

# getting started with insulin

## 1 | know how insulin can help you

	A1C	fasting or before meals	2 hours after meals
blood sugar targets to aim for	less than 7.0%	4.0 – 7.0 mmol/L	5.0 - 10.0 mmol/L (aim for 5.0-8.0 if your A1C is higher than 7%)
my numbers			

## 2 | know the side effects

The major side effect of insulin is the chance of a low blood sugar (hypoglycemia) happening.

A low blood sugar is when your sugar is less than 4 mmol/L.

## 3 | know how to prevent lows

Causes of low blood sugars:

- being more active than usual
- going a long time without eating
- eating less than usual, but still taking the same amount of medication or insulin
- alcohol
- taking too much or taking extra medication or insulin

## 4 | know how it might feel to be low

You *may* experience any of the following symptoms:

- dizzy
- shaky
- sweaty
- hungry
- weak or tired
- confused
- irritable

**It is important to treat low blood sugars right away.**

If low blood sugars are not treated, you could pass out.

## the 15 rule

1 | Check your blood sugar if you are feeling any of the hypoglycemia symptoms. If you do not have your meter but feel "low", follow the 15 rule to treat it anyway.

2 | If your blood sugar is < 4 mmol/L follow the **15 rule**:

- ✓ 3-4 sugar tablets (DEX tabs)
- ✓ 3 packets of sugar, dissolved in water
- ✓ ¾ cup of juice or regular pop (not diet)
- ✓ 6 hard candies that you can
- ✓ chew quickly (not sugar-free)
- ✓ 1 tablespoon of honey

3 | **Wait 15 minutes**, then **re-check** your blood sugar. If it is still less than 4, treat it again.

4 | Once your blood sugar is higher than 4, if your next meal or snack is more than 1 hour away, eat a small snack with carbohydrate + protein to keep your sugar stable.

① **check** → ② **treat** → ③ **eat**

## driving

1 | always test before driving & if sugars are less than 4, treat first & wait 45 min before driving

2 | if your blood sugars are between 4-5 mmol/L, have a snack before driving

3 | pull over every 4 hours while driving and test your blood sugars

## types of insulin

type	name	starts to work in	works the hardest	how long it lasts
<b>meal-time (bolus) insulins</b>				
<b>rapid (clear)</b>	Humalog Novorapid Apidra	10 minutes	60 minutes	4 - 5 hours
<b>fast-acting (clear)</b>	Humulin R Novolin Toronto	30 minutes	3 hours	5 - 8 hours
<b>basal insulins</b>				
<b>intermediate-acting (cloudy)</b>	Humulin N Humulin L Novolin NPH	1-3 hours	5-8 hours	Up to 18 h
<b>extended long acting (clear)</b>	Levemir Lantus Toujeo	90 minutes 90 minutes up to 6 h	No peak	Up to 24 h Up to 24 h Up to 30 h
<b>premixed (cloudy)</b>	Humalog Mix 25   Humalog Mix 50   Novomix 30 Humulin 30/70   Novolin 30/70			

## how to store your insulin

- 1 | Keep your insulin in the fridge until you are ready to use it.
- 2 | Take the new insulin pen or cartridge out of the fridge for a few hours before using it.
- 3 | The insulin cartridge that you are currently using can stay at room temperature for up to 28 days. If you still have insulin left after that, you need to start a fresh new insulin cartridge or pen.
- 4 | Keep your insulin away from direct sunlight & temperatures higher than 30 degrees C° (i.e. do not leave it in your car in the summer).

\*Levemir can be kept at room temperature for up to 42 days.

## know how & where to inject

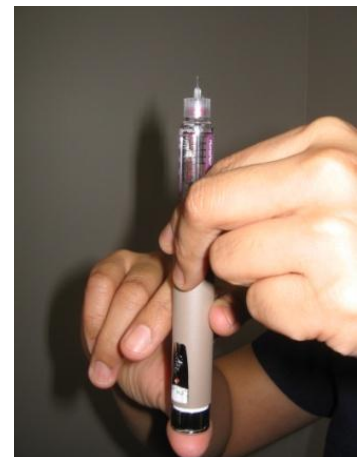
### 1 | pick your site

- The best spot to inject your insulin is in your abdomen – as long as you inject below the bottom of your ribs and above the hip bone. You can go all the way to the seams of your shirt at the side of your abdomen.
- It is very important to rotate your injection areas each time to make sure you are not overusing one area.



### 2 | prime your pen (safety test)

- Priming your insulin pen helps make sure there are no air bubbles getting in the way of your insulin being delivered
- Set the dose for 2-4 units, load a needle onto the pen, hold the pen upright and pointing away from you, and press the plunger at the bottom of the pen – you should see drops of insulin from the top of the needle.
- If you do not see drops of insulin, repeat the process until you do.



### 3 | inject

- Hold the pen in your fingers with your thumb ready to press the plunger down
- Inject at a 90 degree angle straight into the skin.
- If you are using a needle longer than 6 mm (ask your pharmacist or diabetes educator!), you will need to lift an inch of skin between your thumb and finger, and inject into that lifted skin.
- Push plunger down completely. Leave needle in to the count of 10 to ensure proper absorption of insulin. Remove the needle and
- Dispose of the used needle in a sharps container.
- You are done!