

Going home from hospital when you have diabetes

Here are some things you should know before going home from the hospital when you have diabetes.

Do you:

<input type="checkbox"/>	know what your blood sugar targets should be?
<input type="checkbox"/>	have a blood glucose meter (or have a prescription) to test your blood sugar levels?
<input type="checkbox"/>	know what new medications/insulin have been started or been changed while in hospital?
<input type="checkbox"/>	know how to give an injection of insulin (if new to injecting insulin)?
<input type="checkbox"/>	have a prescription for your: <ul style="list-style-type: none"> • new medications or insulin, • blood sugar meter, test strips and lancets • needle tips for insulin
<input type="checkbox"/>	know how to recognize and treat a low blood sugar?
<input type="checkbox"/>	know the driving guidelines for low blood sugar and driving?
<input type="checkbox"/>	know how to recognize and treat a high blood sugar?
<input type="checkbox"/>	know what to do if you are sick?
<input type="checkbox"/>	know when to see your health care provider or go to an Emergency Department?
<input type="checkbox"/>	have a referral to a diabetes clinic or an appointment with your family doctor?

What new medications/insulin have been started or been changed while in hospital?

Oral medications (pills):

Name	Dose	When to give

Insulin:

Name	Dose	When to give

Non-insulin injections:

Name	Dose	When to give

What are my blood sugar targets?

Before meals	4.0 – 7.0 mmol/L
2 hours after meals	5.0 – 10.0 mmol/L



Your health care practitioner may give you some different targets based on your needs.

Why do I need to test my blood sugar?

It is important to test your blood sugar so you can see patterns of your blood sugars. This information will help you and your diabetes team to adjust your treatment plan.

How often should I test my blood sugar?

How often you test depends on your treatment plan. There are many types of treatment plans.

- Meal planning alone
- Meal planning and pills
- Meal planning and insulin
- Meal planning, pills and insulin

Here are some testing guidelines.

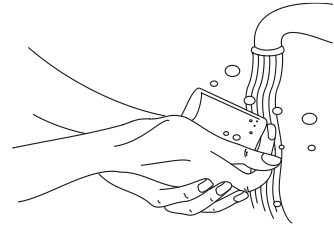
- Test at least once a day (if on pills)
- Test up to 4 times a day (if taking insulin)
- Vary the times during the day that you test
- Keep a record
- Show your record to members of your diabetes care team



How do I give an insulin injection?

The nurses will help you with the first few injections. Here are the steps to follow:

1. Wash your hands.

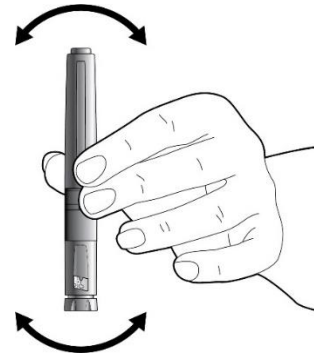


2. Most insulin pens are disposable. Once all of the insulin in the pen has been used or it has been 28 days since first used, throw the entire insulin pen into the sharps container.

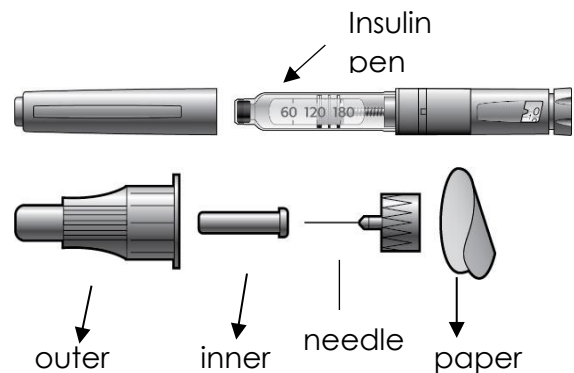
3. If you have a re-usable pen that uses an insulin cartridge, load the insulin cartridge into the pen. Check your manual to see how to load the cartridge.

4. Check that you are using the right type of insulin. Check the expiry date on the cartridge.

5. Gently tip the pen back and forth 10 times gently to mix the cloudy insulin.



6. Remove outer paper cover from needle tip. Attach needle tip to insulin pen by twisting on clockwise. Remove clear outer cap and put aside. Remove coloured inner cap and throw in sharps container.

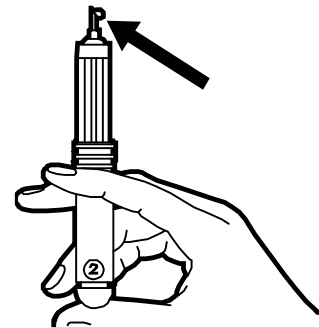


7. If you are using a Luxura or Klikstar pen (reusable), skip to Step 9.

8. If you are using a Novolin Pen 5 (reusable), pull out the dose button to unlock.

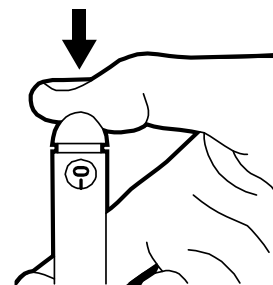


9. Turn the dial to "2". Point the needle upwards and push the dose button to squirt out the 2 units. If a stream of insulin does not appear, repeat until some insulin does appear.



10. Make sure the number in the window returns to "0" (zero).

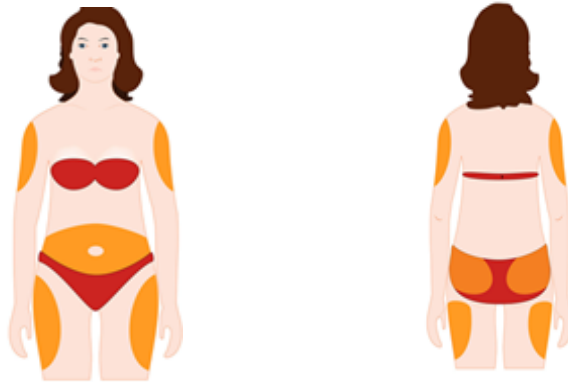
Then turn dose button to your amount of _____ units of insulin.



11. Choose an injection site. The tummy or abdomen is best.

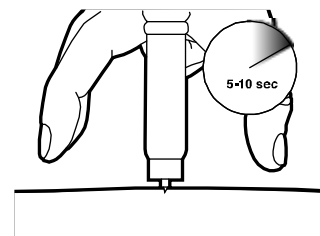
Tips:

- Rotate the sites. Move around to all available areas of the abdomen. Avoid 5 cm (2 inches) around the navel).
- Keep injection sites at least 3 cm (1.5 inches) apart.
- Use a 4 to 6 mm needle tip.
- Watch the injection site for lumps or bumps – do not inject into a lump or bump.
- Use pen needles only once.



12. Insert the needle straight into your skin. You are aiming for the layer of fat below the skin, but above the muscle. You do not need to pinch up any skin unless you are very thin.

13. Push the dose button all the way down to inject the insulin. Count to 10 and then gently remove the insulin pen/needle from your skin. Carefully place large outer cap over used needle tip.



- 14.** Twist cap and needle tip off and discard in sharps container. When the sharps container is full, take it to your pharmacy to be replaced.

Do not put your sharps (pen tips, lancets) in the garbage. Speak to your community pharmacist to obtain a sharps container for disposal.



Tips for insulin and pen care

- Do not store insulin pen you are currently using in the refrigerator.
- Store unopened cartridges/pens of insulin in the refrigerator.
- Never allow your insulin to freeze.
- Store insulin away from heat and strong light.
- Store unopened cartridges of insulin in the refrigerator.
- Store opened cartridges of insulin for 28 days at room temperature, and then discard.
- Some insulins last longer than 28 days: check information sheet that comes with your prescription.
- Always carry your insulin pen with you.

What is low blood sugar?

Low blood sugar is when your blood sugar is less than 4.0 mmol/L. It is also called hypoglycemia.

What happens when your blood sugar is low?

- headache
- blurry eyesight
- hunger
- irritability
- sweating
- dizziness
- fast heartbeat
- shaking
- anxiety
- weakness, feeling tired

If you have one or more of these symptoms, test your blood sugar to see if it is less than 4.0 mmol/L

If your blood sugar is less than 4.0 mmol/L, you need to treat it right away. If left untreated, your symptoms could get worse and you could pass out

If you are not able to test your blood sugar right away, treat your symptoms right away

How do I treat a low blood sugar?

Step 1

- Stop what you are doing
- Eat or drink 15 grams of fast-acting carbohydrate. Choose one of these:
 - 3 to 6 glucose tablets (depending on brand)
 - 3 teaspoons, cubes or packets of table sugar (may be dissolved in water)
 - 3 teaspoons of honey
 - $\frac{3}{4}$ cup of regular pop (not sugar free or diet)
 - $\frac{3}{4}$ cup of juice
 - 3 to 6 candies (depending on brand)

Step 2

- Sit down and rest for 10 to 15 minutes. Check your blood sugar level again.
- If your blood sugar is still less than 4.0 mmol/L or if the symptoms of low blood sugar do not go away, repeat Step 1.

STOP: If you have a low blood sugar just before a meal or snack, treat it as described in Steps 1 and 2 and then have your regularly planned meal or snack and medication.

If your next meal is more than one hour away, have a snack with a starch and protein such as:

- $\frac{1}{2}$ cup of milk plus 2 plain cookies
- $\frac{1}{2}$ cup of milk with $\frac{1}{2}$ cup cereal
- 6 crackers with 1 oz cheese
- 1 slice of bread with 1 tablespoon peanut butter or 1 oz meat or cheese

This will help maintain your blood sugar level until your next meal.

Low blood sugar and driving

When you take insulin or some types of pills for diabetes, you are at risk of having a **low blood sugar while driving**. These medications may lower your blood sugar quickly.

If you have a low blood sugar while driving, you are a danger to yourself and others.

Your blood sugar should be **over 5.0 mmol/L to drive**



Remember “Over 5 to Drive”

If you drive a commercial vehicle, there are different guidelines for your blood sugar level. Please discuss with your health care provider and ask for a copy of “Diabetes and Commercial Driving”.

What do I need to do before I drive?

Always test your blood sugar just before driving if:

- your blood sugar **is over 5.0 mmol/L**, you can drive. Test your blood sugar after every 4 hours of driving.
- your blood sugar **is 4.0 to 5.0 mmol/L**, eat a snack with carbohydrate, such as cheese and crackers or ½ sandwich to raise your blood sugar over 5.0 mmol/L.
- your blood sugar **is less than 4.0 mmol/L** or you have one or more of the symptoms of a low blood sugar, you need to raise your blood sugar quickly by doing **Steps 1 and 2** listed above.

Remember: wait 15 minutes after treating a low blood sugar. Do not drive. Check your blood sugar again:

- if your blood sugar **is still 5.0 mmol/L** or less or your symptoms have not gone away, repeat Step 1 listed above.
- if your blood sugar **is over 5.0 mmol/L**, have a snack such as a granola bar, cheese and crackers or ½ sandwich to keep your blood sugar above 5.0 mmol/L.

When you treat a low blood sugar, **always wait at least 40 minutes before you drive.** You need this time to fully recover and be able to drive safely.



What is high blood sugar?

A high blood sugar level is when the amount of sugar in your blood is higher than your target level. High blood sugar is also called hyperglycemia.

What causes high blood sugar?

High blood sugar can be caused by:

- missing your diabetes medication
- your dosage of diabetes medication is not right for you
- eating too much, especially foods high in carbohydrates
- being sick or under stress
- side effects from other medications

What are the signs on high blood sugar?

When your blood sugar level is too high, you may:

- be thirsty, have a dry mouth and skin
- urinate more often
- feel tired or weak
- feel hunger or nausea
- have stomach pains or cramps



People with type 1 diabetes may also have fruity smelling breath. It may also smell like acetone or nail polish remover.

What do I do if I have a high blood sugar?

- Test your blood sugar levels every 4 hours
- Drink sugar free fluids such as water or diet pop
- If you have type 2 diabetes, an exercise such as walking may help to lower your blood sugar
- If you have type 1 diabetes and your blood sugar is above 14, then do not exercise. Check your blood for ketones. Intense exercise can increase your blood sugars



What are ketones?

If you have type 1 diabetes, ketones develop when your body does not have enough insulin to use sugar for energy. Instead, your body breaks down stored fat for energy and ketones are made as a result.

Ketones can make you very sick. If your blood sugar is high because you are sick, the build up of ketones can make your illness worse.

If you have type 1 diabetes you always need to take insulin. When you are sick, you may need to take more insulin and test for ketones more often.

If you have type 1 diabetes, ask your health care provider about how to test for ketones.

What do I do when I am sick?

- Take your diabetes medication.
- Eat your usual meals and snacks (if you have snacks), at your usual time if you can.
- Test your blood sugar level at least every 4 hours.
- Talk to your health care provider about how to deal with sick days.



What if I am too sick to eat?

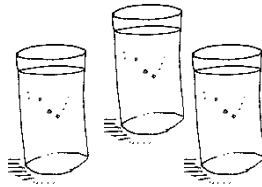
If you are unable to eat your usual meals and snack(s), have one of these every hour:

- ½ cup juice
- ½ cup regular pop
- ½ cup regular Jell-O
- 1 whole popsicle

You may need to test your blood sugar more often

Drink a lot of sugar free fluids such as:

- water
- clear broth
- tea
- diet pop



If you are not eating or drinking well, you need to stop taking medications from the following list:

- | | | |
|----------|---------------------------------------|--|
| S | sulfonylureas, other secretagogues | (e.g: gliclazide MR, glyburide) |
| A | ACE-inhibitors | (e.g: perindopril, ramipril) |
| D | diuretics, direct renin inhibitors | (e.g: furosemide, aliskiren) |
| M | metformin | (also called Glucophage) |
| A | angiotensin receptor blockers | (e.g: telmisartan) |
| N | non-steroidal anti-inflammatory drugs | (e.g: naproxen) |
| S | SGLT2 inhibitors | (e.g: empagliflozin, dapagliflozin, canagliflozin) |

Only restart the medication once you are able to eat or drink normally

When should I see my health care provider or go to an Emergency Department?

You may need to see your health care provider or go to the Emergency Department if you:

- vomit 2 times or more in a 12 hour period (important if you have type 1 diabetes and test positive for ketones)
- have stomach pain and nausea that will not go away
- have diarrhea that does not stop or is getting worse
- have a high fever (greater than 38 C or 100.4 F)
- have a cold, infection or flu that is getting worse
- have extreme thirst, confusion, excessive sleepiness, vision loss or general weakness



See your health care provider or go to the Emergency Department if your condition gets worse

People with type 1 and type 2 diabetes: see your health care provider or go to the Emergency Department if you:

- vomit 2 times or more in a 12 hour period
- have stomach pain and nausea that will not go away
- have diarrhea that does not stop or is getting worse
- have a high fever (greater than 38°C or 100.4°F)
- have a cold, infection or flu that is getting worse
- find your blood sugar level is too high
- have extreme thirst, confusion, excessive sleepiness, vision loss or general weakness

For type 1 diabetes:

- see your blood sugar or ketones are **not** decreasing after taking two correction doses of insulin

Who will I see for my diabetes when I go home?

Speak to your healthcare provider about getting a referral to a diabetes clinic or make an appointment with your family doctor.

Diabetes clinics in Hamilton and area:

Name	Address	Phone
Brant Community Health Centre Diabetes Program	200 Terrace Hill St, Brantford, ON N3R 1G9	519-751-5544
Centre de Santé Communautaire	1320 Barton St. E., Hamilton L8H 2Y2	1-866-437-7606
Compass Community Health (formerly North Hamilton Community Health Centre)	438 Hughson St. Hamilton	905-523-6611
De dwa da deh s nye s Aboriginal Health Centre	678 Main St. E., Hamilton L8M 1K2	905-544-4320
Haldimand Norfolk Diabetes Program	Norfolk General Hospital: 365 West St, Simcoe N3Y 1T7	519-426-0130
Halton Diabetes Program	Oakville Trafalgar Memorial Hospital: 2001 Hospital Gate Dr, Oakville L6M 0L8 <i>Locations in Burlington, Oakville, Milton, Georgetown</i>	905-845-2571
Hamilton Health Sciences: Diabetes Care & Research Program	McMaster Hospital: 1200 Main St. W, Hamilton	905-521-2100 x76061
Niagara Health Diabetes Program	1200 Fourth Ave., St. Catharine's L2S 0A9 <i>Locations in Welland, St. Catharine's, Port Colborne, Niagara Falls</i>	905-378-4647
Six Nations Diabetes Clinic	1745 Chiefswood Ave, Ohsweken N0A 1M0	519-445-2418
St. Joseph's Hamilton: West 5th Campus	St. Joseph's Centre for Mountain Health Services: 100 West 5 th St, Hamilton	905-522-1155
King St. East Campus	St. Joseph's Ambulatory Health Services: 2757 King St. East, Hamilton	x32045

What should I bring to my appointment with the diabetes clinic/family doctor?

Remember to bring:

- a record of your blood sugars
- a list of your medications
- your Ontario health card