

Administration of intravenous fluids

Standard

All infants who require intravenous (IV) fluids will have the procedure for administration of fluids carried out in a safe manner.

Equipment

Prescription chart, prescribed fluid, infusion pump and appropriate giving set (see note 1), alcohol swab

Procedure for peripheral line

- Prepare the trolley surface by cleaning it with a clinell detergent cloth. Allow this to dry.
- With another registered nurse/midwife, check the prescription chart and the fluid pack.([see note 2](#))
- Cleanse hands according to the NNU policy.
- Remove IV fluid bag from outer wrap, squeeze and inspect the bag for leaks, discolouration or particles.
- Remove the IV giving set from outer wrapping; close off the clamp; using a no-touch technique, remove insertion point cover.
- Grasp the administration port and remove the outer protective cover.
- Insert giving set into administration port with a twisting action.
- Squeeze and release the drip chamber to establish proper fluid level (~ ½ full); whilst keeping the membrane on the giving set pressed securely between thumb and forefinger, release the clamp and prime the line with fluid expelling all air. Close off clamp.
- Load the giving set into the pump; adjust the rate, pressure alarm settings and cancel previously infused volume. Any adjustment to rate (at the beginning or during the infusion) must be checked and signed by 2 nurses.

Peripheral line -

- Clamp T-connector at cannula site
- Using an alcohol swab, vigorously rub the no-needle connector for 30 seconds.
- Discard swab and allow the connector to dry (about 30 seconds).
- Flush the line with 0.9% sodium chloride to ensure patency of line.
- Connect IV giving set ([see note 3](#)). Unclamp T-connector and start the pump.
- Inspect cannula site for extravasation (infiltration of surrounding tissues with prescribed fluid) or leakage at least once hourly ([see note 4](#)).

For central lines, please see separate guidance.

Potential complications

Extravasation, infection, haemorrhage, incorrect infusion fluid and rate of flow.

Notes

1. All fluids except amino acid are administered through a 15 micron infusion giving set - this giving set is changed every 24 hours. Depending on the needs of the baby, amino acid may be administered through a 0.2 micron giving set (48 hour giving set).
2. Protocol for checking drugs
 - All prescriptions are checked by 2 registered nurses/midwives (one who has completed the NICU's IV Therapy for Neonates course) for accuracy in:
 - patient name, ID number, weight and gestation,
 - drug to be given, route of administration, special instructions, legibility of the signature of the prescribing person,
 - date and time of current dose and
 - date and time of previous dose.
 - The prescription should be checked against the drug monograph:
 - drug name,
 - dose (considering gestation, weight, actual age),
 - therapeutic monitoring level (check 'Antibiotic drug level' entry in baby's Badger notes if appropriate),
 - incompatibilities and reconstitution (if appropriate).
 - Having independently calculated the dose and volume to be infused (in mls/kg/dose and or rate/minute) the 2 nurses/midwives must confer and agree on the dose before proceeding.
 - Both nurses/midwives must check that the drug is being infused into the correct line and there are no incompatibility concerns (see drug monograph). The prescription chart is signed by both nurses/midwives after administration is complete.
3. IV therapy sets and fluids are changed every 24 hours except for amino acid administration; depending on the needs of the baby a 48hour bag may be used (lipid is changed every 24 hours).
4. Indications of extravasation include localised swelling, blanching, coolness of the affected tissue and possibly discomfort. If extravasation is suspected, the cannula must be removed and if possible, elevation of the affected limb.

References

Campbell T., Lunn D. (1997) Intravenous therapy: current nursing concerns. *British Journal of Nursing* 6 (21) : 1218-1228.

Camara D (2001) Minimizing Risks Associated With Peripherally Inserted Central Catheters in the NICU. *MCN, American Journal of Maternal/Child Nursing* 26(1):17-22

Clark R, Powers R, White R, Bloom B, Sanchez P, Benjamin DK (2004) Prevention and Treatment of Nosocomial Sepsis in the NICU. *Journal of Perinatology* 24:446–453

Vost J., Longstaff V. (1997) Infection control and related issues using intravenous therapy. *British Journal of Nursing* 6 (15) : 846-857.