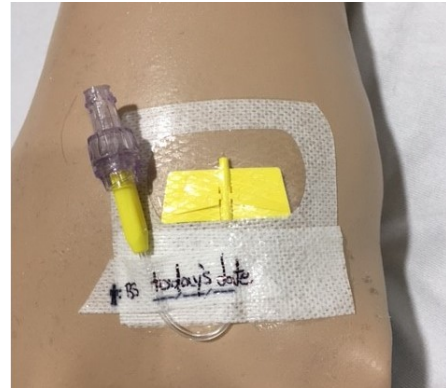


Quick Reference Guide—HYPODERMOCLYSIS

***This quick reference is intended to be used after thorough review of the Hypodermoclysis Operational Guideline and should not be used as a stand alone guidance document.**

Before starting hypodermoclysis ensure:

- √ The resident is assessed as being appropriate for hypodermoclysis
- √ A prescriber order is written in the health record
- √ The nurse has reviewed the Long Term Care Program Operational Guideline on Hypodermoclysis via Indwelling Subcutaneous Device or site policy/procedure.



PERFORM HAND HYGIENE

Obtain the following equipment:

- Equipment required to establish a subcutaneous infusion device
- Hypodermoclysis solution (e.g. 0.9% sodium chloride) Be sure to check the expiry date
- Intravenous tubing administration set
- 2 Alcohol swabs
- Tape
- Hypodermoclysis label for site
- IV pole (or alternative hanging device)
- Optional: Infusion pump or flow regulation device (if available, not required)



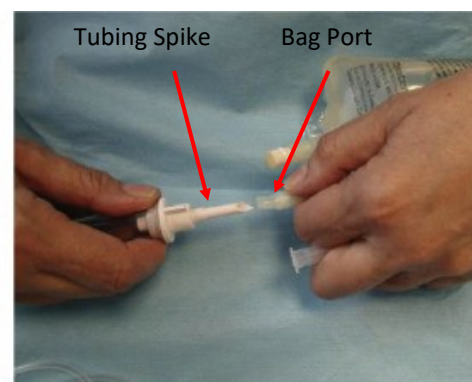
Collect supplies on a clean, dry surface.

PERFORM HAND HYGIENE

1. Explain procedure to resident and verify identity (2 person identifiers)
2. Insert **new** subcut line
3. Label with "Hypodermoclysis only"
4. Spike solution bag
 - a) Close IV set roller clamp
 - b) Remove cap from spike
 - c) Remove cover from port on bag
 - d) Insert tubing spike into bag port



Remove the plastic tab. (Step 1)



Remove the plastic cover from the tubing spike, and insert it into the port. (Step 2)

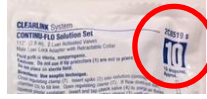
5. Hang the solution bag on the IV pole
6. Prime tubing:
 - a) Squeeze drip chamber and fill half way
 - b) Slowly open roller clamp and prime air from tubing (If tubing has ports—flip and flick to remove air)
7. Label the administration set with date and time



PERFORM HAND HYGIENE

$$\text{Drops/minute} = \frac{\text{Volume of infusion (in mL)} \times \text{Drops / mL}^*}{\text{Time of infusion (in minutes)}}$$

*Information located on tubing package



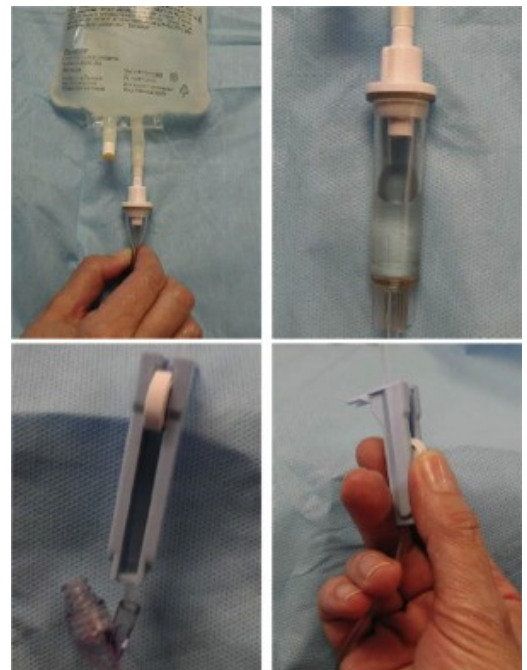
8. Scrub subcut cap with 1 alcohol swab for 30 seconds and allow to air dry.
9. Remove protective cover from the end of primed tubing and push and twist to connect to the needleless subcut cap
10. Slowly open roller clamp and set infusion to the calculated drip rate as ordered
 - a) If running by gravity—start infusion at 20-30 mL/hr for the first hour.
 - b) Increase to ordered rate if resident tolerating (i.e. no discomfort or leaking at site or change in respiratory status)
11. Secure tubing to resident to reduce pulling

PERFORM HAND HYGIENE

12. Document on the fluid balance record and the IPN.

Monitor the resident and site for:

- √ Swelling at the site - this may vary between residents
 - * **A “bubble” at the site can form during the infusion and should be localized.** This is normal and **not** an allergic reaction. Once the infusion is stopped **the “bubble” will subside and the remaining fluid will be absorbed.** The “bubble” is less likely to form during a gravity infusion and is more common when a pump is used.
 - * The appearance and size of a “bubble” is determined by several factors: the site location, the physical condition of the resident (amount of adipose tissue), the amount of fluid going in, and the rate of fluid infusion.



Fill half of the chamber. Open the clamp. Fill the tubing with fluid. Close the clamp when the tubing is full. (Step 3)



References:

<https://www.sciencedirect.com/science/article/pii/S0885392416302949#undfig1>

WRHA LTC Program, Operational Guideline: Hypodermoclysis via Indwelling Subcutaneous Device (December 2020)

Hypodermoclysis (HDC) Quick reference guide

Assessment and Planning:

- √ Resident has been assessed by nursing and deemed at risk for dehydration (changes in oral intake, swallowing difficulties, experiencing physiologic changes d/t illness, steady decline in cognition, emotional stressors, absence of usual cueing from other d/t isolation, etc.) or in a mild form of dehydration (decreased oral intake, weight loss, dry mucous membranes, etc.) and efforts to rehydrate orally are unsuccessful
- √ Prescriber has been notified and assesses
- √ Health care team collaboratively determines rehydration therapy is appropriate and in alignment with the resident goals of care
- √ Prescriber provides a written order.

Drip Rate Calculation:

Make sure you know your infusion set drop factor which is how many drops per ml

$$x \text{ gtt/min} = \frac{\text{Amount of Solution (mL or mL/hr)} \times \text{drop factor}}{\text{Time in Minutes}}$$

Ex: The physician prescribed 1000ml of NS in 24 hrs

Always calculate the rate per hour, so 1000ml/24hrs= 42ml/hour 42ml/hour
X drop factor: _____/60 mins = _____ drops/min

Particulars:

- √ Change/rotate site whenever one of these occurs:
 - Subcutaneous catheter has been insitu for 24-48 hrs
 - After 1.5-2 litres of fluid has been infused
 - When there is erythema, swelling, leaking, bruising, burning or pain at the subcutaneous site
- √ Change tubing Q 96 hrs Change solution bag Q 24hrs

Maximum of 1 to 1.5 litre/day of hydration, no faster than 1 litre in 2 hours.

Monitoring:

- √ Weight- daily (if possible)
- √ BP and pulse
- √ Daily Lab Values (as ordered)
- √ Fluid intake and output
- √ Subcutaneous site Q shift (hourly during infusion)

Complications:

Circulatory overload:

Symptoms: Bounding pulse, hoarseness venous distension, dyspnea, increase respirations, cough elevated BP, restlessness, SOB

Actions (for symptoms of circulatory overload): Stop the infusion and notify prescriber immediately

Electrolyte imbalances:

Symptoms: Changes in behavior, convulsions lack of coordination, hyperventilation, tachycardia, muscle weakness, tingling, tetany, abdominal cramps

Actions (for symptoms of electrolyte imbalance): Stop the infusion and notify prescriber immediately

Troubleshooting:

Infusion stops:	Check to see if tubing is kinked or clamped Raise the height of the infusion set Change site
Site is leaking:	Change the site
Site is red and sore:	Change site
Pooling of fluid at the infusion site:	Inform prescriber
Sporadic drip rate:	Adjust the height of the infusion

Documentation / Communication Checklist:

- √ IPN
- √ Fluid Balance Record
- √ Care plan
- √ Signage a bedside
- √ MDS (section K5a)