

Diabetes & Exercise

Benefits of Exercise

- decreases blood sugar
- improves insulin sensitivity
- decreases body fat
- burns calories and aids in weight management
- improves blood lipid profile
- improves blood pressure

Always speak with your physician before starting an exercise program. If you are taking insulin or oral hyperglycemic agents (OHAs), you will probably need a reduction in your dosage.

If you are taking insulin or OHAs...

Keep a rapidly acting source of carbohydrate with you during exercise in case you have a low blood sugar episode. Hard candy, boxed juices, dried fruit, and glucose tablets are convenient and easy to carry.

Always wear an ID tag or exercise with someone who knows how to treat a severe low blood sugar.

Check your blood sugar level before, during (if exercise is long duration), and after exercising.

Before exercise...

- If it is < 100 mg/dL, you should have a pre-exercise snack (see side bar).
- If it is 100-250 mg/dL, go ahead and exercise.
- If it is > 250 mg/dL, check your urine for ketones. If ketones are present, delay exercise until blood sugar is under better control. If it is >300 mg/dL, always delay exercise.

During intense exercise longer than 1 hour...

- Supplement with 30-60 g CHO per additional hour. This can be achieved by drinking 8 oz. of a sports drink every 15-20 min.

After exercise...

- You may need extra carbohydrate, depending on your blood sugar level.
- Continue to test every 1-2 hours after exercise.

If you are taking insulin:

- Inject the insulin into a non-exercising site.
- Do not exercise for 60-90 min. after the injection.
- Try to exercise at the same time each day.

Consistency of meals, activity, and medication is critical for optimal blood sugar control.

- Don't exercise late in the evening. Your blood sugar could drop dangerously low while you sleep.

Safety tips for everyone:

- Warm up for at least 10 minutes before exercise, and then gradually increase your intensity.
- Drink adequate fluids before, during, and after exercise to maintain optimal hydration.
- Wear proper footwear.

Food Adjustments for Exercise

Low intensity for less than 30 minutes:

If <100 mg/dL 10-15 g CHO before (e.g. 1 fruit or 1 bread exchange).

If 100 mg/dL + No additional CHO before.

Moderate intensity for about 1 hour:

If <100 mg/dL 30-45 g CHO before (e.g. ½ turkey sandwich with 1 fruit).

If 100-180 mg/dL 15 g CHO before.

If 180-300 mg/dL No additional CHO before.

If >=300 mg/dL Delay exercise.

Strenuous intensity for more than 1 hour:

If <100 mg/dL 45 g CHO before (e.g. whole turkey sandwich and 1 fruit); monitor blood sugar carefully during exercise.

If 100-180 mg/dL 30-45 g CHO before.

If 180-300 mg/dL 15 g CHO per hour during.

If >=300 mg/dL Delay exercise.

Table 34-11 in *Krause's Food Nutrition & Diet Therapy*, 10th Edition. 2000.