

Set a Temporary Basal Rate:

- Start 1 hour before and run until 2 hours after the activity.

Activity Intensity	Percentage of Basal
Low intensity	Try ↓ by 10-20% (run at 80-90%)
Moderate intensity	Try ↓ by 20-30% (run at 70-80%)
Lower than usual activity	Try ↑ by 10-20% (run at 110-120%)

Modify Carbohydrate Intake:

- If you have insulin on board or glucose is trending low, have a carbohydrate snack without insulin before/during and/or after activity.
- Trial having 15-30 grams of high glycemic index carbohydrates (more may be needed).

Modify your Meal Time Bolus Insulin:

Bolus Reduction for Exercise		
Activity Intensity	Duration: 30 minutes	Duration 60 minutes
Mild Aerobic	↓ by 25%	↓ by 50%
Moderate Aerobic	↓ by 50%	↓ by 75%
Heavy Aerobic	↓ by 75%	↓ by 75%

Important Reminders

- Always carry quick sugar with you.
- Check glucose before, during (if ≥1 hour) and after exercise.
- If your glucose is above 14mmol/L, consider a partial correction bolus (try ↓ correction dose by 50%).
- If glucose is >16mmol/L and ketones present, delay activity and take a correction dose.

What is severe hypoglycemia?

Severe hypoglycemia is when somebody is unconscious or requires assistance to treat a low glucose (glucose < 2.8mmol/L).

What are the symptoms of severe hypoglycemia?

- Confusion
- Unusual behaviour (i.e. stubborn, angry)
- Poor co-ordination
- Unconscious

Treatment Requirement:

A. If the person is conscious,

1. Treat with one of these quick sugars (20 grams carbohydrate):
 - 5 dextrose tablets (check label for amount)
 - 1 cup fruit juice or regular pop
 - 3 packages "Rockets™"
 - 4 teaspoons of honey

2. Wait 15 minutes and check glucose again. If glucose remains low (<4 mmol/L) then treat again with 15 grams of quick sugar.

3. If it is more than 1 hour before your next meal, have a snack with 15 grams of carbohydrate plus protein.

B. If the person is *unconscious*, call 911. Be sure to ask the doctor about glucagon for dealing with this situation in the future.

What are symptoms of hypoglycemia?

- Shaky/trembling
- Sweating
- Dizziness
- Sudden hunger
- Confusion
- Irritability

When you have any of these symptoms always check your glucose. If you cannot check, assume your glucose is low.

What should I do if I have hypoglycemia?

1. Treat with one of these quick sugars (15 grams carbohydrate):
 - 15g dextrose tablets (check label for amount)
 - ½ cup regular pop or fruit juice
 - 15 "Skittles™"
 - 1 tablespoon of honey
 - 3 packets of sugar
 - 2 packages "Rockets™"
2. Wait 15 minutes and check your glucose again. If it remains low then treat again with one of the quick sugars listed above.
3. If it is more than 1 hour before your next meal, have a small snack with 15 grams of carbohydrate plus protein (i.e. ½ meat or cheese sandwich or 6 crackers with peanut butter).

Remember: Always have your meter, quick sugar, and a carbohydrate containing snack with you.

Hyperglycemia Protocol for Insulin Pumps

If your glucose is above 14 mmol/L, follow these steps:

High Glucose Level No Ketones

Take correction dose with pump. Check if site & pump OK. Recheck glucose in 1 hour.

Glucose is decreasing.

Recheck glucose before next meal. Take insulin as usual.

No change in glucose.

Take insulin by syringe (disconnect from pump and enter insulin taken to track active insulin).

Change infusion set & site, or activate new pod.

Recheck glucose in 1 hour.

Contact doctor if no improvement in glucose.

High Glucose Level With Ketones

Take insulin by syringe using correction factor.

Change infusion set & site, or activate new pod. Check pump.

Drink 1 cup of water every hour.

Recheck glucose & ketones every 2 hours.

Continue to take correction dose through pump.

Contact doctor if no improvement in glucose & ketones.

Guidelines For Managing Hyperglycemia

Signs and Symptoms of Hyperglycemia (High Glucose)	
Onset	<ul style="list-style-type: none"> Gradual (hours to days)
Usual Causes	<ul style="list-style-type: none"> Illness, infection, surgery, injury Stress: emotional or physical Exercise with glucose over 14mmol/L Too little insulin Increased food
Signs and Symptoms	<ul style="list-style-type: none"> Abdominal pain, nausea, vomiting Hard to breathe / acetone breath Thirst Excessive urination Fatigue Blurred vision Change in appetite Dry/itchy skin Slow healing cuts
Troubleshoot	<p><u>Infusion Set:</u></p> <ul style="list-style-type: none"> Is the tubing primed? Is the cannula dislodged or kinked? Has the set been in longer than 2-3 days? Is the set connected to the cartridge? Are there any leaks or can you smell insulin? Is there discomfort, blood or redness at the site? Is there air in the tubing? <p><u>Insulin Pump:</u></p> <ul style="list-style-type: none"> Did you forget to bolus? Check Bolus History Any recent alarms? Is the cartridge empty? Is your insulin delivery suspended? <p><u>Insulin</u></p> <ul style="list-style-type: none"> Is the insulin cloudy or clumped? Has the insulin expired? Has the insulin been at room temperature for longer than one month? Did you leave the insulin in a warm place? <p>For technical problems with your pump, call the 24-hour Helpline</p>

Sick Day Management

Important Reminders:

1. Check your glucose every 2 to 4 hours. Target glucose can be a little "relaxed" when sick.
2. If your glucose is above 14mmol/L, check for ketones.
3. Continue to take boluses for carbohydrates and high glucose as needed. Consider running a temporary basal to give more insulin.

Diet Recommendations:

- Drink plenty of fluids to stay hydrated. If your glucose is above 14mmol/L, choose sugar-free fluids such as: water, any no sugar added liquid/powder enhancer (i.e. Crystal Light™), clear soup or broth, diet soft drink, tea.
- You may need to choose lighter foods, such as popsicles, Jell-O™, soup, cooked cereal, ice cream, pudding, custard, yogurt, apple sauce, toast, soda crackers (consider limiting milk products if vomiting or diarrhea).

When to ask for help?

- Your glucose stays lower than 4mmol/L for 2 consecutive readings and does not respond to hypoglycemia treatment
- Your glucose stays higher than 14mmol/L for 2 or more readings and does not respond to correction doses and increased fluids.
- If you do not know how to adjust your insulin.
- If you have been sick for 2 days and are not getting better.
- If you have symptoms of dehydration, such as dry mouth, extreme thirst, little to no urination or darker urine than usual.
- If you have diarrhea, vomiting, stomach pain that is ongoing or getting worse.
- If you are unable to eat or drink due to vomiting.