



SECTION 11: CARE OF THE CHILD WITH DIABETES

11.3 Administration of Insulin

11.3.3 Administration of Single Dose Insulin Using an Injecting Pen Device

Aims

1. To inject the prescribed dose of insulin using an injecting pen device so as to promote absorption and minimise the risk of complications.
2. To provide education for the child and/or parent/s in the correct use of insulin injecting pen device for prescribed insulin.

Key points

- Self-administration of insulin using the injecting pen device is only available to the patient and/or parent who can demonstrate competence in the procedure during his/her hospital stay. If competence is not achieved, then a Registered Nurse must use hospital approved safety insulin syringe and needle.¹ Refer to [PNPM 11.3.1](#) Administration of Single Dose Insulin.
- All insulin pens are single patient use.² It is recommended that 4, 5 or 6 mm pen needles be used for children and adolescents.⁶⁻¹⁰
- Label each insulin pen with the patient's name.²
- Store new (unopened) insulin in the refrigerator and remove 30 minutes prior to administration.¹¹ Insulin injected at room temperature reduces the risk of local irritation and pain.^{1,3}
- Label all insulin in current use with the time and date opened (and specific patient details). Once opened insulin can be kept at room temperature (below 25°C) but must be discarded 28 days after opening.³ If Humulin[®] cartridges are stored at room temperature discard 21 days after opening.³
- Refillable cartridge pens must be returned to the patient on discharge. Non-refillable pens must be disposed of immediately when no longer required.²
- Use aseptic non touch technique for this procedure. Refer to [A&NTT Framework](#).

Equipment

- Patient owned injecting Pen device
- Injecting Pen needle
- 3mL Pen cartridge of prescribed insulin
- Medication chart
- Diabetes ward monitoring chart
- Alcohol swab
- Novofine needle remover
- Small portable sharps container

Procedure

Steps	Additional Information
Check label to ensure correct patient name and expiry date of the insulin cartridge.	Follow the 6 rights of medication administration.
Perform hand hygiene.	
Take all equipment to patient's bedside.	
Gently mix the pre filled device by inverting back and forth. ⁴	To re-suspend the insulin.
Swab the rubber seal with alcohol swab. ^{5,6}	Swabbing of patient's skin is not necessary.
Attach needle to injecting pen.	4, 5 or 6mm recommended. ⁶⁻¹⁰ 8mm or 12.7mm may be required for obese patients. ^{6,7}
Ask the patient/parent to prime the injecting pen device by dialling up 2 units and expelling until a stream of insulin is seen. ^{6,8}	Ensures the needle dead space is filled with insulin and device is working correctly. Repeat if necessary.
Ask the patient/parent to dial the prescribed dose as per medication chart orders.	

Steps	Additional Information
<p>Observe the patient/parent administering subcutaneous injection:</p> <ul style="list-style-type: none"> • at 45° if needle 8 mm or longer, using a skin lift. • at 90° if needle 4, 5 or 6 mm • holding for 6 seconds before removing device.^{5,8} 	<p>Refer to PNPM 2.5.5 subcutaneous injection technique.</p> <p>To avoid inadvertent intramuscular injection.⁶⁻⁸</p>
<p>Remove the needle from the pen immediately after use.</p> <p>Dispose of used needle in the sharps container.³</p>	<p>Pen needles are one use only.</p> <p>A Novofine[®] needle remover may be used.</p>
<p>Store injecting pen device containing insulin cartridge in ward medication room.</p>	<p>Ensure insulin pen device is returned to the patient on discharge.</p>


Related policy, procedures and guidelines.
PNPM 2.5.5 Subcutaneous Injections
PNPM 2.1.2 Checking and Administration of Medications.

Useful resources.
Australasian Paediatric Endocrine Group. (APEG) National evidence based clinical guidelines for type 1 diabetes in children, adolescents and adults

References:

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