility, lowers stress, and helps prevent muscle soreness after other types of exercise. Your healthcare team can tell you what kind of stretching is best for you.

Can I exercise any time I want?

Ask your healthcare team about the best time of day for you to exercise. Consider your daily schedule, your meal plan, and your diabetes medications in deciding when to exercise.

If you exercise when your blood glucose is above 300, your level can go even higher. It’s best not to exercise until your blood glucose is lower. Also, exercise is not recommended if your fasting blood glucose is above 250 and you have ketones in your urine.

Are there any types of physical activity I shouldn’t do?

If you have diabetes complications, some exercises can make your problems worse. For example, activities that increase the pressure in the blood vessels of your eyes, such as lifting heavy weights, can make diabetic eye problems worse.

If nerve damage from diabetes has made your feet numb, your doctor may suggest that you swimming instead of walking for aerobic exercise.

Numbness means that you may not feel any pain from sores or blisters on your feet, so you may not notice them. Then they can get worse and lead to more serious problems. Make sure you exercise in cotton socks and comfortable, well-fitting shoes that are designed for the activity you are doing. After you exercise, check your feet for cuts, sores, bumps or redness. Call your doctor if any foot problems develop.

Can physical activity cause low blood glucose?

Physical activity can cause hypoglycemia (low blood glucose) in people who take insulin or certain diabetes pills, including sulfonylureas and meglitinides. Ask your healthcare team whether your diabetes pills can cause hypoglycemia. Some types of diabetes pills do not.

Hypoglycemia can happen while you exercise, right afterward, or even up to a day later. It can make you feel shaky, weak,
confused, irritable, hungry or tired. You may sweat a lot or get a headache. If your blood glucose drops too low, you could pass out or have a seizure.

You should still have a physically active lifestyle. You should, however, take steps to prepare for hypoglycemia. Ask your doctor what you can do before, during and after exercise to help prevent or treat hypoglycemia. Following are some general guidelines:

Before Exercise
• Be careful about exercising if you have skipped a recent meal.
• If you take insulin, ask your healthcare team whether you should change your dosage before you exercise.

During Exercise
• Wear your medical identification or other ID.
• Always carry food or glucose tablets so that you’ll be ready to treat hypoglycemia.
• If you’ll be exercising for more than an hour, check your blood glucose at regular intervals. You may need snacks before you finish.

After Exercise
• Check to see how exercise affected your blood glucose level.

What should I do first?
Always talk with your doctor before you start a new physical activity program. Ask about your medications – prescription and over-the-counter – and whether you should change the amount you take before you exercise. If you have heart disease, kidney disease, eye problems, or foot problems, ask which types of physical activity are safe for you.

(inMotion Editor’s Note: A study reported in the May 2005 issue of Diabetes Care suggests that when physicians help plan their diabetic patients’ physical activity and follow up on their behavior, the patients are much more likely to stick to it.)

Decide exactly what you’ll do and set some goals.
Choose
• The type of physical activity you want to do
• The clothes and items you’ll need to get ready
• The days and times you’ll add activity
• The length of each session
• Your warm up and cool down plan for each session
• Alternatives, such as where you’ll walk if the weather is bad
• Your measures of progress.

Find an exercise buddy.
Many people find that they are more likely to do something active if a friend joins them. If you and a friend plan to walk together, for example, you may be more likely to do it.

Keep track of your physical activity.
Write down when you exercise and for how long in your blood glucose record book. You’ll be able to track your progress and to see how physical activity affects your blood glucose.

Decide how you’ll reward yourself.
Do something nice for yourself when you reach your activity goals. For example, treat yourself to a movie or buy a new plant for the garden.

What can I do to make sure I stay active?
One of the keys to staying on track is finding some activities you like to do. If you keep finding excuses not to exercise, think about why. Are your goals realistic? Do you need a change in activity? Would another time be more convenient? Keep trying until you find a routine that works for you. Once you make physical activity a habit, you’ll wonder how you lived without it.

This article is abridged from a publication titled What I need to know about Physical Activity and Diabetes, from the National Institutes of Health (NIH), the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the National Diabetes Information Clearinghouse (NDIC).

Note: This article is intended for educational purposes only. For specific advice about your care, you should consult a doctor.