



# FIT Technique Plus\*

## FIT for Pregnancy

\*Educational tools based on FIT Canada Recommendations for Injection Technique, updated February 11th, 2020



If your health care team has suggested that you need to inject insulin during your pregnancy you will probably have some very important questions.



### 1. Will taking insulin hurt the baby?

- having your blood glucose in target before and during your pregnancy is the most important factor for the health of your baby;
- when you have type 1 or type 2 diabetes before pregnancy good control is needed to prevent early development problems as the baby is forming
- when you have gestational diabetes good control is needed to help prevent large size babies and complications for the baby at birth
- insulin, in the prescribed dose, does not circulate in the baby's blood<sup>1, 2</sup>
- if your blood glucose stays high during your pregnancy it can cause low blood glucose for your baby at birth

### 2. Will the injection hurt the baby?

- no, the injection will not hurt the baby
- the baby is growing many layers below the skin, in the uterus, which cannot be touched by 4-6mm insulin pen needles
- insulin is designed to be delivered into the fat layer below the skin; in adults the abdominal area has a thicker layer of fat than the thigh or arm<sup>3</sup>
- when short needles (4 to 6mm) are used there is less risk of injecting into the muscle below the fat<sup>4</sup>

### 3. Are the injections painful?

- patients report that shorter, finer needles are more comfortable
- using the right site for each injection and using the right injection technique is key<sup>4</sup>



## How should I give the insulin injection?

**Hold the insulin pen at a 90° angle and inject straight into the skin. The needle will go through the skin into the fatty layer.**

During pregnancy, the skin is often taut over the central part of the abdomen. For this reason, most women prefer to use the sides of their abdomen, especially in the third trimester. A skin lift can be used<sup>5,6</sup>.

It is important to give each injection at least 1-2 cm apart.

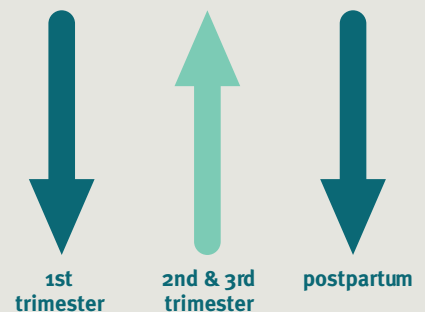
**After each injection be sure to remove the needle and dispose of it in a sharps container.**



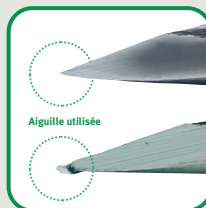
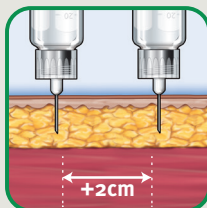
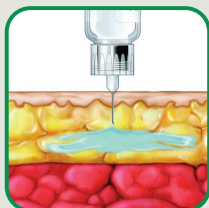
## Insulin requirements



### Requirements during pregnancy



## Injection Tips



- Inject straight into the skin using a 90° angle
- Rotate injection sites at least 1-2 cm apart
- Avoid the area around the umbilicus
- Use a new needle for each injection

1. Pollex E, Feig D, Lubetsky A et al. Insulin glargine safety in pregnancy. Diabetes Care 2010;33:29-33.

2. McCance D, et al. Evaluation of insulin antibodies and placental transfer of insulin aspart in pregnant women with type 1 diabetes mellitus. Diabetologia 2008;51:2141-2143.

3. Gibney MA, et al. Skin and subcutaneous adipose layer thickness in adults with diabetes at sites used for insulin injections: implications for needle length recommendations. Curr Med Res Opin. 2010; 26 (6): 1519-1530.

4. Berard L, et al. FIT Forum for Injection Technique Canada. Recommendations for Best Practice in Injection Technique October 2011.

5. Eisenbeiss C, et al. The influence of female sex hormones on skin thickness: evaluation using 20 MHz sonography. Br J Dermatol 1998;139:462-467.

6. Frid AH, Kreugel G, Grassi G, et al. New insulin delivery recommendations. Mayo Clin Proc. September 2016;91(9):1231-1255

