



## SECTION 2: DRUG AND INTRAVENOUS (IV) THERAPY

### 2.5 Techniques for Administration of Parenteral Medications

#### 2.5.7 Indwelling Subcutaneous Injection Catheter - Insuflon™

##### Aims

1. Safe insertion, management and removal of an indwelling subcutaneous catheter.
2. Safe administration of medications via an indwelling subcutaneous catheter.

##### Background

*Insuflon™* is an indwelling subcutaneous soft cannula used to reduce the need for repeated subcutaneous injections. The cannula can remain in place up to a maximum of 7 days depending on the type of medication being given. The device must be replaced more frequently should complications arise, such as:

- Signs of infection: pain, redness, swelling,
- Obstruction e.g. kinked catheter, blockage which can result in suboptimal drug delivery.<sup>1-3</sup>
- Clinical deterioration of patient e.g. unstable blood glucose level can indicate that medication is not being delivered appropriately and therapeutic drug levels are not being maintained.
- Loose dressing, causing the catheter to move and become dislodged.

##### Indications<sup>1</sup>

Administration of various types of subcutaneous medications e.g. insulin; low molecular weight heparin; morphine; G-CSF; growth hormones.

##### Contraindications<sup>2</sup>

- Administration of vesicant drugs.
- Use with caution when platelet count is low, although bleeding/bruising are rarely a problem.

##### Key Points

1. The Insuflon™ must be changed weekly or removed sooner if complications occur; a new cannula should be inserted at a different site.<sup>1-3</sup>
2. Use aseptic non touch technique ([A&NTT](#)) for accessing, inserting and removing the cannula.

3. It is recommended that a separate Insuflon™ is used for each drug injected.<sup>1</sup> Where this is not possible, consult the patient's treating clinician and pharmacy.
4. **Insulin administration:** A deterioration of blood glucose control without an obvious cause may indicate malfunction of the Insuflon™ device. Immediate replacement is required.<sup>1</sup>
5. **Low Molecular Weight Heparin:** To minimise the risk of excessive bruising arising from the localised accumulation of Heparin, consider inserting a second Insuflon™ and alternating the sites.

### Inserting an Insuflon™

#### Equipment

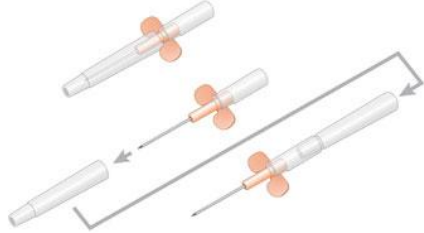
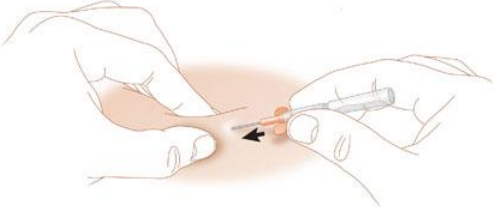
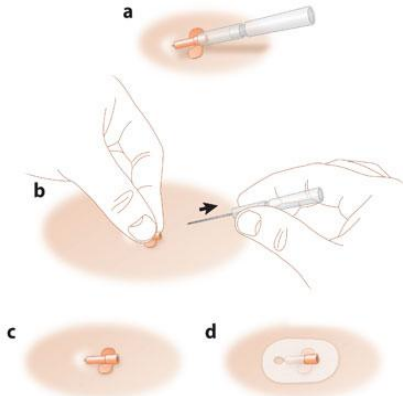
Insuflon™ catheter pack (with dressing supplied)

2% chlorhexidine/ 70% isopropyl alcohol swab (caution in infants < 2months, use 0.5%-1% chlorhexidine)

+/- Protective skin film eg. no-sting barrier wipe

PPE

Steps	Additional Information
<p><b>One hour prior to insertion</b></p> <p>Consider the need for age appropriate pain control/comfort measures.<sup>1, 3-5</sup></p> <p>If required apply local anaesthetic cream to the site.</p>	<p>Refer to Acute Pain Service protocol for the use of the <a href="#">topical anaesthetic agent</a></p>
<p>Perform hand hygiene and prepare equipment using aseptic non touch technique.</p>	<p>Check the pack is undamaged, sterile and within expiry date.<sup>1, 6</sup></p>
<p>Locate an appropriate insertion site on the:</p> <ul style="list-style-type: none"> <li>● abdomen</li> <li>● upper and lateral aspects of the thigh(s)</li> <li>● upper and outer aspects of the upper arm.<sup>1-4, 6, 7</sup></li> </ul>	<p>Avoid skin folds and consider position of clothing, nappies.<sup>1, 3</sup></p>
<p>Clean area with chlorhexidine/alcohol swab and allow to dry.<sup>1, 4, 6-8</sup></p>	<p>A protective film can be applied to protect the skin.</p>

Steps	Additional Information
<p>Hold the catheter hub and remove the protection cap.</p> <p>Place the cap in the rear of the grip as shown opposite.<sup>1, 4, 6-8</sup></p>	
<p><b>Insertion</b></p> <ul style="list-style-type: none"> <li>Pinch the skin at the site of insertion.<sup>1, 4, 6-8</sup></li> </ul>	
<ul style="list-style-type: none"> <li>Holding the Insuflon™ hub between the thumb and index finger, insert the Insuflon™ at a 20 – 45° angle in the direction of the venous return.</li> <li>Use one quick movement with the bevel facing upwards.<sup>1, 4, 6-8</sup></li> </ul> <p><b>Notes:</b></p> <p>If the insertion is too slow there is a risk of the catheter peeling back from the needle.<sup>1</sup></p> <p>Replace the device if there is any difficulty injecting the drug.</p>	<p>The Insuflon™ should be inserted in the same direction as venous return i.e. towards the shoulder joint in the arm, towards the hip in the leg and towards the umbilicus on the abdomen.<sup>1, 4, 6-8</sup></p> 
<ul style="list-style-type: none"> <li>Remove the needle by holding the catheter hub firmly and pulling the needle out slowly.</li> <li>Dispose of the needle in a sharps container.<sup>1, 4, 6-8</sup></li> <li>Secure the Insuflon™ by applying the adhesive dressing; apply from the catheter end first.</li> <li>Ensure the insertion site is covered and clearly visible.<sup>1, 4, 6-8</sup></li> <li>Totally adhere pad to skin to prevent bacteria from entering insertion site.</li> </ul>	
<p>Document placement, time/date and site used in the patient medical record and the nursing care plan.</p>	

Steps	Additional Information
Observe the site at least once per shift and before /after administering any medication. Remove if any of the following present: <sup>1-3</sup> <ul style="list-style-type: none"> <li>• Bruising*</li> <li>• Leakage,</li> <li>• Discomfort/pain</li> <li>• Redness/inflammation</li> <li>• Exudate, bleeding</li> </ul>	*Especially if patient is receiving low molecular weight heparin.
Reinsert a new Insuflon™ into a different site. <sup>1-3</sup>	

### Administering Medication via an Insuflon™

#### Equipment

Syringe with medication

1 x 26 gauge needle

2% chlorhexidine/ 70% isopropyl alcohol swab

Steps	Additional Information
Prepare prescribed medication using aseptic non touch technique.  Replace drawing up needle with a 26g needle for administration.	
Cleanse the hub of the Insuflon™ with 2% chlorhexidine/alcohol swab and allow to dry completely.	
With the bevel of the needle facing the skin <sup>1, 6</sup> insert the needle into the hub and rotate to penetrate.	The needle must penetrate the hub by 3mm but not exceed 8mm. <sup>1</sup>
Instil the medication slowly to prevent irritation. <sup>1, 5</sup>  If 10% of the drug will be lost in the dead space consult with the patients treating clinician and pharmacy; a small amount of a compatible solution may be considered to flush. <sup>1</sup>	Dead space volume is 0.0075mL so it is not necessary to flush before and after.

Steps	Additional Information
Remove the needle/syringe and discard in sharps container.	Excess medication may need to be wiped from the membrane of the Insuflon™ with an alcohol swab.
Document medication administration.	

### Removing an Insuflon™

Procedure	Additional Information
Wait 30 minutes following medication administration to allow dissipation to occur. Carefully peel off the pad at the catheter end and remove the catheter.	
Place a dry gauze pad or cotton wool ball against the site and apply gentle pressure for 30 seconds.	For children who are thrombocytopenic or on anti-coagulant therapy a longer period of gentle pressure may be required.
Document date, time and reason for removal in the patient medical record. <sup>1, 2</sup>	

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PMH, Perth. Oncology Total Care Unit; Ward 3B Insuflon™ – indwelling subcutaneous injection port document.

File Name and Path:	Indwelling Subcutaneous Injection Catheter – Insuflon <a href="https://healthpoint.hdwa.health.wa.gov.au/policies/Policies/CAHS/PNPM%2002.05.07%20Indwelling%20Subcutaneous%20Injection%20Catheter%20-%20Insuflon.pdf">https://healthpoint.hdwa.health.wa.gov.au/policies/Policies/CAHS/PNPM%2002.05.07%20Indwelling%20Subcutaneous%20Injection%20Catheter%20-%20Insuflon.pdf</a>		
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