

Insulin Start Package – Going Home on Insulin

Why is insulin needed?

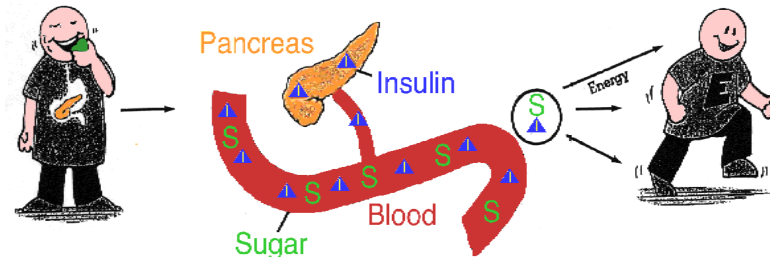


Insulin is a hormone produced by the pancreas. Diabetes is a condition in which the body either can't produce insulin or can't use it properly.

Insulin regulates the amount of sugar in the blood. Blood sugar must be carefully balanced to give your body energy. Managing blood sugar levels is important for healing, preventing infection, improving energy and preventing long term complications of diabetes.

What is Diabetes?

- The energy your body needs to live comes from sugar (carbohydrate) in your food.
- Carbohydrates are found in grains and starches, fruit and milk products.
- Your cells need insulin in order to use the sugar for energy.
- Insulin must be injected to balance with the sugar from food to give your body life-sustaining energy.



This package has information to help you get started on insulin.

1. Checking Blood Sugar
2. Giving insulin
3. Low Blood Sugar
4. Healthy Eating with Diabetes - Diabetes Canada Just the Basics

**** For all food related questions, book an appointment with the Diabetes Education Center 519 376 2121 ext. 2876 to speak with a Registered Dietitian.**

What about costs?

The cost of insulin and monitoring supplies is covered the *Ontario Drug Benefit* Program - people over 65 or under 25 years of age, on Ontario Disability Support Program (ODSP), Ontario Works (OW) or Trillium Drug Program. The cost of needle tips is covered separately for those over 65 years (Syringes for seniors) & with a medical necessities form for those on ODSP or OW.

Most private plans will cover the cost of insulin & monitoring supplies & needle tips.

If you have questions about costs, you may ask for a Social Work consult.

May 2025



Monitoring Blood Sugar for Diabetes

Monitoring your blood sugar can help you know how your food, activity and medications are working together.

Keeping your blood sugars in the target range will help to keep you healthy. High blood sugars over a long time can cause problems with your heart, eyes, feet or kidneys.



Target blood sugar levels for most adults	
Before a Meal	2 Hours After a Meal
4 – 7 (mmol/L)	5 – 10 (mmol/L)

Continuous Glucose Monitoring (CGM)

CGM is a great way to monitor sugar levels, especially if you take insulin. A sensor is placed, often on the back of the arm, which measure sugar levels every 2-5 minutes. The information is sent to either a smartphone app or a meter/scanner or receiver.



Sugar = Glucose
These words mean the same thing!

Dexcom and FreeStyle LIBRE are two CGM systems. They have smartphone apps (*Dexcom G7* or *FreeStyle LIBRE*) that can link to your health care team online to share information for assessments. *Alternatively* they can connect to a separate device that can be uploaded by computer to share diabetes information.

Connect your **FreeStyle LIBRE** info with our clinic via LIBRE View by adding Practice ID **16594984** to your account.

Connect your **Dexcom G7** app with our clinic using clinic code **greybruce**.

Keep track of your insulin doses in the app or device to understand the effect of your insulin.

Monitoring blood sugar using a meter

It is still important to learn to do finger prick monitoring as it will always be used as backup and for problem-solving.

Getting a blood drop:

1. Poke the side of your fingertip with the 'lancing device' (finger piker).
2. 'Milk' the finger from the palm of your hand to the tip of your finger to get a blood drop.
3. Put a test strip into the meter.
4. Look for the flashing 'blood drop' on the screen.
5. Touch the blood drop to the strip. The strip will 'suck up' the drop of blood like a straw.



6. Wait for the blood sugar number to appear on the screen. Log the blood sugar on a **Blood Sugar Record**.

Date	Breakfast			Lunch			Dinner			Bedtime			Other	Notes
	Before	After	Insulin	Before	After	Insulin	Before	After	Insulin	Before	After	Insulin		

Monitor blood sugar before each insulin dose.

Increased monitoring when:

- Medications or insulin doses are being changed
- During illness

**Always bring your meter
to diabetes education appointments.**

May 2026

FreeStyle Libre 3 Sensor Insertion Handout



What does the Libre 3 Sensor do?

The Libre 3 Sensor is a continuous glucose (sugar) monitor. It displays the current glucose (sugar) value, an arrow to show the trend and a graph.

It also has low and high glucose (sugar) alerts that can be set up.

Reading the sensor

The sensor can be read by a reader (meter) pictured above or by a smartphone app. If a smartphone is not available, get a prescription for a reader (meter) and sensor.

Download the FreeStyle Libre 3 App:

- Receive real-time readings minute-to-minute sent directly to your smartphone.

iPhone:

1. Scan the QR code below or open the **App Store** on your iPhone.
2. Search for **FreeStyle Libre 3** and select the app.
3. Tap **Get**.
4. Install by entering your **Apple ID**.
5. Once downloaded, open the app and follow the onscreen instructions to set up.



Android:

1. Scan the QR code below or open the **Google Play Store** on your Android.
2. Search for **FreeStyle Libre 3** and select the app.
3. Tap **Install**.
4. Once downloaded, open the app and follow the onscreen instructions to set up.



How to Insert Libre 3 Sensor:

1. Choose an area on the back of the upper arm.
Clean area with alcohol swab and allow area to dry completely.



2. Unscrew cap from the sensor applicator.



3. Place the sensor on the prepared area. Press firmly against skin to apply the sensor. Wait a few seconds. Gently pull the applicator away from the skin.



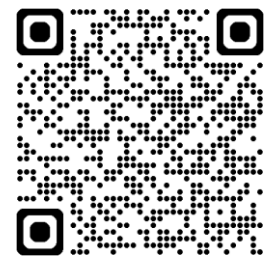
4. Connect your sensor to your phone app following the on screen prompts or scan with reader/meter to start.

The sensor will be ready to use in 1 hour.

Scan this QR code for a video about sensor insertion.

https://youtu.be/HA3NMBOX_T4

**Join Diabetes Grey Bruce clinic with
Practice ID 16594984**



Giving Insulin – Insulin Pens

All people with Type 1 Diabetes and many with Type 2 Diabetes need insulin to manage blood sugar levels. Insulin will lower blood sugar. This handout will teach you how to give your insulin injection.

Also see, *Monitoring Blood Sugar with Diabetes*, *Low Blood Sugar – Hypoglycemia & Diabetes Canada Just the Basics – Healthy Eating with Diabetes*.

Giving insulin

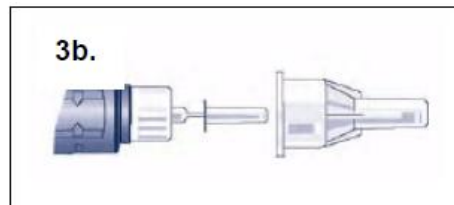
You will need:

- A prefilled insulin pen
- Community use pen tip needles

1. Remove the cap from the pen.

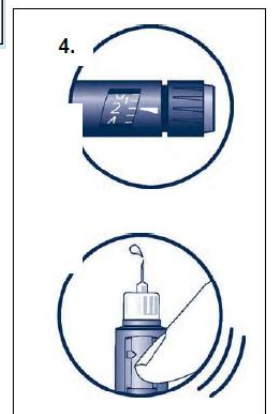
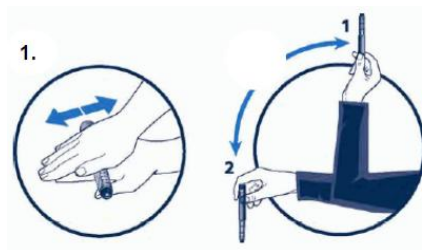
2. Peel the paper tab off the pen tip needle.

3. Screw the pen tip needle onto the pen and pull off **two** caps. You should see the needle.



4. **Dial a 2 unit test dose.** Squirt it into the air by pressing the injection button on the end of the insulin pen. Repeat this until insulin flows. If insulin does not flow, change the pen tip needle. Test doses should be done before **EVERY** injection.

5. If your insulin is cloudy (NovoMix 30 or Humalog Mix 25 or 50), mix it by turning it over or rolling in your hands at least 20 times so that it looks evenly 'milky'.



Giving Insulin – Insulin Pens

6. Dial your dose of insulin (you should be provided with this information on discharge).

Two different types of insulin may be prescribed (slow and/or fast acting).

Be sure you check the insulin label to be sure you have the

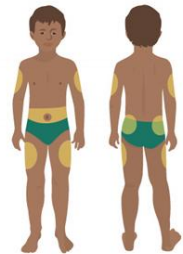
1. right type
2. right dose
3. right time

7. Hold the pen in the palm of your hand with the needle facing your body. Put your thumb on the injection button.

8. Inject your insulin in your belly, outer thighs, back of upper arms or upper buttocks. (Choose a new injection site each time.)



9. Insert the needle straight into your skin and press the injection button all the way in. **Count to 10** with the needle under your skin.



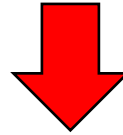
10. Remove the needle from your skin. Check that the dose window reads 0. This means you have given your full dose.
11. Replace the large needle cap and unscrew to remove. Dispose of the used needle in a plastic jar with a lid.

Storage

The insulin pen you are using can be kept at room temperature for 1 month (Tresiba insulin 2 months). Store extra insulin in the refrigerator.



Low Blood Sugar - Hypoglycemia



What is low blood sugar?

- Blood sugar less than 4 mmol/L or symptoms of low blood sugar

What are the symptoms of a low blood sugar?

- Trembly/Shaky
- Sweaty
- Dizzy
- Hungry
- Tired/Weak
- Grumpy/Irritable



What to do:

1. Don't wait! Treat with fast sugar first!

- 3 teaspoons of sugar in water
- OR Chew 4 candies or 4 Dextrose tablets.
- OR Drink $\frac{3}{4}$ cup (175 mL) of fruit juice or regular pop



2. Wait 15 minutes

3. Recheck your blood sugar and repeat fast sugar every 15 minutes until you are feeling better and your blood sugar is above 4.0 mmol/L.

4. Then and only then, if your next meal is more than 1 hour away, have a snack to keep the blood sugar from dropping again, such as:

$\frac{1}{2}$ sandwich OR granola bar OR 3 plain cookies OR 6 crackers & cheese



What causes a low blood sugar?

- Too much insulin (or medication, such as gliclazide or diamicon)
- More physical activity than usual
- Less food than usual
- Illness
- Drinking alcohol

Be prepared!

- **Carry 3 low blood sugar treatments (fast sugar) and snacks with you at all times**, especially in the car and when being active.
- Check your blood sugar before you drive. Do not start driving if your blood sugar is less than 4 mmol/L. See the *Drive Safe with Diabetes (Diabetes Canada 2020)* handout.
- Carry extra food when you are more active or reduce your insulin
- Keep low blood sugar treatments at your bedside or near your favourite chair to prevent falling when you get up to treat your low.
- Call your Diabetes Educator or health care provider if you have:
 - too many low blood sugars or they are too hard to handle
 - a severe low blood sugar - where you need help to treat it

Wear diabetes medical identification
i.e. Medic Alert™ bracelet.



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Getting started: healthy eating and diabetes

Glucose comes from foods that contain carbohydrates such as fruit, milk, some vegetables, starchy foods and sweet foods like honey, candy and desserts. Healthy eating and physical activity help to manage your blood sugar. You may also need to take pills, insulin and/or other medications.



All bodies need energy in the form of sugar called glucose. Insulin is a hormone that helps our bodies take this glucose and use it for energy. Without insulin, glucose builds up and causes high blood sugar.

Here are some basic tips to help you get started

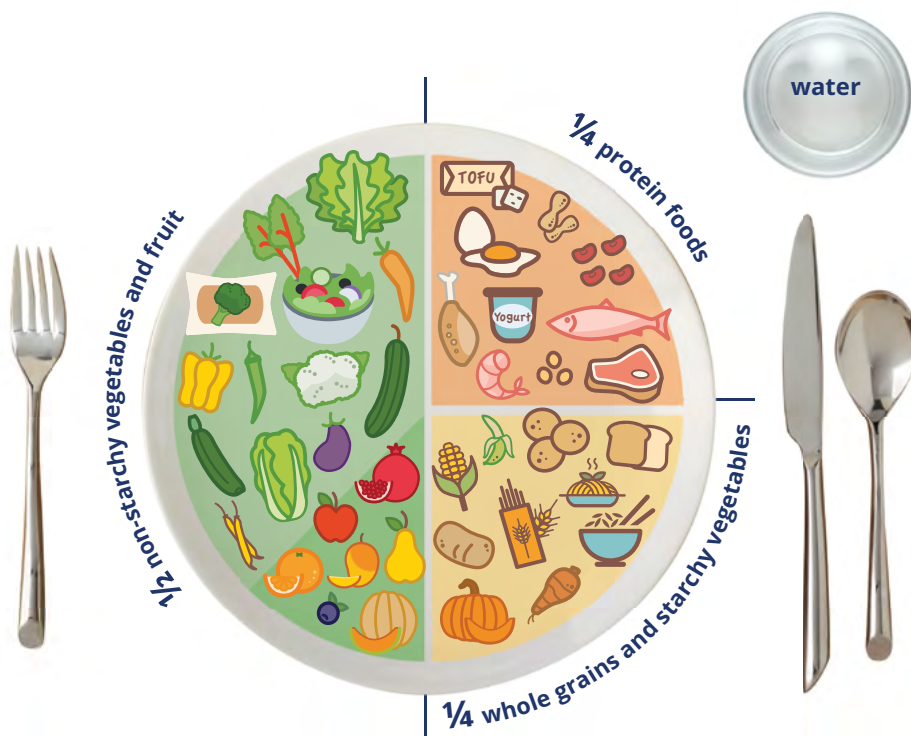
Tips:	Reasons:
Eat a meal or snack every 4-6 hours to ensure you are getting enough energy and nutrients.	Eating at regular times helps manage blood sugar levels.
Eat more high-fibre foods such as whole grains, breads and cereals made with whole grains, beans, peas, lentils, vegetables and fruit.	Foods high in fibre will keep you full longer, lower the impact of carbohydrates on your blood sugar and support overall health.
Eat a balanced breakfast that includes both carbohydrates and protein.	Helps to prevent blood sugar highs and lows
Prepare more meals at home.	Preparing meals gives you more control over how much sugar, salt and added fats you eat.
Limit sugars and sweets such as sugar sweetened drinks, desserts, candies, jam and honey.	Increased intake of sugar increases blood sugar levels.
Choose healthy fats such as olive, canola or vegetable oils in small quantities.	Replacing saturated fats and processed foods high in saturated fats with unsaturated fats helps reduce heart disease risk.
Choose water more often as your drink of choice.	Plain water has no carbohydrates or sugars and will not add to your carbohydrate intake.
Add physical activity to your day.	Regular aerobic and resistance exercise improves blood sugar and is good for overall well-being.
Limit alcohol consumption.	Alcohol can affect blood sugar levels and provides calories but no nutrients.



Diabetes Canada recommends that all people living with diabetes should receive advice on nutrition from a registered dietitian. It's natural to have questions about what food to eat. A registered dietitian can help you include your favourite foods in a personalized healthy eating plan.

Plan for healthy eating

The balanced plate approach applies to all mealtimes, even if you use a bowl! The balanced plate is designed to help you meet your nutrient needs and manage your blood sugar.

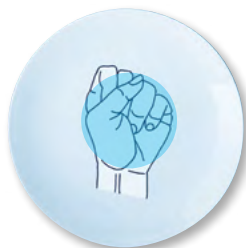


Healthy eating tips

- ✓ Eat more vegetables. They are very high in nutrients and fibre and low in carbohydrates.
- ✓ Choose lean animal proteins such as skinless chicken, pork, extra lean beef and fish. Select vegetable proteins such as tofu, edamame, beans and lentils more often.
- ✓ Select heart healthy fats such as olive oil, canola oil, vegetable oils, avocado and nuts and seeds instead of animal fats.
- ✓ Learn more about low-glycemic-index foods such as legumes, whole grains, fruits and vegetables and how to include them in your eating pattern.
- ✓ Eat together as a family more often to model healthy eating behaviours to children and teenagers.
- ✓ Consider learning about counting carbohydrates, and different types of eating patterns (e.g. Mediterranean, DASH).
- ✓ If you are planning on fasting, talk to your health-care team 1 to 2 months in advance.

Handy portion guide

Your hands can be very useful in estimating appropriate portions. When planning a meal, use the following portion sizes as a guide:



Fruits/Grains & Starches Choose an amount the size of your fist for grains or starches, or fruit.



Vegetables Choose as much as you can hold in both hands. Choose brightly coloured vegetables.



Protein Foods Choose an amount the size of the palm of your hand and the thickness of your little finger.



Fats Limit fat to an amount the size of the tip of your thumb.

Sample meal plan 1

Breakfast:

- Scrambled eggs (2)
- Sauteed vegetables-peppers, onion, cabbage, spinach (1 cup, 250 mL)
- Whole wheat toast (2) or tortillas (2x6")
- Reduced sugar Greek yogurt (1 container, 95 g)
- Tea or coffee

Lunch:

- Lentil or bean vegetable soup (2 cups)
- Raw, non-starchy vegetables (1 cup, 250 mL)
- Hummus (1/4 cup, 60 mL)
- 1% or skim milk or alternative (1 cup, 250 mL)
- 1 small mango

Dinner:

- 2 whole grain roti or flat bread (6" round)
- Chicken, fish or lentil curry (1 cup, 250 mL)
- Side salad (1 cup, 250 mL) + dressing (1 Tbsp, 15 mL)
- 1% or skim milk or soy alternative (1 cup, 250 mL)
- Cantaloupe (1 cup, 250 mL)

Evening Snack:

- Roasted, unsalted peanuts (1/4 cup, 60 mL)
- 1 small banana

Increase your physical activity

- Make time for physical activity into your daily routine. Even small amounts of movement add up throughout the day.
- Try to be active most days of the week. Start with a few days and work your way up to daily.
- Slowly increase the amount of effort; for instance, progress from strolling to brisk walking.
- Try new activities like dancing or basketball and make family time active.
- Reflect on how moving your body makes you feel. Many people sleep better, experience reduced stress or have improved energy.



Additional tips

- ✓ Include a protein, carbohydrate/starch and a fruit or vegetables at every meal.
- ✓ Listen to your body's cues for hunger and fullness.
- ✓ Include high-fibre foods such as whole grain breads, cereals, and pastas, fruits, vegetables and legumes.
- ✓ Move your body in a way you enjoy every day.



Sample meal plan 2

Breakfast:

- Old fashioned oatmeal or porridge (3/4 cup, 175 mL)
- Almonds, roasted, unsalted (1/4 cup, 60 mL)
- Frozen blueberries, thawed (1 cup, 250 mL)
- 0% or 2% Greek yogurt (3/4 cup, 175 mL)
- Tea or coffee

Lunch:

- Tuna, packed in water (85 g or 1/2 tin)
- 2 slices whole grain bread or 6" pita
- Reduced fat mayonnaise (1 Tbsp, 15 mL)
- Tomato slices
- Greek Lentil Salad (1 1/2 cups, 375 mL)
- Watermelon (1 cup, 250 mL)

Afternoon Snack:

- Apple (1 medium)
- Cheddar cheese (1 oz, 30 g)

Dinner:

- Brown rice, cooked (2/3 cup, 150 mL)
- Stir-fried broccoli (1 cup, 250 mL) with beef or salmon (4 oz, 120 g)
- Sautéed spinach with garlic (1 cup, 250 mL)
- 1 orange
- 1% or skim milk or soy alternative (1 cup, 250 mL)

Evening Snack:

- Air-popped popcorn (3 cups, 750 mL)
- Pumpkin seeds, unsalted (1/4 cup, 60 mL)

Notes:

For additional nutrition and fitness information, visit diabetes.ca

**DIABETES
CANADA**

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