How to Analyze the Ambulatory Glucose Profile (AGP)

To do the analysis, I make sure that:

- my device is properly calibrated (if applicable);
- the period is representative; I will redo the AGP if it's not representative (e.g., illness, travel);
- \cdot my meal, physical activity, etc. schedules are recorded;
- the period selected for my report contains at least 14 days of data;
- there is sufficient data for the report to be **representative**;
- the target blood sugar levels indicated on the report are correct.





STEP 2 DOES MY BLOOD SUGAR VARY SIGNIFICANTLY?

- At what time(s) of the day does my curve have the widest range?
- What might explain the variability of my blood sugar at those times?



STEP 3 ARE THERE TRENDS?

- Is the median line stable throughout the day?
- Is the median within range?
- At what time(s) of the day do I observe trends (upward or downward)?



After analyzing my AGP and using the table below, I make sure that:

- I identify, before anything else, the circumstances that may be causing hypoglycemia;
- I identify situations that cause my blood sugar variability and hyperglycemic episodes;
- I identify the times when my blood sugar tends to be within target levels and note what works for me;
- I adjust my treatment based on my AGP analysis and the recommendations of my healthcare team;
- I ask my healthcare team for help, if needed.

WHAT AFFECTS BLOOD SUGAR LEVELS?

HYPOGLYCEMIA (blood sugar lower than 4 mmol/L)	HYPERGLYCEMIA (blood sugar higher than 10 mmol/L)
DIET	
 Misjudging the amount of carbs that I eat (too many carbs estimated, therefore too much insulin taken in relation to amount of carbs consumed). Skipping or delaying my meal or snack. Consuming alcohol without eating or while taking insulin (can cause hypoglycemia up to 24 hours after ingestion). Eating unbalanced meals* (e.g., rich in fat, rich in protein, low in fibre). Not taking enough sugar or taking something other than fast sugars to correct hypoglycemia. 	 Misjudging the amount of carbs that I eat (too many carbs in relation to the insulin dose taken). Consuming alcohol that contains carbs (raises blood sugar immediately). Eating snacks with too many carbs without taking insulin. Eating unbalanced meals* (e.g., rich in fat, rich in protein, low in fibre). Taking too much sugar to treat hypoglycemia.

MEDICATION

- Making **mistakes in administering my insulin** (e.g., error in the dose or type of insulin, or insulin injected too soon before a meal).
- Taking an **insulin dose that is too big to correct hyperglycemia** (e.g., using incorrect blood sugar measurement to calculate dose, meter that is miscalibrated, inaccurate or used incorrectly) **when I have high blood sugar**.
- Taking **insulin doses too close together** (two injections taken in less than four hours without taking active insulin into account).
- Not adjusting the insulin dose responsible for blood sugar levels often falling below 4.0 mmol/L at the same time of the day.
- Having bumps or dents on usual injection/insertion sites (lipodystrophies).*
- Problems with the equipment I use to administer my insulin (e.g., injection in the muscle with a needle that is too long).

- Making **mistakes in administering my insulin** (e.g., error in dosage or type of insulin or insulin injected too late: for instance, after the meal).
- Forgetting or neglecting to take my insulin.
- Not adjusting the insulin dose that is leading to frequent high blood sugar levels at the same time of the day.
- Having bumps or dents on usual injection/insertion sites (lipodystrophies).*
- **Problems with the equipment I use to administer my insulin** (e.g., blocked needle or catheter, forgetting to prime the cannula with a pump).



HYPOGLYCEMIA (blood sugar lower than 4 mmol/L)	HYPERGLYCEMIA (blood sugar higher than 10 mmol/L)
PHYSICAL ACTIVITY	
Not adjusting my insulin and/or my diet for physical activity that lowers blood sugar (physical activity can lower blood sugar for 48 h)	 Doing less physical activity than usual. Doing very intense physical activity or resistance training.* Ingesting too many carbs in trying to prevent hypoglycemia brought on by physical activity.
HEALTH	
 Being sick (e.g., vomiting or diarrhea). Experiencing stress or emotions.* Having a digestive illness (e.g., gastroparesis, celiac disease)*. Experiencing hormonal variations (e.g., certain periods of the menstrual cycle, menopause, pregnancy).* 	 Being sick (e.g., infection). Experiencing stress or emotions.* Taking medication that raises my blood sugar (e.g., cortisone). Experiencing hormonal variations (e.g., certain periods of the menstrual cycle, menopause, pregnancy).* Having a rebound hyperglycemic episode following a hypoglycemic episode (e.g., hyperglycemia in the morning after an uncorrected hypoglycemic episode at night).

*Responses may vary from person to person.

