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## **Subcutaneous Fluids**

The infusion of a solution into the subcutaneous tissues is called hypodermoclysis. Subcutaneous fluid is absorbed by the large number of capillaries under the skin ensuring rapid absorption from the site.

Advantages compared to the intravenous route are:

- Ease of administration
- Low incidence of infection
- Little pain or discomfort
- No need for prolonged immobilisation
- Minimal medical intervention

Mainly used for dehydration and particularly in the elderly when oral intake is not adequate, no acute need for an intravenous line e.g mild to moderate dehydration

When establishing or maintaining an IV line presents a problem

Contraindications:

- Not used for patients who need more than 2-3 litres of fluid in 24 hours
- Never used as an alternative to IV route when treating major dehydration, shock or diabetic coma

It should be used cautiously in patients with:

- Coagulation defects
- Possible tissue fibrosis resulting from previous radiotherapy injury or surgery, since absorption will be decreased
- Pre – existing heart disease. Subcutaneous fluids can lead to fluid overload.
- Pre existing oedema
- Poor tissue perfusion

Sites:

- Anterior thigh
- Abdomen
- Anterior and lateral aspects of chest wall
- Upper arm
- Scapula

Site choice is dependent on the following:

- Patient mobility
- Comfort
- Access
- Skin condition

The following are areas that should be avoided for potential sites:

- Lymphoedematous limbs

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- Over bony prominences
  - Areas that have been irradiated
  - Near a joint
  - Near a surgical or chronic wound site
  - Sites of infection
  - Areas of inflammation

Always document the site of insertion and rotate the infusion site to maximise absorption of the fluids

Change the site if the following occur:

- Bleeding or bruising
- Oedema at site
- Pain at site
- Localised inflammation
- Skin surrounding insertion site becoming white and hard
- Blood present in butterfly
- Dislodged needle

### **Procedure for insertion**

#### **Equipment:**

- Gloves
  - 21 or 23 gauge butterfly
  - Alcohol swab
  - Semi permeable IV dressing
  - Fluid for administration
  - Intravenous giving set
  - Prescription
1. Insert butterfly in recommended site
  2. Apply occlusive dressing and mark on film dressing date of insertion
  3. Check the patient details on the prescription. Check with prescription type of fluid, route and rate. Ensure prescription is dated and signed.
  4. Prime the giving set
  5. Attach butterfly cannula to the luer at the end of the giving set and regulate the prescribed flow rate and monitor rate of infusion
  6. Remove Butterfly at completion of fluids