BD Diabetes Care

Educational support request form

Full name:		Job/title:	
Telephone:		Date:	
Email:			
Facility Name:			
Delivery Address:			
State:		Postcode:	

BD Pen Needle samples	Catalogue No.	Pack size	Quantity *	Office use
BD Ultra-Fine™ 4mm 32G Pen Needle with EasyFlow™ Technology	320405	Each box contains 20 packs of 5 pen needles	None	
BD Ultra-Fine™ 5mm 31G Pen Needle with EasyFlow™ Technology	320545	Each box contains 20 packs of 7 pen needles	None	

BD educational support materials

Patient support literature:

Booklet: For people new to injecting diabetes medication _____

Booklet: 5 Golden rules of injection technique for adults & children _____

A4 sheet: Injecting your diabetes medication _____

A4 sheet: Injection technique recommendations _____

Brochure: BD Ultra-Fine™ 5mm Pen Needle _____

Brochure: BD Ultra-Fine™ 4mm Pen Needle _____

Educator materials:

A4 sheet: HCP Discussion Guide _____

Booklet: Detecting, treating & preventing lipohypertrophy _____

A4 sheet: BD Ultra-Fine™ Pen Needle compatibility chart _____

Education tool: Rotation grid (paper/plastic - please indicate) _____

* Maxiumum of 5 shelf packs, subject to stock availability.

Email completed form to: bd_diabetes_care_anz@bd.com

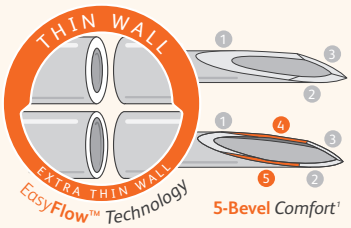
If you require more resources than what is offered please contact your Account Manager.

Becton Dickinson Pty Ltd Australia. Toll-free: 1800 656 100

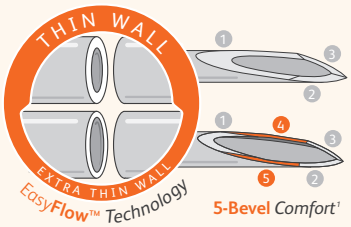
BD pen needles

BD pen needles are compatible with leading brands of diabetes medication pens#

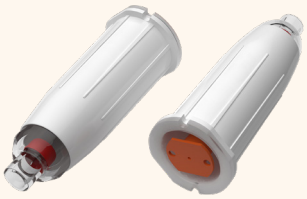
4mm x 32G (0.23mm)
NDSS Code: 266



5mm x 31G (0.25mm)
NDSS Code: 97



Safety Pen Needle
BD AutoShield Duo™ Safety Pen Needle reduces needle stick injuries and is suitable for needle-phobic patients.[1*~] 5mm x 30G (0.30mm).



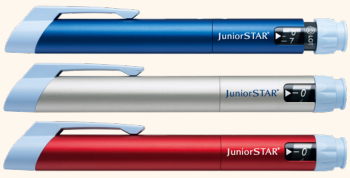
Sanofi Diabetes

SoloStar

AllSTAR

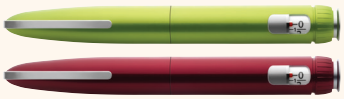
Toujeo

JuniorSTAR

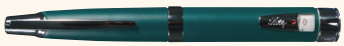


Eli Lilly

HumaPen SAVVIO



HumaPen Luxura HD



KwikPen

Novo Nordisk

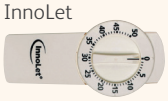
FlexPen

NovoPen 4

NovoPen Echo

Victoza

InnoLet



AstraZeneca

Byetta Pen

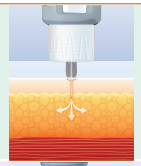
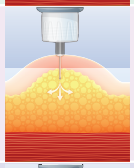
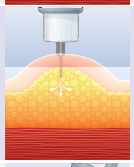
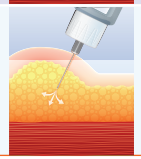
As at June 2020
*Compared to non-safety pen needles.
~Injection technique for BD AutoShield™ Duo may vary. Skin stabilisation may be required for loose or soft skin.
Refer to BD AutoShield Duo™ Safety Pen Needle Instructions for Use.

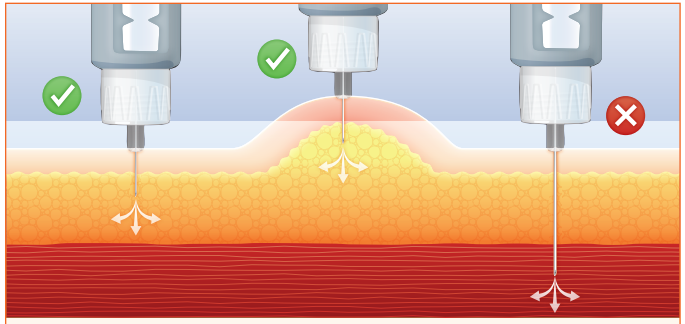
BD Ultra-Fine™ Pen Needles are recommended by SANOFI DIABETES and Lilly

BD

Injection technique[2-4]

General recommendations for injection technique

Pen Needle length	Recommended technique for most patients	Exceptions	% Risk of intramuscular (IM) injection^[3]
4mm		Very thin adults or children may require a skinfold	0.4%
5mm		Overweight or obese adults may not require a skinfold	1.8%
6mm		Overweight or obese adults may not require a skinfold	5.7%
8mm		Use of an 8mm pen needle is discouraged for children	15.3%



Accidental IM injection may result in hypoglycaemia, pain, bruising and/or bleeding. Diabetes medication should be injected into subcutaneous tissue for consistent absorption.[2-3]

Diabetes medication insulin should be injected into subcutaneous tissue for consistent absorption.[2]

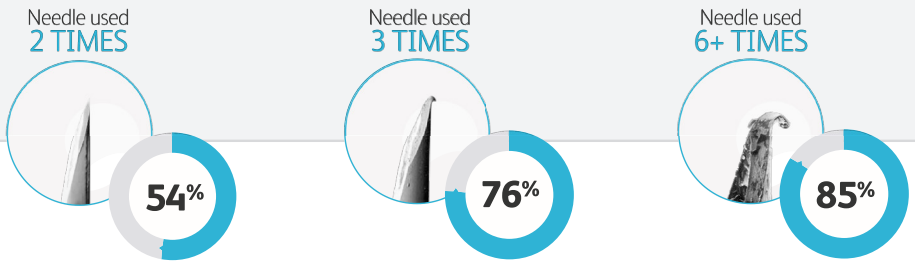
"There is no medical reason to recommend pen needles longer than 4-5mm for children and adults."[4]

Pen needles are for single use only.

Re-using pen needles can also cause[2,5]:

- Needle bending and breaking
- Skin infections
- Medication dosing inaccuracy
- Pain and discomfort
- Bruising and bleeding

Needle re-use and the risk of developing lipohypertrophy[6-7,+]



Photographs from Dieter Look and Kenneth Strauss: "Nadeln mehrfach verwenden?" *Diabetes Journal* 1998, 10:S.31-34.
+Based on a study conducted in Spain. Percentages represent the proportion of patients developing lipohypertrophy based on the number of times needles are re-used.
^Calculated risk into adult population, needle inserted at 90 degree angle without a skin fold.

References: 1. Hirsch L, Gibney M, Berube J, *et al. J Diabetes Sci Technol.* 2012; 6(2): 328-335. **2.** Frid AH, Kreugel G, Grassi G *et al. Mayo Clin Proc.* September 2016:91(9):1231-1255. **3.** Gibney M, Arce C, Byron K, *et al. Curr Med Res Opin.* 2010; 26(6): 1519-1530. **4.** Australian Diabetes Educators Association (ADEA). Clinical Guiding Principles for Subcutaneous Injection Technique, December 2019. **5.** Misnikova I, Dreval A, Gubkina V, *et al. J Diabetol.* 2011; 1(1): 1-5. **6.** Vardar B, Kizilcl S. *Diabetes Res Clin Pract.* 2007; 77:231-236. **7.** Blanco M. Hernandez M, Strauss K, Amaya M *et al. Diabetes Metab.* 2013; 39(5): 444-453.

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Diabetes injection technique discussion guide

Using a short pen needle

1. Are you using a 6mm or 8mm pen needle?	Yes ○	No ○	Not sure ○
2. Are you using a shorter (4mm or 5mm) pen needle?	Yes ○	No ○	Not sure ○
3. Have you heard about the BD Ultra-Fine™ 4mm pen needle?	Yes ○	No ○	Not sure ○

Rotating injection sites widely

4. Do you rotate your injection sites widely within an injection area?	Yes ○	No ○	Not sure ○
5. Do you use a new site for every injection?	Yes ○	No ○	Not sure ○

Holding for 10 seconds after injecting

6. Do you keep the needle in the skin for a count of 10 after you have dispensed your dose?	Yes ○	No ○	Not sure ○
7. Do you notice liquid on your skin after your injections?	Yes ○	No ○	Not sure ○

Using minimal force

8. Do you pay attention to how hard you push when you inject?	Yes ○	No ○	Not sure ○
9. Do you push harder when you inject in some areas versus others *(e.g. abdomen vs thigh)*?	Yes ○	No ○	Not sure ○

Replacing the pen needle for each injection

10. Do you use your pen needle more than once?	Yes ○	No ○	Not sure ○
11. Do you experience any pain when injecting?	Yes ○	No ○	Not sure ○
12. Do you experience any bleeding and/or bruising after injecting?	Yes ○	No ○	Not sure ○

Health professional consultation

Recommend BD Ultra-Fine™ 4mm Pen Needles for a more comfortable injection.#

- 5-Bevel Comfort ensures less force is required to gently ease the needle tip into the skin.[1]
- EasyFlow™ technology increases the flow of medication, resulting in faster injections.[2]
- Compatible with leading brands of medication pen devices.§

Assess any areas for improvement

All **blue** answers?

Great injection technique![3]

Any **orange** answers?

Use the back of this sheet to discuss the 5 easy steps for great injection technique with people who inject their diabetes medication.[4]

* Patients should consult the manufacturer's instructions for use for their pen device.
# Compared to BD standard hub, 3-bevel, thin wall pen needles.
§ As of January 2020.

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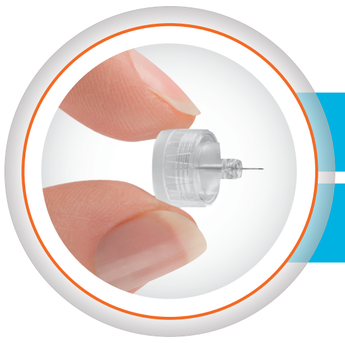
Simple steps for great injection technique[2]

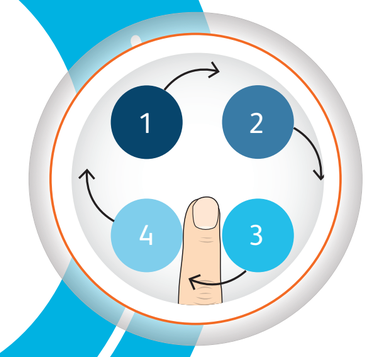


1 Use a 4mm pen needle

Use a BD Ultra-Fine™ 4mm Pen Needle for a more comfortable injection experience and to reduce the risk of injecting medication into your muscle.[1-3]

2 Rotate sites

Inject at least one finger-width away from your last injection to keep your skin healthy and reduce complications. A single injection site should not be used more than once every 4 weeks.



3 Insert the needle

When using a 4mm pen needle, insert straight into your skin.* Do not insert the pen needle at an angle.

4 Hold for 10 seconds

Keep the needle in your skin for 10 seconds after injecting to make sure your full dose is delivered and absorbed.

5 Replace your needle

Pen needles should only be used once. Always use a new needle for *every* injection.

Injection Technique Certified

Consumers should always consult their healthcare professional regarding treatment of their diabetes.

* Children and slim adults may need a skin lift at all sites.[3]

References: 1. Hirsch L, Gibney M, Berube J *et al. J Diabetes Sci Technol.* 2012; 6(2): 328-335. **2.** Aronson R, Gibney M, Oza K. *et al. Clin Ther.* 2013;35:923-933. **3.** Australian Diabetes Educators Association (ADEA). Clinical Guiding Principles for Subcutaneous Injection Technique, December 2019.

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Detecting, treating and preventing lipohypertrophy

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Detecting lipohypertrophy[1]

Lipohypertrophy (lipo) is common.[1] A Spanish study[2] found lipo in **64.4%** of injecting patients, while an Italian study[3] found the prevalence to be **48.7%**, and in a Chinese study it was **53.1%.**[1] Absorption of insulin injected into lipo may be erratic and unpredictable, which can lead to hyperglycaemia, unexpected hypoglycaemia, or increased glucose variability.[1,4,5]

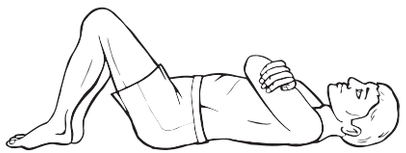
Detailed below is the recommended technique for detecting and palpating hypertrophic lesions.

Prepare for the examination

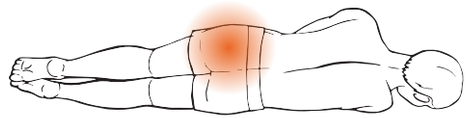
- The **room must be warm** to prevent the patient from chilling. While this ensures patient comfort, more importantly it prevents shivering and muscle tension, which can interfere with the examination and mask the presence of lipohypertrophy (lipo).
- Use **directional task lighting** if possible. Light should always be oblique to the skin surface, preferably not overhead. Use of an examination light that is fully articulated and adjustable is ideal. If an examination light is not available, the use of a head worn light is a good alternative.

Visual examination of injection sites[1]

1. Firstly, inform the patient and gain consent for the examination. Ask the patient which sites they use for injections and ask them to describe any abnormalities at their injection sites. Record in the patient's notes where the abnormalities are on the body and for how long they have been present.
2. Ask the patient to disrobe, keeping only their underclothes on. To examine the abdomen and thigh injection zones, position the patient laying down on their back, ideally on an examination bed.
3. Ask the patient to raise their knees and fold their arms across their chest. The muscles of the abdomen and thigh quadriceps should all be fully relaxed and soft, ready for the examination.



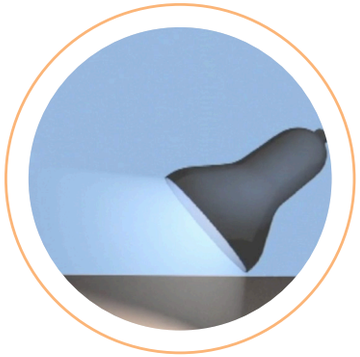
- To examine the buttock area, ask the patient to lie on alternate sides and flex their knees towards their chest to relax their gluteal muscles, examining the upper facing buttock area. Underclothes may need to be repostioned to assess the buttocks.



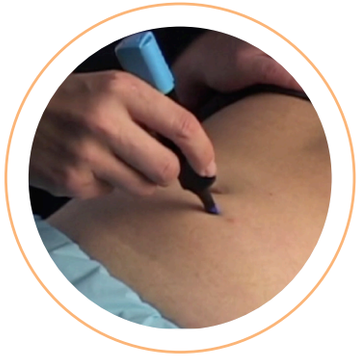
- If you do not have an examination bed, ask the patient to sit upright in a chair with their hands resting in their lap and their legs at right angles to the floor. You can examine the thighs from this sitting position.
- To examine the abdomen and buttocks ask the patient to stand up and let their arms hang by their sides. You can now examine the abdomen and buttocks from this position.

Visual examination of injection sites[1]

4. Wash your hands thoroughly and follow infection control procedures. Warm your hands before touching the patient. Cold hands may cause tension and mask lipo lesions.



5. Visually examine the injection sites using the angled lamp to highlight any subtle rises and dips across the skin. Lipo is usually manifested as a raised or mound like convex area sitting above the surrounding skin surface. There is seldom any variation in skin colour or hair distribution, making detection sometimes difficult. However it could be visible as a cluster of injection points. Occasionally lipohypertrophic areas can be manifested as shiny or hyper-pigmented, especially in darker skins. You may also notice some hair loss.



6. If you detect lipo, mark the centre point with a marker pen suitable for use on the skin. This will help you when you palpate the site.

Palpation examination of injection sites[1]

1. Warm hands by rubbing them together or washing them in warm water, following infection control procedures.

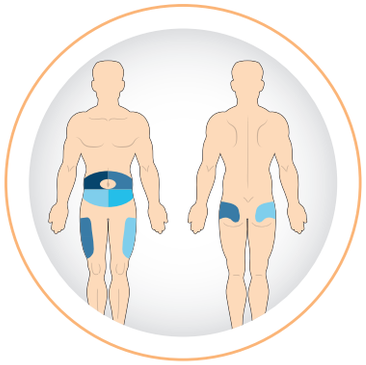
2. Bring clinical examination gel to near body temperature by placing the tube in your pocket near to your skin surface or placing some gel in your hands and warm it for a few moments before applying it to the patient's skin.

3. Apply the clinical exam gel liberally on the area to be examined. Palpate with your fingertips.

4. Work the gel towards the injection area with light massage motions, forward thrusts and circular sweeps. Lipo is identified by a change in the soft highly-plastic feel of the subcutaneous fat tissue which is replaced by a harder, more rubbery and less plastic tissue.

Often, the edges of the abnormal lipohypertrophic area are clearly evident. It is relatively easy, with some practice, to identify the transitional zone which steps up from the surrounding soft tissue.

Measuring and documenting lipo[1]



1. Determine by palpation the extent of the lipo zone. Using a skin-safe marker pen, draw a line around its exact border. The shape is sometimes circular but it can be any shape.

2. Measure the distance along its longest axis and record. Use body maps if available or body landmarks for reference to record the exact position. If possible (and with permission of the patient) **photograph without using flash and from a distance of one metre.**

3. Using the oblique light source will reveal surface contours. Use the photograph and measurement records to follow evolution of the lipo lesion over the long-term.

Post examination care[1]

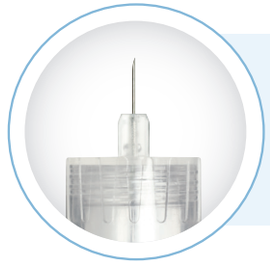
1. Teach the patient to conduct **self-examination** for lipos at regular intervals. The use of a hand or body lotion may help locate lipos more easily.

2. **Review sites** at every clinical visit thereafter.

3. Advise the patient they **must not inject into the lipohypertrophic area** until they are told it is safe to do so by their healthcare professional.

4. Avoiding lipos and injecting into healthy tissue often results in lower insulin dose requirements. Ask the patient to monitor their blood glucose levels closely, being **very vigilant for hypoglycaemia. Dose adjustment by a qualified healthcare professional may be required.**

5. **Review the patient's injection technique.**



Patients who switch from injecting into lipo to normal tissue are at risk of hypoglycaemia. Dose adjustment may be required by a qualified healthcare professional.[1]

Tips for educating patients[1]

Patients who inject or infuse their diabetes medication can develop poor technique which reinforces the need for regular patient reviews and ongoing education.

1. **Stop re-using needles.** Needles are developed for single-use only. Patients should be taught to use a new needle ***every time*** they inject to reduce the risk of injection site complications.

2. **Use a short needle.** All patients should use a 4mm or 5mm pen needle, or 6mm insulin syringe to minimise pain and reduce the risk of accidental intramuscular risk due to using larger injection zones.

3. **Make use of the latest needle technology** such as advanced needle geometry and extra thin-walled needles to make dosing easy and minimise discomfort when injecting into healthy tissue.

4. **Correctly rotate injection/infusion sites.** Patients should be taught to space out their injections approximately 1-2cm (at least one adult fingerbreadth) from each other. An injection site rotation grid can be helpful for patients.

Patients should be given an easy-to-follow rotation plan so that a single injection site is used no more frequently than every four weeks. For example, divide an injection area into quadrants, using one quadrant per week, and rotating quadrant-to-quadrant in a consistent clockwise direction.

References:
1. Frid AH, Kreugel G, Grassi G *et al. Mayo Clin Proc.* September 2016:91(9):1231-1255. 2. Blanco M, Hernández MT, Strauss KW, *et al. Diabetes Metab.* 2013;39(5):445-453. 3. Grassi G, Scuntero P, Trepiccioni R, *et al. J Clin Translat Endocrinol.* 2014;1(4):145-150. 4. Famulla S, Hövelmann U, Fischer A, *et al. Diabetes Care.* 2016 Jul 13:pii: dc160610. 5. Hovelmann U, Famulla S, Hermanski L, *et al. Diabetes.* 2015;64 (suppl 1):A254-A255.

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