

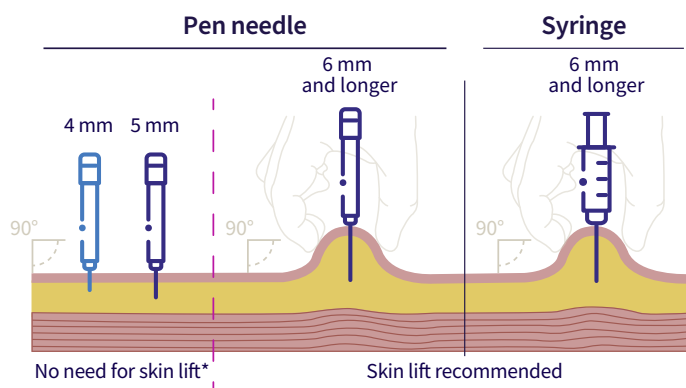
Injection Technique Recommendations



FITTER Forward provides updated recommendations to reflect state-of-the-art diabetes care.

Device Angle & Skin Lift

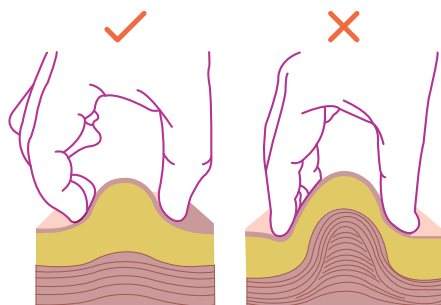
- 90° injection (straight in) is recommended for all needle lengths
- 4-5 mm needles: a skin lift is not needed in most cases*
- 6 mm and longer: a skin lift is recommended



*For individuals with low BMI (<19 kg/m²)/Lean body mass or children age 6 years or younger a skin lift is recommended

Injecting into a skin lift

- 1 Gently lift 2 inches of skin, with low pressure
- 2 Insert needle at 90° angle to the surface of skin lift
- 3 Count to 10 after plunger is depressed
- 4 Remove needle at 90° angle
- 5 Release skin lift
- 6 Dispose of used needle safely



Avoid performing the skin lift with the whole hand as seen in image.

Patient Physiology

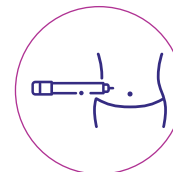
Subcutaneous (SC) layer thickness

- The thickness of the SC is highly variable, can vary by anatomical location, and is influenced by age, BMI, sex, and pregnancy status
- Skin lifts are recommended for those with less SC tissue, including elderly patients, children, and individuals with low BMI/lean body mass



Delivery site selection

- Injection into areas of lipohypertrophy or the presence of scars, tattoos, or skin lesions may alter insulin absorption and should be avoided if possible



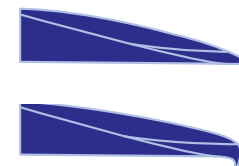
Dexterity/Movement abilities

- Sufficient dexterity is needed to assemble and use an injection device
- The ability to reach multiple injection sites is also required



Needle Reuse & Disposal

- Avoid needle reuse to help prevent pain from dull needles
- Always use a certified waste receptacle for needles and syringes and follow local guidelines for disposal



Temperature of insulin when delivered

Injection of cold insulin should be avoided; room temperature is preferred to reduce risk of lipohypertrophy and increase comfort when injecting



Access the full manuscript here:



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Klonoff DC et al. Mayo Clin Proc. 2025;100(4):682-699.
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