

EXERCISE AND TYPE 1 DIABETES



GETTING STARTED WITH EXERCISE

Physical activity is important for all people. Regular exercise can help manage diabetes and reduce stress levels. There are many fun ways to stay active. Including the family, pets or friends may make it even more fun!

Some ways to stay active are:

- Exercise at the park
- Dance
- Swim
- Walk or run
- Play sports
- Ride a bike

If I exercise will it lower my blood sugar?



Yes, because exercise helps insulin work.



How to prepare for exercise:

- Lower the dose of insulin you take before you exercise to prevent a low. This is also called reducing the insulin on board.
- Try not to start exercise until your blood sugar is 150 mg/dl or more.
- Carry fast-acting carbs with you.

Be sure you have these supplies with you when you exercise:

- CGM or strips to check your blood sugar level
- A way to give insulin (either through a pump or by injection)
- Fast-acting carbs like glucose tablets, glucose gel or juice
- Glucagon if you have frequent low blood sugars



It's important to have extra supplies with you to help manage your blood sugar after exercise.

How does exercise impact my blood sugar levels?

Different kinds of exercise can have different impacts on your blood sugar. It can make your sugar go too low or too high. Aerobic exercise can lower your blood sugar levels. Some types of aerobic exercise are:

- running
- riding a bike
- swimming

Resistance and burst exercise can raise blood sugar levels. Some types of resistance and burst exercise are:

- lifting weights
- short bursts of exercise like sprinting or boxing

If you do both types of exercise during your workout, it can raise, lower or keep sugar levels the same. If you do resistance exercise before aerobic exercise it can help keep your blood sugar from going too low.

HOW CAN I EXERCISE WITH DIABETES?

If you are going to exercise, it is important to keep check of your blood sugar levels. To do this, check your blood sugar levels before, during, and after physical activity.

Exercising can help make your insulin work better. This means that you may not need as much insulin before you exercise or up to 24 hours after you exercise. It is important to know how intense your physical activity will be so that you can manage your blood sugar levels. Sometimes, exercise can raise your blood sugar level. Always test your blood sugar before and after exercise.

Depending on your blood sugar level you may need to treat before exercising:

If below 80mg/dl:

- Treat low blood sugar with 8 to 15 grams fast acting sugar.
- Re-check blood sugar after 15 minutes. If >80mg/dl follow with 10 to 15 grams of carbs without giving insulin.
- If >80 mg/dl it is ok to do resistance exercise.
- Wait until your blood sugar is at least 150 mg/dl before doing aerobic exercise.

If 81 to 150mg/dl:

- Treat low blood sugar with 4 to 8 grams fast acting sugar, followed by 10 to 15 grams of carbs without giving insulin.
- If >80 mg/dl it is ok to do resistance exercise.
- Wait until your blood sugar is at least 150 mg/dl before doing aerobic exercise.

If 151 to 250mg/dl:

- Do not treat blood sugar.
- Re-check blood sugar every 30 to 60 minutes.
- If blood sugar is less than 150mg/dl and you are going to keep exercising, give 10 to 15 grams of carbs without giving insulin. Take another 15-30 grams of carbs for every 30-60 minutes of aerobic exercise.

If 251mg/dl and above:

- Check for ketones if you feel sick.
- If a large amount of ketones are present, do not exercise.
- If ketones are negative it is okay to exercise.
- Check blood sugar in 45 to 60 minutes.
- If blood sugar is less than 150mg/dl and you are going to keep exercising give 10 to 15 grams of carbs without giving insulin.





Special Instructions for Continuous Aerobic Exercise

- For continuous aerobic exercise the goal is to start with a sugar level between 150 - 250 mg/dl with CGM arrows that are flat or going up.



- If your sugar is below 150 mg/dl take 10 - 15 grams of carbs and wait to start exercise until your glucose levels are going up. You may need more carbohydrates if your blood sugar level does not increase.
- If your sugar level is above 350 mg/dl and you don't know why, then check for ketones before exercise. Exercise should usually be avoided if ketones are positive.
- If sugar levels are low before aerobic exercise then it may help to take carbs and do some resistance exercise first.
- During aerobic exercise try to take 15 - 30 grams of carbs for every 30 - 60 minutes of exercise.

IT TAKES TRIAL AND ERROR TO LEARN HOW TO ADJUST INSULIN AND CARBS FOR EXERCISE. WORK WITH YOUR DIABETES TEAM TO HELP YOU FIGURE IT OUT. ANYTHING IS POSSIBLE FOR PEOPLE WITH T1D, EVEN EARNING OLYMPIC GOLD MEDALS!

