



# FIT Technique Plus\*

## FIT for Kids

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



### Meet Regi



Age 4 ♂ newly diagnosed with Type 1 Diabetes



- Hospitalized in mild diabetic ketoacidosis (DKA).
- Emaciated at diagnosis with a height of 105cm (75th percentile) and a weight of 14.5 kg (10-25th percentile).
- Fearful of injections and requiring restraint.
- Started on a t.i.d. insulin regimen with rapid- and intermediate-acting insulin.
- Mom is a single parent without any support systems.

### Technique Review:

- Mom is a single parent without any support systems. A review of potential injection sites indicates that there is minimal subcutaneous tissue at the abdomen, arms, thighs and buttocks.
- Mom reports that she does not have a fear of needles but that she is afraid that she is going to hurt Regi and she is stressed by his response to injections (crying and thrashing).

### Current Challenges

1. Minimal subcutaneous tissue and lack of surface area.
2. Regi's and Mom's reaction to needles.
3. Lack of social support.

### What does the research say?

#### Lo Presti 20121

Distance from the skin to the muscle surface was less than 4mm in nearly 10% of children, especially in the 2 to 6 year old age group. This distance decreased progressively based on injection site (arm <math>\leftarrow</math> thigh <math>\leftarrow</math> abdomen <math>\leftarrow</math> buttock).



#### Howe 20112

Reported fear and pain with injections was higher in younger children. Mothers' self-reported fear was 43% and distress was 52% when administering insulin injections to their children.



#### Patton 20103

Approximately 50% of youth reported barriers to using new injection sites. They reported fear that new injection sites would be painful and comfort with their existing routine.



### Recommendations for Regi

Advised to use buttocks until weight regained and more fatty tissue at other sites. As soon as possible, encourage use of other sites with a systematic plan for rotation to prevent lipohypertrophy.

Home care organized to provide support and restraint with injections. Taught to inject with 6mm syringe using a skin lift and a 45° angle. Once cooperating, plan to teach pens with 4mm needle length (may require skin lift at some sites).

Suggest mom experience giving a saline injection to herself.

Instructed Mom to prepare the injection out of sight, approach Regi in a matter-of-fact manner and get the injection over with quickly without display of emotion.

Provided Mom with FIT for Kids: Pointers for Parents (see page 2).

### FIT Canada Recommendation:4

To address needle anxiety and pain, consider intervention strategies for the parents.





## Do you have a child with Type 1 Diabetes?



### You are not alone.

Many children in Canada inject to manage their diabetes. Injecting isn't difficult. It's easy to learn. It's quick and more comfortable than you would think. Your approach with your child, will greatly affect how quickly they adjust. If you are anxious and frightened about giving your child a needle they will also be anxious and frightened.



- Prepare the injection out of sight.
- Approach your child in a matter-of-fact manner, stating that it is time for "insulin". Do not use the word "needle".
- Offer a simple explanation as to why he or she needs insulin. For example: to help you grow and be strong.
- Tell your child that sometimes insulin stings for a brief moment, but their job is to stay still.
- Restrain your child if necessary.
- Avoid negotiating and bribing and deliver the injection quickly.
- Give your child a hug and kiss when completed.

## Helpful tips



### Tips for toddlers, preschoolers and early school-aged children:

- Try to keep your child distracted while giving the injection. For example: watching T.V., playing with your phone, wiggling toes, counting, blowing bubbles or finding objects in a picture.
- Let your child help prepare the injection. For example: mixing the cloudy insulin, screwing on the pen needle, and doing the 2 unit "air shot" with the insulin pen.

- Pretend that one of their stuffed animals or dolls has diabetes and let her give it injections with a syringe that has the needle cut off or an insulin pen without a pen needle attached.
- Use a sticker chart to encourage your child to hold still for injections. After he has earned a certain number of stickers you might want to offer a small reward such as a coin or a pack of sugar free gum.

**Note:** give a reward for 3-5 stickers for a 3 year old and 5-8 for a 5 year old.



## Did you know?



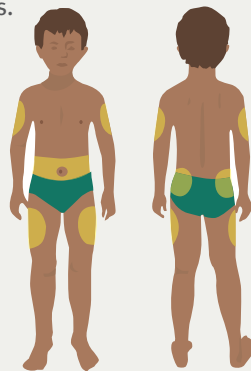
### If injecting themselves:

- Small children do not have much surface area at injection sites. If injections are given in limited spots, fatty lumps may form. These lumps are called lipohypertrophies. Lipohypertrophy can become unsightly looking and insulin is poorly absorbed from them.

### To prevent lipohypertrophy:

- Inspect and feel your child's injection sites on a regular basis and ensure that your doctor or diabetes educator does so at each visit.

- Ask your doctor or diabetes educator to help you identify other potential injection sites.



- Do not ask your child where she would like to have her injection as she will likely favour only a few spots. Use at least 2, but preferably 3, areas on the body for injecting insulin. For example: buttocks, abdomen and legs.
- If your child is anxious about trying new sites, consider using a sticker chart when a new site is used and offering a bravery award after a certain number of stickers are earned.
- Most importantly, do not let your child "call the shots" on where insulin is to be given

1. Lo Presti D, et al. Skin and subcutaneous thickness at injecting sites in children with diabetes: ultrasound findings and recommendations for giving injection. *Pediatric Diabetes* 2012; 13(7): 525-33

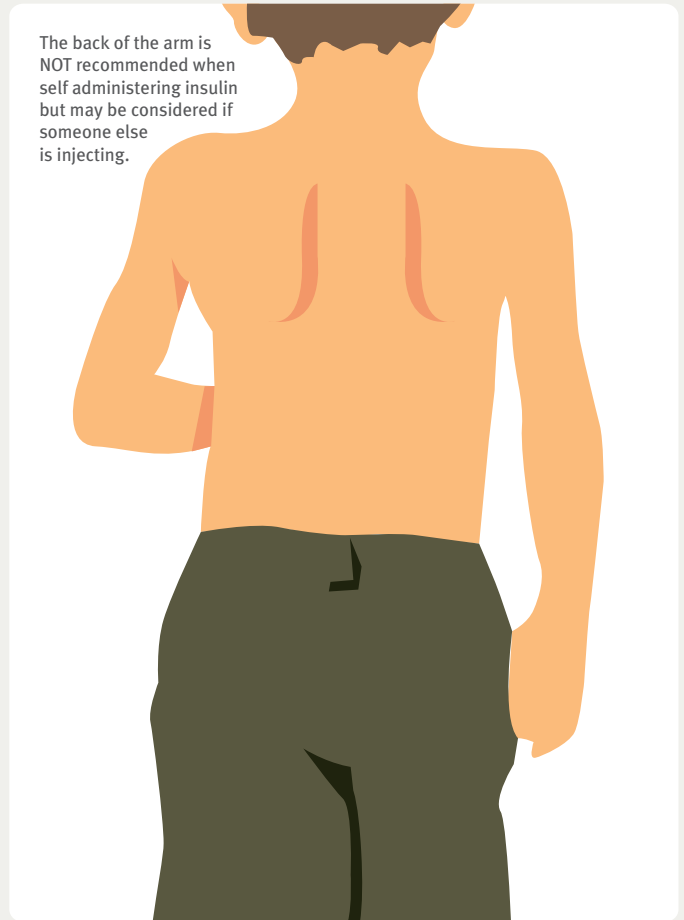
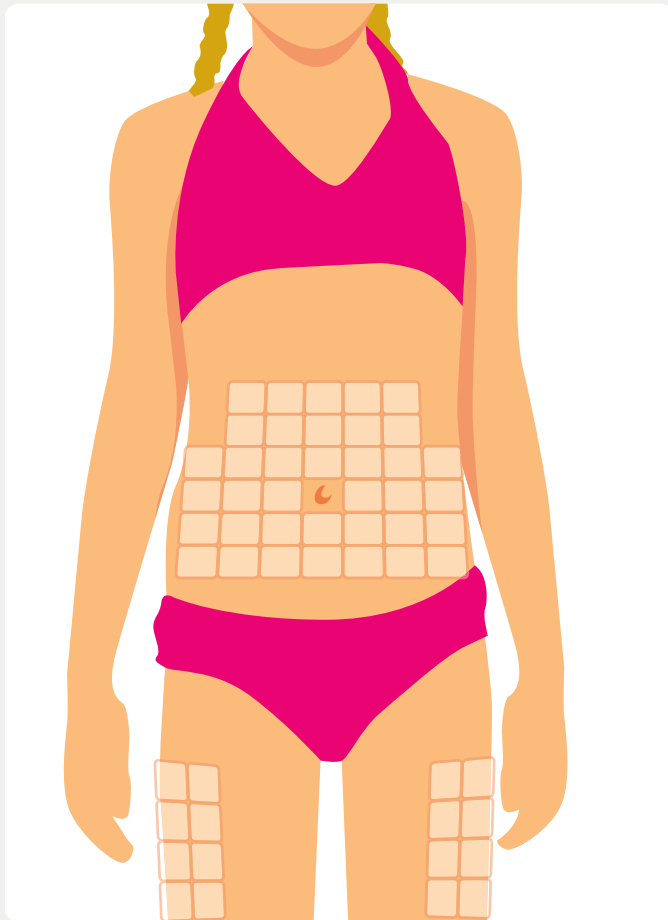
2. Howe CJ, Ratcliff SJ, Tuttle A, Dougherty S, Lippman TH. Needle anxiety in children with type 1 diabetes and their mothers. *Maternal Child Nursing* 2011; Jan/Feb: 25-31.

3. Patton SR, Eder S, Schwab J, Sisson CM. Survey of insulin site rotation in youth with type 1 diabetes. *Journal of Pediatric Health Care* 2010; 24, 365-371. 4. Berard L, et al. FIT Forum for Injection Technique Canada. Recommendations for Best Practice in Injection Technique. October 2011.





### Up, Down and All Around Chart



#### Ideas for Use:

1. Reward your child with a sticker for holding still for an injection.
2. Put an "X" through any lipohypertrophies (lumps).
3. Reward "bravery" stickers for trying new injection sites.

#### Notes:

