Using Insulin | tackling exercise

tackling exercise on insulin

#1. It is great that you are being active. Keep it up!
#2. Before starting a physical activity program, ensuring that your basal rates are set properly will allow you to better understand the impact that activity will have on your blood sugars.
#3. Use these recommendations to guide you to find the solution that works best for you.
#4. Planning = better results. There is no magic answer. We are all different. Test and evaluate!

1 | getting started

- One of the biggest challenges with moderate aerobic exercise and diabetes is the ability to balance activity with carbs and insulin in order to prevent low blood sugars.
- Exercise >30 minutes will likely require extra carbs or adjustments to your basal insulin to avoid exercise lows.
- You may find that after training for several weeks, your blood sugar will not drop as significantly or as often as when you first started.
- The start time of your exercise can play a big role in your body's response. For instance, you are less likely to experince lows if you exercise before breakfast, especially before taking any insulin.

2 | know what insulin to adjust

Adjust the insulin that will have the most effect on your blood sugar while you are exercising:

- if your activity start time is going to be within 2 hours after your meal you may need to adjust your pre-meal bolus*
- if your activity start time is NOT within 2 hours after a meal bolus you will likely need have a snack or plan ahead with taking less basal the night before.

*3 | know how to use ExCarbs

ExCarbs quantifies how many carbs an exercise will consume based on your body weight.

Calculate yours:

Weight	_____ kg	Approximate amount of ExCarbs for Activity
Moderate Activity?	~0.5g/kg/hr	_____ g
Intense Activity?	Up to 1.0g/kg/hr	_____ g

Use this number to assist you planning your activity (see following scenerio) + consider *your* goals when choosing whether or not to eat the extra carbs, adjust your meal bolus, take less background insulin or a combination!

Scenario.

- Consider a 70kg person planning to do 1hour of a moderte intensity aerobic activity approximately 1.5 hours after eating a lunch containing 60g of carbohydrate.
- ExCarb amount = 70kg x 0.5g/kg/hr = 35g

OPTION A | consume the carbs

- She would have to consume an additional 35g of carbohydrate to compensate for this activity. She can choose to drink it prior, during and/or after her activity
- Ex. Gatorade™ (14g carbs/8oz). Therefore, she would need a total of 20oz found in 2/3 of a bottle.

OPTION B | adjust meal bolus

- Subtract the ExCarb amount from the total amount of carbohydrates planned for that particular meal, bolus for the difference.
- Planned Carbs - ExCarbs = 60g - 35g= 25g
- She would have to give less bolus insulin since she would be only taking the 25 grams into account.

OPTION C | take less basal insulin

- If she knows she is being active on certain days of the week, she may consider taking less basal insulin the night prior if there is a pattern of lower blood sugar levels with more active days.

prevention of exercise induced keto-acidosis

Blood sugar levels higher than 14.0mmol/L prior to exercise may mean a lack of insulin delivery.

In this case, ketones should be monitored.

x If there are NO ketones present, evaluate whether or not the high blood sugar is due to recent food intake, exercise with caution and test regularly.

√ If there ARE ketones present, a correction bolus will be needed and exercise should be delayed until the ketones are negative.

**** If you have blood ketones >3mmol/L at any point, it is recommended that you to go to the Emergency Room.**