

# Intravenous Cannulation

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**Original Author(s):** Ollie Jones

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## Clinical Skills - Intravenous Cannulation



Preparation	⌚ 00:06
Procedure	⌚ 05:08
Aftercare	⌚ 08:00

Intravenous cannulation is a process by which a small plastic tube (a cannula) is inserted into a peripheral vein. The subsequent venous access can be used for the administration of fluids, medication and nutrition. In some cases, blood samples can also be obtained from the cannula.

The process of cannulation can be divided into four steps; explanation and consent, preparation, procedure and aftercare. We shall now look at these stages in more detail.

## Explanation and Consent

Confirm the patients identification

Check full name, DOB, and hospital number

Confirm against patients wristband

Explain rationale for the procedure

Describe the procedure

State the importance of the procedure

Explain the risks of the procedure to the patient

Infection (can be minimised by sterile equipment and aseptic non-touch technique)

Structure missed or another structure hit (nerve, artery, or bone)

Haematoma or phlebitis may develop

Ask about relevant past medical history

Blood clotting disorders or medication that affects blood clotting (e.g. warfarin)

Arterio-venous fistula present

Previous breast surgery or lymph node removal

Ask about needle phobia

Ask about preferred location of cannula

Check that the patient is happy to go ahead with the procedure. Ask the patient if they would like a chaperone present

# Preparation

When in the treatment room, prepare your equipment on an appropriate equipment trolley

- Decontaminate your hands

- Clean your trolley and plastic tray with appropriate aseptic agent (e.g. Chlor-clean), allowing to dry fully. Decontaminate your hands

- Check expiry date of saline solution with another member of staff. Clean the top of the saline vial with chlorhexidine wipe and open. Draw up saline into sterile syringe and discard the needle

- Open the bionector packaging, flush it, and place in the tray

- Gather the rest of the equipment into the plastic tray on the trolley and move to the patients bedside

  - Equipment required cannula pack, 2 chlorhexidine wipes, pre-primed bionector, saline-filled syringe, tourniquet, inco pad, and sharps bin

  - Cannula pack should contain at least cannula, gauze, sterile dressing, absorbent pad, and cannula assessment record

Once at the patient's bedside

- Re-confirm the patients identification

- Decontaminate your hands and position the patient's arm underneath a pillow with the inco pad

- Apply the tourniquet, select a suitable vein, remove the tourniquet and carry on with the procedure

# Procedure

- Don your gloves and apron

- Clean the puncture site with the chloraprep wipe (in a cross-hatch formation) and allow to air dry

- Apply the tourniquet and do not repalpate the cleaned skin

- Placing traction on the skin below the intended puncture site, insert the cannula with the bevel up at an angle of 30° into the puncture site

- Advance the cannula and observe flashback

- Hold the needle introducer still whilst advancing the cannula forward, over the needle and fully into the vein

- Release the tourniquet and dispose the needle into the sharps bin

- Connect your bionector to the cannula

- Secure the cannula in place with the sterile dressing

  - Ensure not to cover the puncture site with the tape when securing down, as this can cover up any possible phlebitis developing

- Flush the bionector and cannula with 5ml of saline

  - No resistance should be felt

  - Check for any signs of extravasation / tissueing around the cannula site. Remove cannula if suspected

- Discard all waste into the correct disposal bins and ensure the patient is comfortable

- Remove your gloves and decontaminate your hands

# Aftercare

Instruct the patient to inform the nursing staff if:

- Cannula site becomes painful, red, hot, or swollen

- The area around the cannula feels wet or the dressing is coming loose

- The cannula is limiting their self-care

Thank the patient and leave the patient's bedside. Ensure the correct cannula insertion documentation is filled out completely and placed in the patients notes. Inform the nursing staff and place any cannula care pathway stickers into the nursing notes

Ideally, the cannula should be checked and flushed 3 times a day, and should be removed after 72hrs.

