

Blood collection from intravenous cannula

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Bloods can almost always be collected from a new cannula as long as you remember and can often be collected from an old one.

Blood at the time of cannula insertion

Equipment:

- Your usual equipment for cannula insertion
- 2 x 10 mL syringe (aspirate for pathology and flush)
- 10 mL of sterile 0.9% NaCl (normal saline) for injection
- 21 gauge needle (inject blood into pathology tubes)
- pathology tubes

Blood collection is almost always possible from a newly sited intravenous cannula so don't ruin another vein by poking the patient a second time.

A "Vacutainer" system with vacuumed tubes should never be used with a cannula. Rather learn the art of using a syringe.

1. Tighten the tourniquet again.
2. Attach a syringe to the cannula hub directly, or to a short extension line and **gently** aspirate back.
 - The advantage with using a syringe is that you can "feel" the flow of the blood back and adjust your pressure accordingly.
 - Too much suction and the vein collapses stopping blood flow.
3. The position and angle of the cannula into the skin may have to be adjusted to get a good flow.
4. After the specimen has been collected, release the tourniquet.
5. Flush the cannula with 10 mL of 0.9% NaCl solution.
6. Finish taping the cannula and fixing it to the skin as per normal.

Blood collection from an old cannula

Equipment:

- 1 x 3 mL syringe (initial flush)
- 3 x 10 mL syringes (first aspirate for discard, second aspirate for pathology, end flush)
- tourniquet
- 10 mL of sterile 0.9% NaCl (normal saline) for injection
- 21 gauge needle (for injection of blood into pathology tubes)
- pathology tubes

Taking blood from an “old” cannula, especially one sited in a small vein is often less successful, especially if the blood has been diverted from the vein distal to the cannula. Depending on the vein, there is probably only around a 50% chance of success. Nevertheless, it is worthwhile trying in someone with poor veins as if you are careful, you won’t “ruin” the cannula and the only thing you lose potentially is time.

1. Stop any infusion into the cannula for at least 10 minutes.
2. Give a 1-2 mL flush of the cannula with sterile saline.
3. Apply the tourniquet.
4. With a syringe attached to the hub of the cannula or to a short extension line, gently aspirate back.
 - o Slightly adjusting the position of the cannula on the skin may facilitate flow.
5. If blood can be aspirated then discard the first 10 mL of aspirate as it is contaminated with infusion fluid.
6. With a new 10 mL syringe, aspirate the volume of blood required for your specimen.
7. Once enough blood has been collected, release the tourniquet.
8. Flush with 10 mL of sterile saline.

Hints

- I recommend using 10 mL syringes for aspiration of blood as it gives you a good balance between size, and pressure control.
- Switching between multiple syringes to collect the adequate volume of blood necessary is fiddly. It is uncommon that you actually need more than 10 mL of blood for most tests. If you do have many tests, use paediatric tubes or speak to the pathology laboratory scientists and technicians to let them know that you want tests done despite less than the usual amount of blood.
- You **cannot** use this method to collect blood for an aPTT or coagulation studies if heparin has been run through the cannula as even a trace amount of heparin in the cannula will substantially change the result.

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