

Blood collection from external jugular vein

Index: [Alternatives to venepuncture](#)

Original article by: [Michael Tam](#)



External jugular vein

If venepuncture from a limb vein is difficult or impossible, blood collection from the external jugular vein is an option to consider. Usually, the external jugular vein is large large vessel and it is a fairly easy process.

I personally do not like blood collection from the external jugular vein as it is a "gruesome" process (insofar as putting a needle into someone's neck) and there is the (small) risk of hitting the common carotid artery. Most patients don't like the idea very much either. Nevertheless, there are a group of patients who prefer bloods to be taken from the external jugular. In Sydney, the ex-IVDU patients who require frequent blood tests (but have extremely poor venous access) seem to like it.

Normally, I would preferentially collect blood via the radial artery but the advantage with the external jugular vein is that it is easier to collect large volumes of blood and it is less "fiddly".

Equipment:

- 21- or 23-gauge butterfly needle
- Use either the Vacutainer system (preferred) or attach a 10-20 mL syringe to the butterfly needle
- pathology tubes
- cotton wool ball



The most important aspect of blood collection from the external jugular is to position the patient well. Unlike blood collection from a limb, it is not possible to place a tourniquet around a patient's neck to dilate the veins! This can be accomplished, however, by having the patient lie supine on a bed and tilting the bed to a slight "head down" position. Asking the patient to perform Valsalva manoeuvres will often help as well.



Vacutainer system

The skin can be kept taut over the external jugular vein by asking the patient to turn their head to the opposite side. Insert the butterfly needle at an angle of around 30 degrees to the skin. It should be relatively easy to enter the lumen of the vessel.

Then, using either the Vacutainer system or a syringe, withdrawal the required volume of blood.

When done, apply constant pressure over the venepuncture site with a cotton wool ball. Ask the patient to sit up. Apply pressure for a full 5 minutes.

Hints

- A butterfly needle is a necessity in this case. As the neck "concaves" inward (with regards to the shoulder and jaw), it is extremely difficult to get the right angle with a simple needle and syringe. Injury the common carotid artery (or worse, cause an A-V fistula) is much more likely if an attempt to collect blood is made from the external jugular vein with a needle and syringe.
- At least 5 minutes of direct pressure is recommended to avoid a haematoma. If the patient can't be trusted with this act, then do it yourself (or ask a nurse to do it).
- Asking the patient to turn their head to the other side not only helps expose the external jugular vein and keeps the skin taut, but also prevents them from seeing what you are doing.

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