

## NURSING PRACTICE STANDARDS

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### B-00-12-10107 – Hypodermoclysis - Palliative

#### Hypodermoclysis: Insertion, Maintenance, and Management for Palliative Care

##### Related Standards and Resources:

1. [B-00-12-10060](#) - Subcutaneous Butterfly Cannula: Insertion, Maintenance, and Medication Administration, procedure

##### Skill Level:

**Basic:** RNs and LPNs

##### Need To Know:

Hypodermoclysis is a treatment to administer fluids subcutaneously to patients who require non-urgent hydration for symptom management at End of Life.

Points to Consider:

- Intended duration of therapy – define a period for reassessment with particular goals
  - Intended setting – home or hospital
  - Condition of patient's skin
  - Previous infusion-related problems
  - Information needs of patient/family
1. Hypodermoclysis may not be suitable for patients:
    - with a bleeding or coagulation disorder, or thrombocytopenia
    - who are emaciated or have severe edema
    - with severe dehydration
    - with CHF
    - who are receiving hemodialysis
    - in whom death is expected imminently
  2. Risks of hypodermoclysis include:
    - Increased peripheral edema
    - Increased pulmonary and gastrointestinal secretions
    - Pain/discomfort at infusion site(s)/cellulitis
  3. The recommended infusion rate for subcutaneous administration of fluids is 50 to 75 mL/hour.
  4. If required, 2 insertion sites may be used to infuse fluids simultaneously.
  5. Maximum fluid per 24 hours is three litres, divided into two different sites
  6. Infusion solutions should be as near to isotonic as possible: sodium chloride 0.9% or sodium chloride 0.18% and glucose 4% are recommended.
  7. The use of hyaluronidase (to increase the speed of absorption) is not recommended.
  8. Refer to [B-00-12-10060](#) for care specific to the maintenance of the subcutaneous butterfly cannula.

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9. Change the tubing Q96 hours (Q24 hours for intermittent infusions) and the intravenous solution bag Q24 hours.

### PRACTICE GUIDELINE

#### Equipment and Supplies:

1. 24 gauge 0.75 inch BD Saf-T-Intima subcutaneous butterfly catheter
2. Transparent dressing
3. Tape
4. Alcohol swabs
5. Infusion set (60 DPM set)
6. IV solution as ordered

#### Procedure

STEPS	RATIONALE
1. Prime infusion set with ordered IV solution.	
2. Insert subcutaneous butterfly (please refer to <a href="#">B-00-12-10060</a> for insertion of subcutaneous butterfly procedure) Recommended sites for insertion of subcutaneous butterfly catheter: <ol style="list-style-type: none"> <li>1. interscapular region on the back</li> <li>2. subclavicular area (avoid breast and axilla)</li> <li>3. abdomen (at least 2.5 cm away from the umbilicus and avoid the waist)</li> <li>4. the anterior/lateral aspect of the thigh</li> </ol> *** Avoid the upper arm for hypodermoclysis***	Choose an area with adequate subcutaneous tissue.
3. After the stylet has been withdrawn, remove the injection cap that is now exposed.	
4. Connect the infusion set directly to the catheter's port.	
5. Unclamp the tubing and set the flow-rate to 30 mL/hour. Fluids may be infused via pump or gravity.	To ensure that the catheter is sited correctly and that the tissues are absorbing the fluid.
6. After one hour, titrate to the ordered flow-rate.	The maximum volume to be infused into any single site should not exceed 2 litres per day or 80 mL/hour.
7. Assess the insertion site Q2H & PRN for redness, pain, bruising, leaking, firmness, edema, weeping, bleeding etc.	See troubleshooting section on next page.

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8.	The subcutaneous butterfly catheter site should be changed Q24 to 48 hours and PRN.	
9.	The infusion set tubing must be changed every 96 hours (every 24 hours for intermittent infusions).	

#### Troubleshooting:

If there appears to be a problem with the absorption of fluids:

- Adjust the height of the infusion bag (i.e. raise the height of the bag)
- Apply warm compresses to site
- Apply gentle massage if the site has become edematous
- Slow infusion rate down
- Infuse the required volume over two sites
- Re-site the subcutaneous catheter
- Re-evaluate the need for hydration

If the site is red:

- Remove catheter and re-site in a new area
- If the site is also painful, hard, and accompanied with a fever: stop the infusion, remove the catheter, and notify the physician

If the site leaks after the removal of the catheter:

- This will resolve spontaneously

#### Documentation:

1. Document insertion, routine care and assessment on the Palliative Care 7 day Flow sheet, the 24-hour Flow Sheet or the critical care documentation system – whichever is applicable in your area. This includes patient symptoms, quality of life indicators and goals of care.
2. Document any complications, significant findings and interventions in the Interdisciplinary Progress Notes; critical care documentation system or Progress Notes.
3. Document IV solutions on the Fluid Balance Record or 24 Hour Flow Sheet as appropriate

#### References:

1. Vancouver Coastal Health (2011). Medication Administration, Subcutaneous (Intermittent & Continuous). Clinical Practice Document PCG M-100
2. Vancouver Coastal Health (2011). Hypodermoclysis – Guidelines for providing fluids via the subcutaneous route in Residential Care. Clinical Practice Document VCH-H-2020
3. Gabriel, J, (2014) Subcutaneous fluid administration and the hydration of older people *British Journal of Nursing*. Vol. 23. Supp. 14 S10-S14.  
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4. Bruno, V. (2013) Hypodermoclysis: A literature review to assist in clinical practice. *Hospital Israelita Albert Einstein, Sao Paulo, SP, Brazil* retrieved from <http://dx.doi.org/10.1590/S1679-45082015RW2572>
5. National Health Service – Gloucestershire (2010). Clinical Guidelines for Subcutaneous Infusion (Hypodermoclysis). Clinical Policy Reference Number 16
6. Remington, R & Hultman, T (2007). Hypodermoclysis to Treat Dehydration: A review of the evidence. *Journal of the American Geriatrics Society*, (55)12, 2051 – 2055
7. Lopez, JH & Reyes-Ortiz, CA (2010). Subcutaneous hydration in hypodermoclysis. *Reviews in Clinical Gerontology*, 20, 105 – 113
8. Scales, K (2011). Use of hypodermoclysis to manage dehydration. *Nursing Older People*, (23)5, 19 – 22

#### **Persons/Groups Consulted:**

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