

# iLet Bionic Pancreas System User Educational Resource Guide



**Beta Bionics**

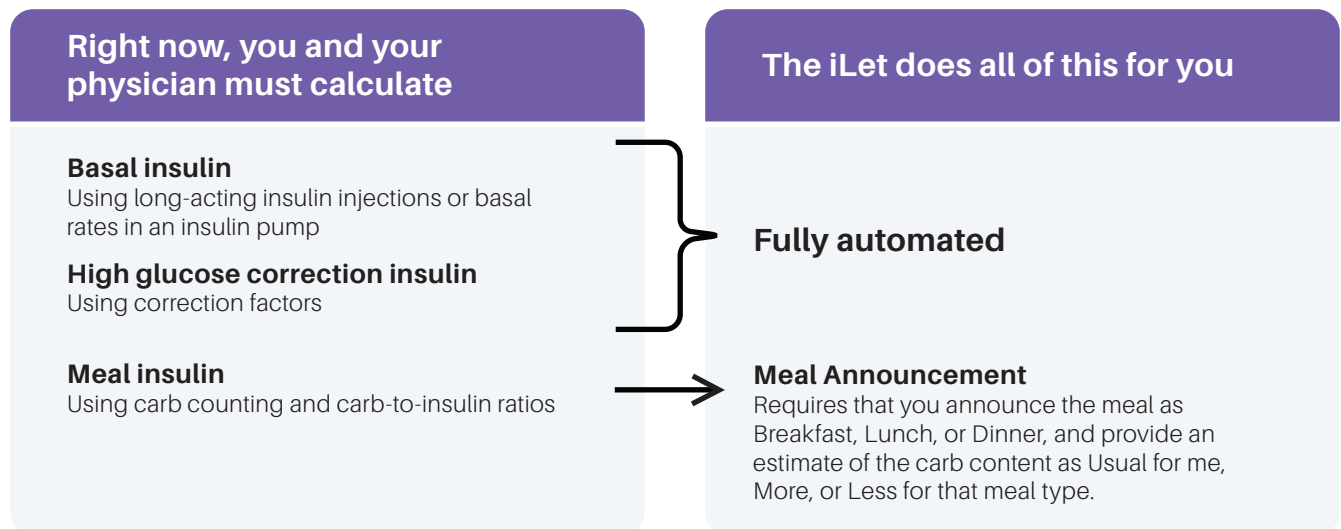
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# 1. The iLet Bionic Pancreas System: what you might expect

## The iLet Bionic Pancreas System



## How is this different from my current diabetes care?

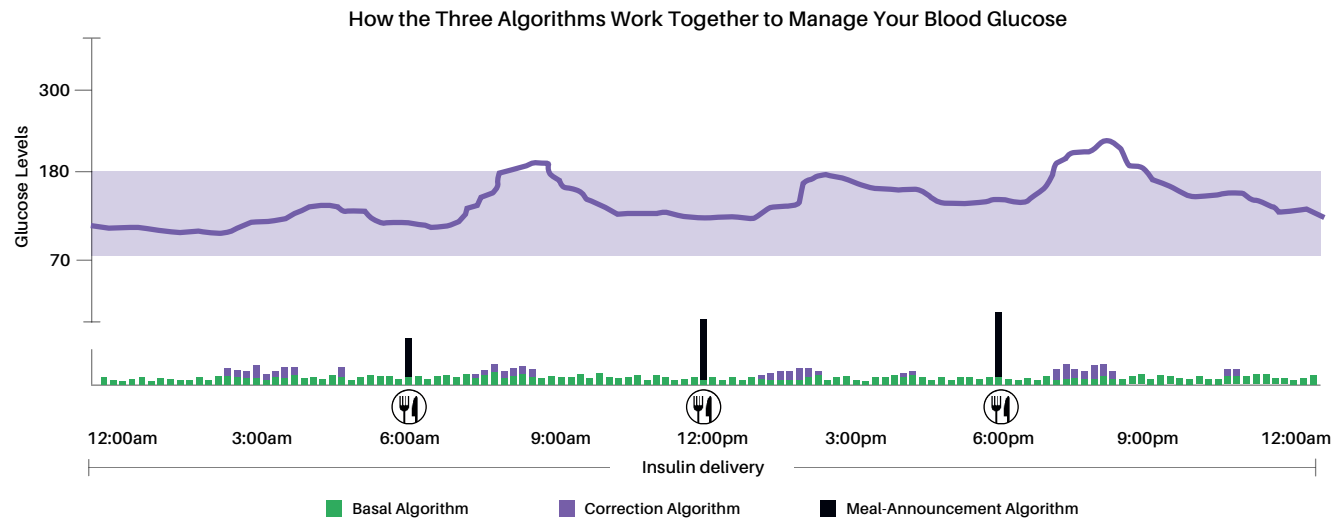


The iLet makes insulin dosing decisions every five minutes using your CGM glucose level. It will respond to rising and falling CGM levels and will adjust insulin doses accordingly. You will still have highs and lows, and your CGM graph will not be flat or in range all the time when wearing the iLet.

The iLet automatically calculates how much insulin to give you for basal, for high CGM levels, and for meals.

You will not know what these calculations are and you will not be able to edit the doses, but you will be able to see how much insulin was dosed.

The iLet never stops learning and is always adapting to your insulin needs. It will continue to adapt as your insulin needs change over time. Adaptation works best if you follow your usual routine in the first few days. Don't challenge the iLet right away - all it knows is the weight that was entered. It does not know anything else about your insulin needs yet, and starts out conservatively for most users.



- Even when you use the Meal Announcement, **your blood glucose levels could rise above 250 mg/dl** for a few hours. You'll need to be comfortable with letting the iLet regulate your blood glucose.
- **Your blood glucose levels could drop below 70 mg/dl or 54 mg/dl**, especially during or soon after exercise.

## When wearing the iLet:

- you cannot program any insulin settings (no basal rates, correction factors or carb ratios).
- you cannot give a correction dose of insulin.
- you cannot enter carbohydrates into a bolus calculator or determine the amount of insulin to give for a meal.
- you cannot change how the iLet is automating insulin delivery.

## How can I best succeed while using the iLet?

The iLet is different from any other insulin delivery device, as you cannot program any insulin settings or control any of the insulin dosing. The iLet can take a few days to learn how to best take care of your diabetes. The iLet will work best if you let it do the work for you. We recommend that you avoid overthinking what the iLet is doing.

## Will I have to treat low blood glucose levels with the iLet?

**Yes.** You may still have low blood glucose levels (hypoglycemia) that you will need to treat with fast-acting sugar. The iLet will reduce or stop insulin dosing automatically in response to low CGM levels. You will still need to treat low blood glucose levels while using the iLet.

## Do I need to correct high blood glucose levels with the iLet?

**No.** You cannot give additional insulin boluses when your blood glucose levels are high (hyperglycemia). The iLet automatically tries to give you insulin to bring your blood glucose down (this may take longer than you expect). You may need to change your infusion set or tubing and cartridge if you think your high blood glucose levels could be due to a problem with your insulin, tubing, or set. When in doubt, change it out!

## How do I take insulin for meals?

When you eat meals, you should enter a Meal Announcement into the iLet. There is no need to count carbohydrates, and the iLet does not use a carbohydrate-to-insulin ratio. Instead, you tell the iLet if the amount of carbs you are eating is Usual for you, More than usual, or Less than usual. The iLet will use this information to determine how much insulin to give you. You cannot choose the exact dose of insulin (this has made some people uncomfortable in clinical studies).

## What if I forget to announce a meal?

If you forget to announce your meal, the iLet will automatically deliver insulin in response to your rising CGM levels. Your blood glucose levels may go higher and stay higher for longer than if you had used the Meal Announcement feature. Having a low blood glucose later is also more likely.

## Can I change how much insulin the iLet is giving me?

**No.** You cannot change insulin doses with the iLet. All insulin doses are automatically calculated by three separate algorithms which are continuously learning. The only action you can take to influence insulin delivery is to issue a Meal Announcement before eating a meal, or to disconnect from the iLet temporarily. Blood glucose control will worsen if you try to trick the system.

# 2. Managing Highs & Lows

You will still experience high and low CGM glucose values that require your attention while using the iLet. Call your HCP if you have any questions or if you need assistance in managing your glucose levels while using the iLet.

## General Tips

- It is important to be patient with the iLet as it adapts to your insulin needs and responds to your changing glucose levels. It is also critically important to maintain your iLet device properly and respond to all alerts promptly.
- Low glucose levels (hypoglycemia) require treatment with rapid-acting carbohydrates (juice, glucose tabs, etc). You may need to treat with fewer carbs than you are used to because your iLet will have likely already decreased and/or stopped insulin dosing.

- High glucose levels (hyperglycemia) may require you to replace your insulin infusion site or take other steps to resolve a problem with your device.
- It is recommended that you use the High and Low glucose alerts in the iLet. Whatever volume you choose, make sure you are able to hear and respond to these alerts.
- If you are feeling symptoms of high or low glucose levels that are not consistent with your CGM glucose, it is always a good idea to confirm with a fingerstick blood-glucose reading. If your CGM is very inaccurate compared to your fingerstick blood-glucose reading, calibrate your CGM according to the manufacturer's instructions (this can be done through the iLet user interface or through the Dexcom app).

**CAUTION:** Managing your BG using your iLet device is different from managing your BG on your own. Follow the instructions as provided in this training. Always ask your healthcare provider for additional guidance if you are unsure.

## Symptoms of High Glucose (Hyperglycemia)

### When your blood glucose is high, you may:

- feel very tired, thirsty, or hungry.
- have dry mouth.
- urinate more often than usual.

### More serious symptoms of high blood glucose and diabetic ketoacidosis (DKA) include:

- flushed or dry skin.
- rapid breathing or breath that smells fruity.
- abdominal pain, nausea, and vomiting.

## Symptoms of Low Glucose (Hypoglycemia)

### When your blood glucose is low, you may feel:

- nervous, anxious, or shaky.
- sweaty or confused.

### More serious symptoms of low glucose include:

- seizure or loss of consciousness (passing out).

**NOTE:** Remember, it is very important that you maintain your iLet device properly and respond to all alerts promptly!

## When Your Glucose Level is High

Your iLet will automatically deliver insulin in response to rising and high CGM glucose levels to bring your glucose level safely back into range. This may take longer than you expect.

**REMEMBER:** DO NOT take additional insulin via injections, inhaler, or another pump while using the iLet unless directed by your healthcare provider.

### **Always check to confirm that your iLet is working as it should. Make sure your iLet:**

- is reading your CGM glucose level every five minutes and make sure your CGM is calibrated.
- is delivering insulin doses in response to your CGM glucose level.
- has enough battery power.
- has enough insulin in the cartridge. Change your insulin cartridge, iLet Connect, tubing, and infusion site if it has been more than 3 days since you last changed them.
- does not have an active alert that has stopped insulin dosing (i.e., occlusion, complete cartridge change process, empty cartridge, dosing stopped, etc.).
- is connected to the tubing and your infusion set.
- is not leaking insulin anywhere (make sure there is no wetness or smell of insulin along the tubing at the connector site, along the tubing, and at the infusion site).

If everything looks like it's working, give the iLet time to respond to your glucose levels. Continue to monitor your glucose until it returns to a normal range.

**REMEMBER:** If you have the High Glucose alert turned on, the iLet will notify you if your CGM glucose has been above 300 mg/dl for 90 minutes.

### **Signs that the infusion site is not working include:**

- The device is working properly (charged, has insulin, is reading CGM glucose levels), but CGM glucose levels continue to rise and/or stay high despite insulin dosing by the device
- CGM glucose is above 300 mg/dl for 90 minutes or more or above 400 mg/dl once
- Any evidence the site may be kinked, dislodge, or is leaking insulin (is wet, smells like insulin)
- Consider changing your insulin cartridge, tubing, and iLet Connect in addition to your infusion site if there is any suspicion of leaking in the cartridge area.

**Change your insulin infusion site if you have any suspicion that it is not working. When in doubt, change it out!**

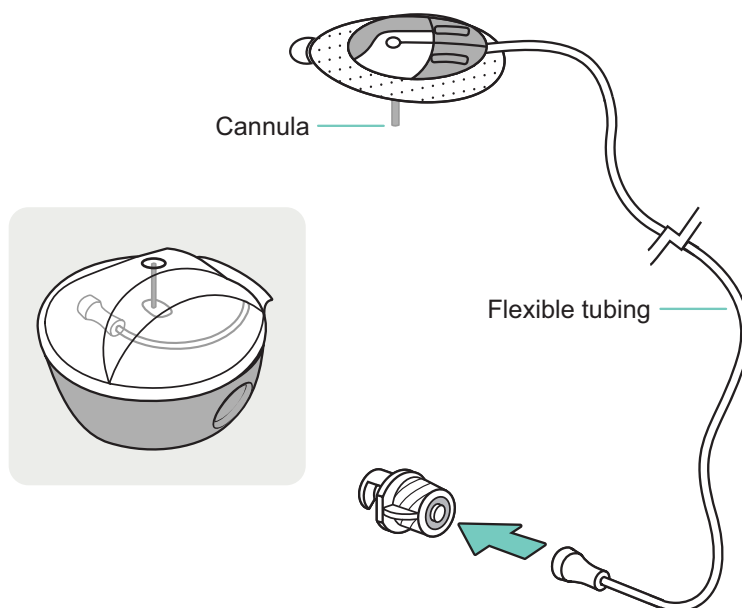


Figure A

## Understanding Ketones

When blood glucose is high and your body does not have enough insulin, it cannot break down glucose for energy. Instead, your body will produce ketones. High ketone levels are toxic and cause diabetic ketoacidosis.

**If your CGM glucose is above 300 mg/dl for 90 minutes or more:**

- Your iLet will alert for high glucose readings (see Figure B), and you should respond immediately! If your glucose level is this high for this long, it likely means that something is not working as it should.
- Check a fingerstick blood glucose reading to confirm your hyperglycemia.
- Check a fingerstick blood ketone level or urine ketone level as directed by your healthcare provider.
- Consult with your healthcare provider and your Ketone Action Plan.
- Change your infusion site if you have ketones or as directed by your healthcare provider.



Figure B

**REMEMBER:** Unless specifically directed to do so by your healthcare provider, **DO NOT** take additional insulin that the iLet does not know about (via injections, inhaler, or another pump). This is dangerous and can result in severe hypoglycemia.

**REMEMBER:** NEVER use the Meal Announcement to correct a high blood glucose level. This is


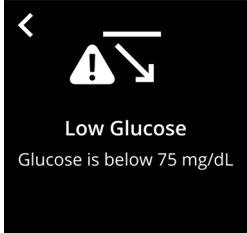
dangerous and can result in severe hypoglycemia. It will also affect your iLet's learning, causing future Meal Announcement doses to be less effective.

**REMEMBER:** WHEN IN DOUBT, CHANGE IT OUT!



## When Your Glucose Level is Low

Your iLet will reduce or stop insulin dosing in response to low or falling CGM glucose levels. Always make sure to have rapid-acting carbohydrates and emergency glucagon available to respond to low glucose levels. Make sure your CGM alerts are turned on and you can hear them.

**Your iLet has four different alerts for low CGM glucose readings:**

Alert	Meaning	Response
<p><b>Urgent Low Glucose</b></p>  <p><b>Urgent Low Glucose</b> Act now. Glucose is below 54 mg/dL</p>	CGM glucose < 54 mg/dl	<ul style="list-style-type: none"> <li>• Check a fingerstick blood glucose reading to confirm hypoglycemia.</li> <li>• Treat with up to 15 grams of rapid-acting carbohydrates. You may need to treat with fewer carbs than you are used to because your iLet will have likely already decreased and/or stopped insulin dosing.</li> <li>• Always wait and give your glucose level a chance to respond to the rapid-acting carbohydrates before treating again.</li> </ul>
<p><b>Low Glucose</b></p>  <p><b>Low Glucose</b> Glucose is below 75 mg/dL</p>	CGM glucose < 75 mg/dl	<ul style="list-style-type: none"> <li>• Check a fingerstick blood-glucose reading approximately 15 minutes after treating. Your fingerstick glucose reading may show a rise in glucose level before your CGM glucose rises.</li> <li>• Treat again with rapid-acting carbohydrates if your glucose level remains low.</li> <li>• Continue to monitor your glucose until it remains above 70 mg/dl.</li> </ul>



<p><b>Glucose Falling Quickly</b></p>  <p><b>Glucose Falling Quickly</b> Glucose below 100 mg/dL and is falling at 2 or more mg/dL per minute</p>	<p>CGM glucose &lt; 100 mg/dl and falling 2 mg/dl/min or more</p> <p>(CGM glucose will be &lt; 70 mg/dl within 15 minutes)</p>	<p>Treat with rapid-acting carbohydrates to prevent a hypoglycemic event from happening. You may not need the full amount of carbohydrates you would usually use to prevent this low glucose event from happening.</p>
<p><b>Urgent Low Soon</b></p>  <p><b>Urgent Low Soon</b> 54 mg/dL within 20 min. Act now to prevent urgent low</p>	<p>CGM glucose will be &lt; 54 mg/dl within 20 minutes</p>	

## If you see your CGM glucose level dropping, but your glucose is still above 100 mg/dl:

- do not treat with rapid-acting carbohydrates right away.
- monitor your CGM glucose levels and be patient.

Do not take more carbohydrates than needed to treat a low glucose level. This can cause your glucose to respond too much, leading to a high glucose level and triggering more insulin dosing from the iLet.

**REMEMBER:** If you have the Low Glucose alerts turned on, the iLet will notify you and you can treat with rapid-acting carbs as needed.

## 3. BG - Run Mode

**WARNING:** The iLet is intended to dose insulin based on CGM data. In the events where CGM stops providing glucose data to the iLet, BG-run mode will serve to continue a safe level of insulin delivery, but it will not provide the same level of glucose control as the iLet with CGM. BG-run use SHOULD BE TEMPORARY and always for the shortest duration possible with the goal to resume CGM-guided iLet insulin dosing AS SOON AS POSSIBLE.

Your iLet needs to be receiving glucose values from a CGM sensor to give you insulin. If your iLet is not displaying a CGM value, it is in BG-run mode. In this mode, your iLet automatically delivers basal insulin, can give correction insulin if you enter a high BG value into the iLet, and will still deliver meal insulin when a meal

is announced. However, you will need to enter BG values frequently or all insulin dosing will be stopped. If you are unable to enter the required blood glucose values, you will need to switch to your backup therapy plan as prescribed by your healthcare provider.

**CAUTION:** If your CGM is offline for an extended period of time, dosing will stop and you should switch to alternative therapy until you are able to reconnect to a CGM sensor. A countdown timer will appear before dosing would stop.

### **Reasons your iLet might go into BG-run mode:**

- Failed Dexcom sensor
- Failed Dexcom transmitter
- Sensor is offline or disconnected (e.g., connectivity with sensor is lost, warming up a new sensor, etc.)

### **When the iLet enters BG-run mode, you have two choices:**

1. Respond to the iLet alerts by entering a fingerstick BG value with each alert. This will allow the iLet to continue dosing insulin until CGM values are available again (within the time limits explained below).

OR

2. Switch to a backup therapy plan prescribed by your healthcare provider until CGM values are available again. You may want to do this if you think it will take longer than 48 hours to restart your CGM.

## **Insulin delivery during BG-run mode**

You must connect to your CGM as soon as possible. Once the iLet is receiving CGM values, it will go back to working as usual.

- Your iLet will continue dosing basal insulin based on its previously learned basal rates as long as you enter the required fingerstick BG values.
  - If you enter a low BG, the iLet will shut off your basal insulin for an hour, or until you enter a BG that is not low.
  - If you enter a high BG value, the iLet may give you correction insulin.
- You can continue to announce meals and the iLet will give you insulin for your meal type and size.

## Insulin suspension during and after BG-run mode

### 0-7 days after starting the iLet:

- The iLet will alert to request a BG every 1 hour until CGM is restored. If no BG is entered within 1 hour of the alert, insulin delivery will stop (see Figure C).
- You **MUST** enter a BG, resume CGM, or switch to backup insulin delivery.
- Insulin suspension will never start between 12-4 am. If suspension was indicated during this time, it will suspend immediately at 4 am.
- After 48 consecutive hours with no CGM, BG-run mode will end and ALL insulin dosing will stop.
  - You **MUST** resume CGM or switch to backup insulin delivery. The iLet will not deliver any insulin until a CGM value is received.

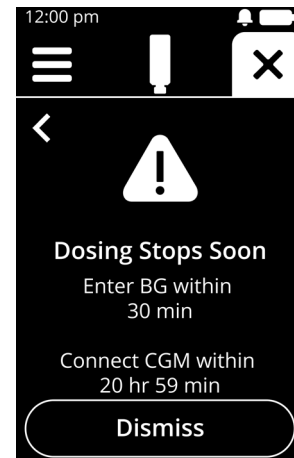


Figure C

### More than 7 days after starting the iLet:

- The iLet will alarm to request a BG entry every 4 hours until CGM is restored. If no BG is entered within 4 hours of the alert, insulin delivery will stop (see Figure C).
- You **MUST** enter a BG, resume CGM, or switch to backup insulin delivery.
- Insulin suspension can occur at any time during the day or night.
- After 72 consecutive hours with no CGM, BG-run mode will end and ALL insulin dosing will stop.
  - You **MUST** resume CGM or switch to backup insulin delivery. The iLet will not deliver any insulin until a CGM value is received.

## Duration of BG-run mode

If you have been using the iLet for 7 days or less, BG-run mode will last up to **48 hours**.

If you have been using the iLet for more than 7 days, BG-run mode will last up to **72 hours**.

After the maximum period of 48 or 72 hours, all insulin dosing will stop and a CGM value is required to restart dosing (see Figure D). The iLet will not start dosing any insulin again until it receives a CGM value. If your iLet will not be receiving a CGM value soon, you will need to switch to your backup therapy plan as advised by your healthcare provider.

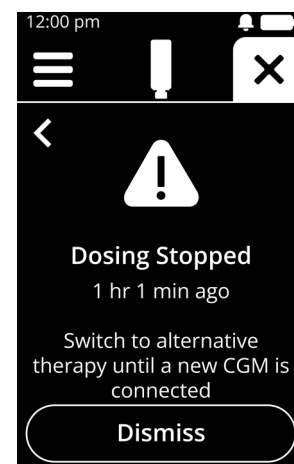


Figure D

## Entering a blood glucose value during BG-run mode

The iLet will alert you to enter fingerstick BG values:

<b>If you enter BG-run mode in the first 7 days of using the iLet:</b>	Enter BGs every hour until CGM is restarted.
<b>If you enter BG-run mode after 7 days of using the iLet:</b>	Enter BGs every 4 hours until CGM is restarted.

To help keep your glucose in good control while your CGM is not on, it is recommended that you check and enter BG values at the following times:

- When you wake up
- Before each meal
- 2 hours after a meal
- Before bed
- Before, during, and after exercise
- If you are feeling high or low

The iLet will alert whenever a BG value is **required** to continue insulin dosing.

### Enter BG

If the CGM sensor is online, you do not need to enter BG values for autonomous dosing. You may enter a BG to calibrate your CGM sensor. Refer to the your CGM manufacturer's instructions for calibration guidance.

- Use a BG meter to check your BG.
- From the Home screen, tap the Menu icon in the upper left corner (see Figure E).
- Tap the Enter BG icon (see Figure F).

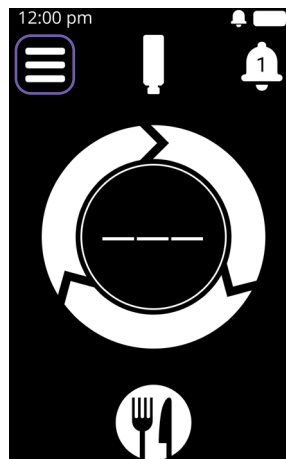


Figure E

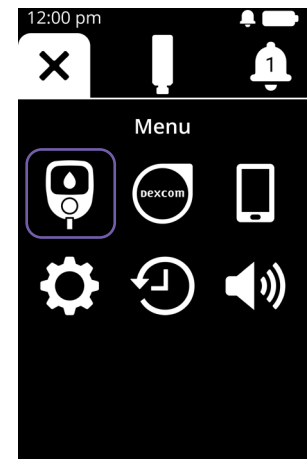


Figure F

- d. Type in a BG value. Tap Next to continue (see Figure G).
- e. Check if the BG entered is correct. Tap Confirm to proceed.

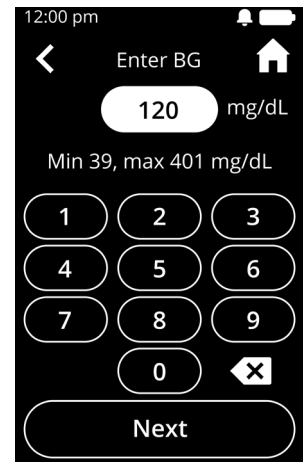


Figure G

## Preparing for BG-run mode

**ALWAYS make sure to have sufficient CGM supplies to avoid going into BG-run mode.**

- ALWAYS request a replacement from Dexcom if a sensor fails or falls off early, or if the transmitter fails.

Website: <https://dexcom.custhelp.com/app/webform>

If you can't use the website, you can call Dexcom's customer support at 1-888-738-3646

- ALWAYS order supplies and obtain the required paperwork (prior authorization, etc.) as soon as possible to avoid running out.
- Contact Beta Bionics customer service with any issues or questions about BG-run mode or obtaining supplies.

Phone: 1-855-745-3800

- Have your iLet mobile app running on your phone.
  - This will allow your HCP to have the most up to date insulin dosing information to help guide your care if needed.
  - This will also help Beta Bionics provide customer service and support when it comes to troubleshooting issues with your device.

## Switching to your backup therapy plan

Contact your HCP right away to discuss your backup therapy plan. Your HCP will prescribe an insulin dosing regimen for you to follow until your iLet is receiving CGM values again.

Always disconnect from the iLet before starting your backup therapy plan.

### Obtain the supplies you need. This may include:

- BG testing supplies (meter, strips, meter batteries, QC solution)
- Long-acting insulin pen & pen needles or syringes & vial
- Rapid-acting insulin pen & pen needles or syringes & vial
- Insulin dosing regimen

It is important that you always have a backup therapy plan and the necessary supplies when using the iLet. You must be able to switch to your backup therapy plan if necessary.

## 4. Meal Announcement Guide

### Why do I need to announce my meals?

- When you announce a meal the iLet will give you insulin to help limit the glucose rise after eating. The iLet may add more insulin if needed.

### When do I announce?

- Announce a meal right when you start eating.
- You can announce a meal up to 30 minutes after you start eating. If you forget to meal announce, and more than 30 minutes have passed since you started eating, do not announce, otherwise you might cause insulin "stacking".

**CAUTION:** Announcing more than 30 minutes after you have started eating can result in severe hypoglycemia.

- If you announce a meal and then decide to eat more, you can announce again for the additional carbohydrates (carbs). Only consider the amount of additional carbs you are eating when choosing the meal size, not the carbs you have already announced.

**CAUTION:** If eating more and announcing again, do not include carbs that you have already announced when deciding the meal size. This could result in severe hypoglycemia.

## What is the meal TYPE?

- Select the meal type based on what you consider to be breakfast, lunch, or dinner (see Figure H).
- You are free to decide the meal type based on carbohydrate content, time of day, or whatever you find works best for you.
- Being consistent with what you consider breakfast, lunch, and dinner will help the iLet learn how to treat your meals.

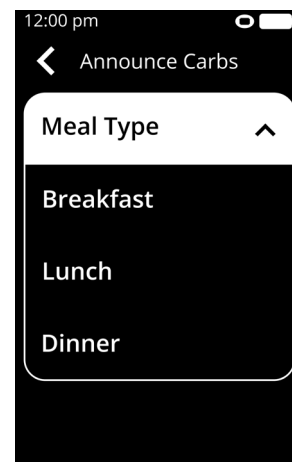


Figure H

## What is the meal SIZE?

- **It is important to choose your meal size based on the amount of carbs in the meal, NOT the total size of the meal or the amount of protein, fiber, or fat.**
- Although the iLet System does not require you to enter an exact carb amount to calculate and administer a meal bolus, it does require that you announce the meal as Breakfast, Lunch, or Dinner and provide an estimate of the carb content as Usual for me, More, or Less for that meal type (see Figure I). Choose the meal size compared to the usual amount of carbs you eat for the chosen meal type.
- You should be choosing Usual for me MOST of the time.
  - Use Less if your meal has around half the carbs of your Usual for me meal.
  - Use More if your meal has around 50% more carbs than your Usual for me meal.
- All that matters is what you consider to be Usual, More, or Less for yourself and for the chosen meal type.

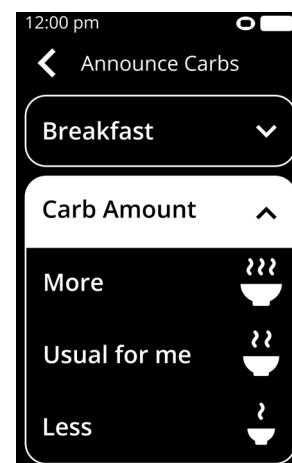
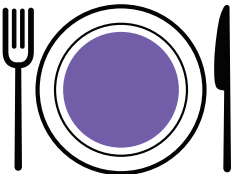
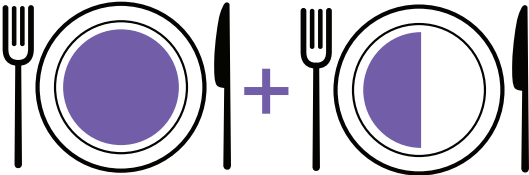
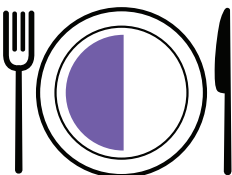
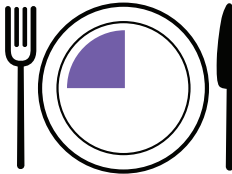


Figure I

## Meal Size Guide:

Carb Amount	Example	
<b>Usual for me Carb Amount</b>		This is the usual amount of carbs you would typically eat for that meal type.
<b>More Carb Amount</b>		This is around 50% more carbs than your Usual for me meal (1.5 times as many carbs as your Usual for me meal).
<b>Less Carb Amount</b>		This is around half as many carbs than your Usual for me meal (50% of your Usual for me meal).
<b>DO NOT ANNOUNCE</b>		If the meal or snack you are eating has less than one quarter (25%) of the carbs in your Usual for me meal, you do not need to announce.

## How can I help the iLet learn my meals?

- Be consistent with how you decide the meal type and size.
  - Only select Breakfast if you are eating your breakfast, Lunch for your lunch, and Dinner for your dinner.
  - Only think about the carbs in your meal when selecting the size, not the amount of fat, fiber, or protein.
- When the iLet is initially learning how much insulin you need for meals, the Less meal option is not available and cannot be selected in the meal size drop down list.
  - The Less option will be available once the iLet has learned how much insulin you need for your Usual for me meal. This will happen separately for Breakfast, Lunch and Dinner. This can happen after one meal announcement, or it may take several meal announcements. Once this happens, the Less option will no longer be marked as unavailable and you will be able to select this size in the drop-down list.
  - If the Less option is not yet available and you are eating less carbs than your Usual for me meal, do not announce that meal. The iLet will deliver insulin in response to your rising CGM glucose.
- In the first few days, try to eat meals that have carbs in the Usual for me range and wait at least 4 hours



before eating and announcing again. This will help the iLet learn how much insulin you need for your Usual for me meal.

- The iLet never stops learning and is always adapting to your insulin needs. It will continue to adapt your insulin dose sizes for meals as your insulin needs change.



## 5. Meal Announcements FAQ

### What happens if I do not announce my meals?

The iLet will automatically give you insulin as your blood glucose rises, but it will not be able to track and learn from your meals. Your blood glucose may go higher and stay higher for longer than if you had announced the meal.

**CAUTION:** This may lead to hypoglycemia later due to the correction algorithm adding more insulin than it would have if you had announced the meal.

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### I ate or drank carbohydrates to treat a low blood glucose. Should I announce those carbohydrates as a meal?

No. Do not announce a meal for carbohydrates used to treat low blood glucose.

**CAUTION:** This could cause additional hypoglycemia and is dangerous.

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### If I forgot to announce my meal and I already finished eating, should I announce a meal?

You can announce a meal up to 30 minutes after you start eating. If you forget to meal announce, and more than 30 minutes have passed since you started eating, do not announce the meal.

**CAUTION:** After 30 minutes your glucose is already rising and the iLet has already dosed insulin according to your rising CGM levels, even without a meal announcement. If you announce a meal during this time, you will “stack” insulin and be at risk for severe hypoglycemia. This will also confuse the iLet, causing future meal doses to be less effective.

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### I usually have a snack before bed to keep my blood sugar in range overnight. Do I need to do this while using the iLet? If so, should I announce my bedtime snack?

You do not need to eat a bedtime snack to keep your blood glucose in range overnight while using the iLet.

If you chose to eat before bed, you should announce it to the iLet the same as you would during the day. This will give you insulin up front and help prevent additional dosing in response to the rise in glucose after you eat. This will reduce the risk of hypoglycemia during the night.

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### **I do not eat foods with carbohydrates and if I do, they are very low carb. Should I still announce my meals?**

No. If you eat a very low carb diet or no carbs at all, you should not announce meals.

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### **Can I use the meal announcement to bring my glucose level down if I am not eating?**

No. This can be dangerous.

**CAUTION:** It could lead to severe hypoglycemia and confuse the iLet, causing future meal doses to be less effective.

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### **If my glucose is high and I am about to eat, should I announce a meal that is larger than my actual meal to get more insulin correction up front?**

No. Do not announce a meal that is larger than the actual meal size to correct high glucose levels. The iLet will have already delivered correction insulin in response to your high glucose.

**CAUTION:** Announcing a larger meal than the actual size could lead to severe hypoglycemia and confuse the iLet, causing future meal doses to be less effective.

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### **I am used to counting carbohydrates. I saw how much insulin the iLet gave me for my last meal. Should I work backwards to figure out my meal size based on my old insulin-to- carbohydrate ratio?**

No. The iLet does not use insulin to carbohydrate ratios to dose insulin for meals.

Do not calculate the amount of carbohydrates you need based on the insulin dose your iLet gave you. This will affect the iLet's ability to learn about your insulin needs and confuse the iLet, causing future meal doses to be less effective.

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## I think the iLet has not learned my meal dose(s) because my glucose is high after meal(s). Is there anything I can do?

You may need to take a few days and focus on helping the iLet learn about your meals.

- Be consistent with how you decide the meal type and size.
  - Only select Breakfast if you are eating your breakfast, Lunch for your lunch, and Dinner for your dinner.
  - Only think about the carbs in your meal when selecting the size, not the amount of fat or protein.
- Try to eat meals that have carbs in the Usual for me range and wait at least 4 hours before eating and announcing again.

After a few days, your meal dose(s) should adapt. Refer to the Meal Announcement Guide for more information on meal announcements and helping the iLet adapt.

## 6. Exercise Management

When you exercise, your insulin needs can change significantly. Your iLet does not know that you are exercising. Your iLet will continue to increase or decrease insulin dosing in response to your changing CGM glucose levels as usual.

### There are things you can do to help prevent hypoglycemia during and after exercise:

- Before exercise, make sure your CGM glucose is not low and not falling.
- Make sure your CGM alerts are turned on and the volume is set to a level that you can hear on your iLet, and your CGM app on your smartphone if applicable. Respond to CGM alerts immediately.
- Always make sure to have rapid-acting carbohydrates available to prevent or treat hypoglycemia. Carry emergency glucagon with you to treat severe hypoglycemia.

### Can I eat carbohydrates in preparation for exercise while using the iLet?

- If you eat carbohydrates before exercising while still connected to the iLet, the iLet will automatically increase insulin delivery in response to your rising CGM glucose levels. This will cause you to have more insulin working in your body while you are exercising, increasing your risk of hypoglycemia during and after exercise – exactly what you were trying to avoid!
- If you want to “pre-load” with carbs, make sure to eat your carbohydrate meal or snack **AFTER DISCONNECTING** from the iLet. This way, the iLet cannot deliver insulin and your glucose will rise from the carbs in the meal or snack as you intended.

## You have 2 options to consider when performing exercise that usually leads to falling glucose levels

### OPTION 1 | Disconnect from the iLet

You and your healthcare team may decide to stop insulin dosing before, during, and/or after exercise. To stop insulin delivery, disconnect the iLet tubing from the infusion set base and set the device aside. Leave your infusion set base on your skin so that you can easily reconnect to the iLet when you are ready.

- Be sure to do this for all water related activities.
- Disconnect from your iLet up to 30 minutes before exercise, or as recommended by your healthcare team.
- Make sure you can still monitor your CGM glucose and hear your CGM alerts using your CGM app on your smartphone. Keep your iLet device close by to hear the alerts if you do not have a smart phone.
- **DO NOT** “pre-load” with carbs **BEFORE** disconnecting from the iLet.
  - If you choose to “pre-load” with carbs, only do so **AFTER** disconnecting from the iLet.
- Remember to reconnect to the iLet when you are finished exercising.
  - Staying disconnected for too long can result in hyperglycemia and development of ketones. Consult with your healthcare team about how long you should be disconnected from the iLet.

### OPTION 2 | Stay Connected to the iLet

You may wish to remain connected to the your iLet during exercise. The iLet will continue to increase or decrease insulin dosing in response to your CGM glucose levels.

- **DO NOT** “pre-load” with carbs.
- ALWAYS make sure to have rapid acting carbohydrates available to treat hypoglycemia. Carry emergency glucagon with you to treat severe hypoglycemia.
- If your CGM glucose is low or is dropping fast during or after exercise, treat with rapid acting carbs as needed. Continue to monitor your blood glucose until it remains above 70 mg/dL.
- **DO NOT** take more carbohydrates than needed to treat a low glucose level. This can lead to a high glucose level triggering more insulin dosing from the iLet. This may end up causing a “roller coaster” effect while your iLet responds to both rising and falling glucose levels.

## REMEMBER

Always make sure to have rapid-acting carbohydrates available to prevent or treat hypoglycemia. Carry emergency glucagon with you to treat severe hypoglycemia.

Make sure your CGM alarms are turned on and the volume is set to a level that you can hear.

DO NOT pre-load with carbs while still connected to the iLet.

## 7. Back up supplies to keep with you

Always be prepared to respond to an issue with your device or your blood glucose levels. Remember, your iLet cannot dose insulin if it doesn't have any insulin in the cartridge, any battery power left, or if you have gone too long without a CGM sensor!

Carry the following supplies with you all the time when using the iLet Bionic Pancreas System:

- Back up insulin therapy (syringes/vials or pens/pen needles)
- BG meter and strips to monitor BG in case of CGM malfunction
- Ketone testing supplies (blood ketone meter and strips or urine strips)
- Hypoglycemia treatment (rapid acting carbohydrates, emergency glucagon)
- CGM sensor and transmitter
- Insulin cartridge, syringe and needle to fill the cartridge, iLet Connect, infusion set and tubing
- iLet charger
- Ketone action plan
- Emergency contact information

# Beta Bionics

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