



# FIT Technique Plus\*

## FIT<sub>4</sub> the Older Person

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



### Meet Mrs. Simpson



82 year old ♀

Type 2 diabetes for 16 years

- Widow for 2 years and currently lives alone with the support of her daughter.
- Recent A1c 9.8%, up from 8.2% 4 months ago.
- Injecting pre-mixed insulin BID for the last 9 years, now using a 5mm pen needle.

### Current Challenges

- Osteoarthritis resulting in difficulty twisting her spine.
- Preparing meals for one is challenging and she has erratic food intake.
- Remembering to take her insulin.
- Difficulty with use of pen due to tremor.



### Technique Review:

- **Site rotation:** uses right side of abdomen only as this is easiest for her to reach.
- **Technique:** she demonstrates how she prepares for injection and it is obvious she does not thoroughly mix her insulin. She injects at a 90 degree angle with a skin lift.
- **Skin:** has some scratches and bruising.

Safety is a major concern for Mrs. Simpson. She is at risk for hypoglycemia due to her erratic eating. Inadequate insulin suspension and lack of sufficient site rotation could provide unpredictable insulin action and lead to hypoglycemia or hyperglycemia.

### What does the research say?

#### Tanwani 2011<sup>1</sup>

Insulin is underutilized in the older adult population for many reasons, some being fear of hypoglycemia and perceived difficulty of use. Consider the use of insulin analogues, newer pen devices and include family, friends and caregivers when initiating insulin use in this population.

#### Ligthelm 2012<sup>2</sup>

Older adults are at greater risk for hypoglycemia due to decreased renal function, multiple medications, impaired counter-regulatory hormones and reduced ability to recognize hypoglycemia. Consequences of hypoglycemia are considerable to both the patient – potential for falls, fractures, seizures, coma, death, fear and anxiety.

#### Munshi M, et al. 2013<sup>3</sup>

Physical and social situations frequently cause blood glucose excursions in the older adult with diabetes. Telephone follow up between clinic visits has shown to improve A1c, maintain functionality and lower distress in this population.



### Recommendations for Mrs. Simpson:



Assess cognitive function: clock test.



Assess depression: geriatric depression scale.



Assess insulin pen skills, examine injection sites.



Obtain collateral information regarding coping at home: ask permission to talk to daughter.



Provide adequate support – use written directions; whenever



possible provide supervision.



Ensure injections are given twice daily: to help patient remember injections, link injections to a daily task; use a dosette to put needle tips in and check needles are used.



Consider home care support.



Telephone follow up was scheduled in one week, clinic follow up in 4 weeks.

### FIT Canada Recommendation:<sup>4</sup>

Safety, which is the major consideration in injection therapy, becomes the most significant factor when assessing cognitive and functional abilities affected by aging.





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## Are you helping an elderly family member manage their insulin injections?

### Did you know?



All people living with diabetes should have targets set for their diabetes, this is especially true as people get older.

- Ask your diabetes team what blood sugar level is best for your family member.
- The older people get, the less they are alike: you may know other people who have diabetes who will have different blood sugar targets.
- Tell the health care team if your family member is having any blood sugar levels below their target.

As people get older they sometimes worry about their memory.

- When insulin is added as treatment, it is a change in routine. Some older adults may have trouble remembering whether they took their insulin. One memory aid for remembering insulin injections is a dosette – place an insulin pen needle tip into each compartment for the week. Both you and your loved one can check to ensure the needle has been used.
- Another option is to use an insulin pen that has a memory feature.



### Did you know?



**Depression is common in older adults**

- Depression can interfere with older adults ability for self-care.
- Untreated depression can make it difficult for older adults to go to the grocery store to buy food, for example, or can interfere with their motivation to take insulin injections.

Signs of depression in older adults can be different than in younger adults and can include:

- early morning awakening
- physical complaints
- lack of appetite
- weight loss
- substance abuse

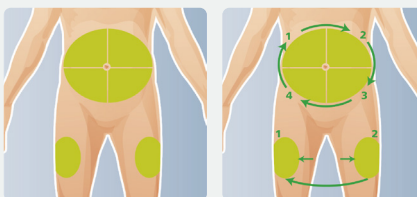
## Other considerations



### If injecting themselves:

- Encourage them to attend their clinic appointments with their insulin and supplies.
- Ask them to show you how they inject every 3-6 months to ensure that they are not missing any important steps (i.e. priming, mixing cloudy insulin, rotating injection sites or using a new needle every time).
- Use of a short needle is recommended. In lean older adults a skin lift may be necessary to reduce the risk of injecting into a muscle.

- If you, or a family member is performing the injection:
- Consider the use of a safety engineered device to prevent needlestick injuries.
- Ensure that a site rotation routine is set. This will ensure proper absorption of insulin and prevent unnecessary problems at the injection site.



**Technology is improving for older adults living with diabetes.**

- The diabetes health care team can help find the best delivery device for your family member.
- There is a lot to learn about using insulin and devices. Give your family member lots of time and practice to learn these skills. Encourage them to ask questions if they are not sure about something recommended. In lean older adults a skin lift may be necessary to reduce the risk of injecting into a muscle.

<sup>1</sup> Tanwani, LK. Insulin Therapy in the Elderly Patient With Diabetes. American Journal of Geriatric Pharmacotherapy. 2011;9(1):24-36.

<sup>2</sup> Ligthelm, RJ, et al. Insulin Use in Elderly Adults: Risk of Hypoglycemia and Strategies for Care. Journal of the American Geriatrics Society. 2012;60(8):1564-70.

<sup>3</sup> Munshi M, et al. Assessment of Barriers to Improve Diabetes Management in Older Adults. Diabetes Care. 2013;36:543-549.

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

