Mount Sinai Hospital
Sinai Health System
Joseph & Wolf Lebovic Health Complex
Leadership Sinai Centre for Diabetes

Insulin Sensitivity Factor (ISF) Assessment

The **Insulin Sensitivity Factor (ISF)** or **Correction Factor** is used to calculate how much bolus is needed to correct a blood glucose (BG) level that is above or below your BG target. The accuracy of your ISF can change over time so it needs to be periodically checked and adjusted.

Important Requirements to ensure the most reliable results:

- Eat a usual meal without excessive protein or fat.
- Avoid alcohol and exercise during the assessment period and within 24 hours.
- Avoid doing this assessment when you are sick or under another major stress.

Steps for testing your ISF:

1. Choose a time when:
    - Blood glucose is above 11 mmol/L
    - It has been at least 4 hours since your last bolus or food
2. Take a correction bolus without food
3. Do not eat for at least 3 hours
4. Record the BG values in the table below.

Repeat these 4 steps on 3 separate occasions.

Test #	BG when correction bolus taken	BG 3-4 hours after correction bolus
1		
2		
3		
Target BG	Above 11 mmol/L	Within 1.7 mmol/L of your target BG

Your ISF needs to change:

1. If your blood sugar remains too high after 3 hours, you are receiving too little insulin from the correction bolus. If this happens on two or more occasions out of the three, decrease your ISF by about 20%. For example, ISF of 2.0 (mmol/L per 1 unit of insulin) decreases to 1.6 mmol/L per 1 unit of insulin.
2. On the other hand, if the BG drops too low on two or more occasions, the ISF of 2.0 should increase to 2.4. Repeat the test until the correction bolus lowers your BG to within 1.7 mmol/L of the target.

If you use a Continuous Glucose Monitor (CGM) it may help to wear it during these assessments. However, checking BG with your BG meter can be just as effective.

If you have questions contact your diabetes team and discuss the results of your evaluation.