

Jugular Catheterisation made easy

The Infusion Concepts range of polyurethane jugular catheters offers you a wide choice of lumen gauge & numbers, and catheter lengths. Other configurations are available, so please ask if you need a different size.

We strongly encourage the use of needle-free valves in place of the caps supplied. These make disconnecting your patient from lines and extensions much easier. They are also much easier to use for frequent IV access such as serial blood sampling.

Principles in catheterisation

- Indwelling jugular catheters must be placed under aseptic conditions . . . Consider them as surgical implants.
- All lines, including static sampling lines, should be flushed every few hours to minimise the risk of clot of fibrin deposit formation. For active lines use current fluids; for static lines use hep saline.
- For repeat blood sampling you need to use THREE syringes:
 - Heparinised saline to aspirate blood in channel. Use this syringe for first flush after collection
 - Empty syringe to collect desired blood sample
 - Heparinised saline to flush line clear after initial flush.
- Do NOT overlook other IV access options for catheterisation:
 - For cats, the medial saphenous vein is an excellent longer-term access point.
 - For dogs, the medial or lateral saphenous is a good alternative site.
- If you have a sterile ampoule of heparin flush it may be easier to prime all channels prior to starting placement. This ensures that all channels are primed with fluids and prevents ingress of blood that may lead to clot formation in the event of a prolonged catheterisation procedure.

Which channel goes where?

Each lumen in our jugular catheter range exits the catheter at a different site. These are clearly visible on inspection of the catheter tip. Once placed, you can always tell which channel exits where by:

- The distal chanel (brown) is always the one at the blue tip of the catheter.
- Chanel luers are ISO colour-coded.
- Exit positions (distal, proximal etc) are labeled on the channel tubing

Single, double or triple?

Deciding on the number of channels depends on the end use and your needs. As a rule, blood samples are collected from the proximal-most channel for sake of purity. The following guide is for quick reference only. Please contact us if you need further advice on selection.

- SINGLE: For reliable I/V access only. Suitable for irritant fluids such as TPN and chemotherapy
- DOUBLE: Used with primary fluid channel and secondary channel for drug administration (via syringe driver) or dedicated blood sampling.
- TRIPLE: Allows primary fluids, secondary drug infusions as well as dedicated blood sampling

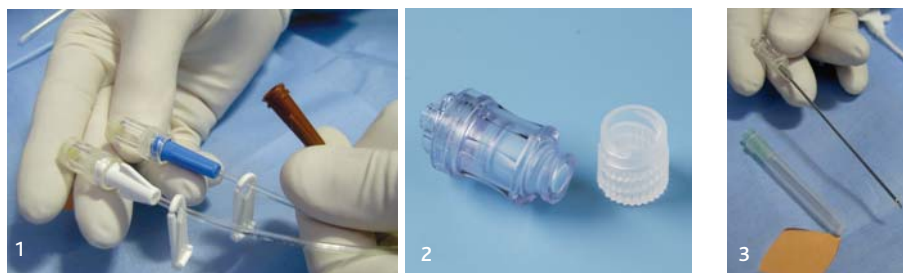
NOTE:

1. Increasing the number of lumens for a given catheter size reduces the lumen diameter and flow rates. Use the lowest number of lumens possible for best flow rates.
2. A double lumen catheter can be adapted to deliver fluids, a drug line and leave a proximal channel for blood sampling by using a Y-extesion line on the distal channel.
3. The DISTAL channel is ALWAYS the widest bore, and is best suited for use with IV volume fluids.
4. Dedicated blood sampling should always be from the PROXIMAL channel.

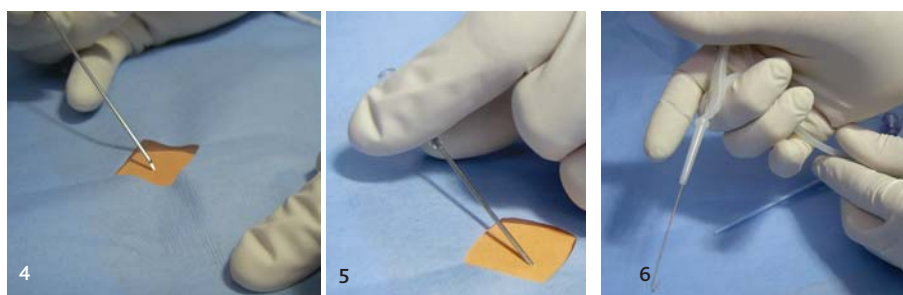
Placement of jugular catheters by Seldinger technique

This pictorial guide takes you through the steps in placement of jugular catheters by the Seldinger technique.

Remember that the jugular vein is not always the best access point for some patients and conditions. We are happy to advise you further on technique and catheter selection, so please contact us for further details



The desired access point should be clipped, scrubbed and draped (3). Before starting, identify the DISTAL (Brown) channel on the catheter and ensure the injection cap is removed (1). Using a needle-free valve (FNV-MF-H: #2) is very helpful especially if connecting infusion lines or sets. Flush channels if appropriate. Select the special Seldinger needle only (3)



Locate the vein (4) and adequately advance needle in direction of blood flow (5). In a clinical patient, you will experience a moderate blood flow - do NOT panic! You are now ready to place the guide wire (6).

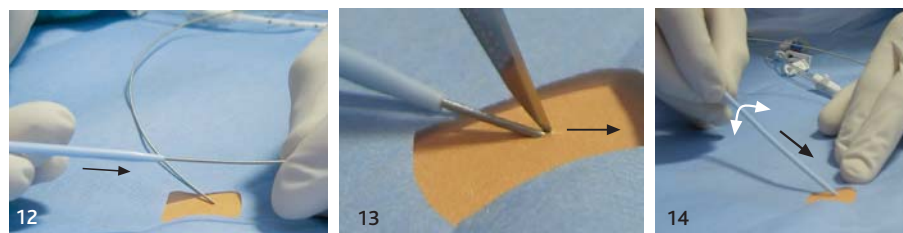


Take the guide wire holder in one hand (7). Use thumb to retract the wire J-tip back into the plastic cone. Push cone firmly into luer of Seldinger needle (8). Use thumb over wire on outer cut-out area (9) to advance the guide wire down the predetermined length for that patient. An ECG will show if you have advanced too far (into heart chambers).

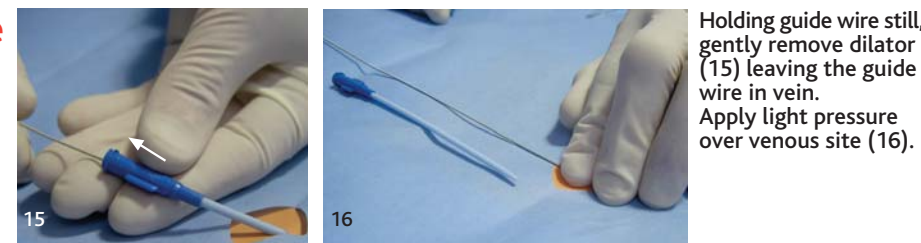


Hold the guide wire steady and remove the Seldinger needle (10).

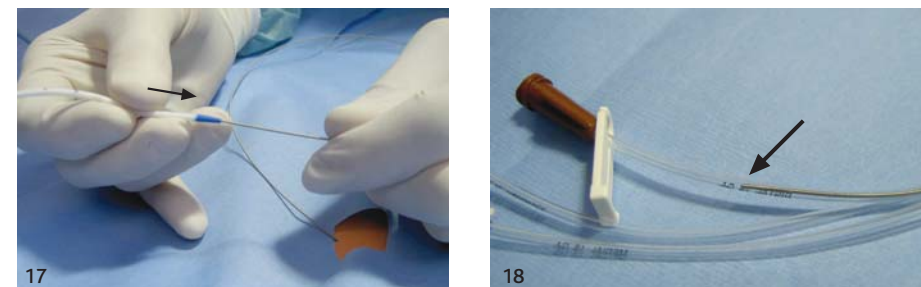
Light pressure over the puncture site minimises seepage (11).



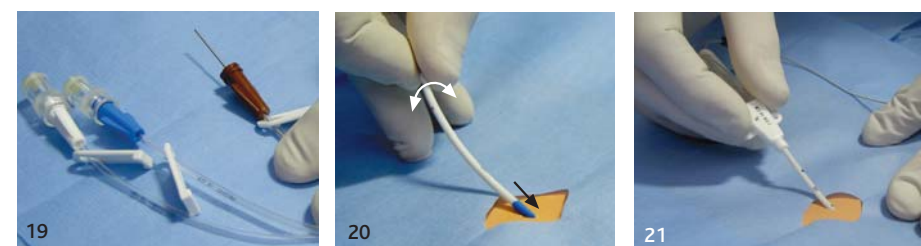
Feed the free end of the guide wire into the tip of the dilator (12). Advance the dilator over the guide wire down to the skin and advance through gently using a twisting motion. If the skin is tough, use the scalpel to nick the skin over the wire (13). Do NOT do this over the dilator itself. Using a gentle rotating motion, pass the dilator into vein (14 & 15).



Holding guide wire still, gently remove dilator (15) leaving the guide wire in vein. Apply light pressure over venous site (16).



Now feed the free end of the guide wire into the tip of the catheter (17). Holding the guide wire still, advance the catheter down over the wire. The wire appears in the tubing of the distal (BROWN) channel (18). If you have capped this channel, you must now remove the cap to allow the wire to exit.



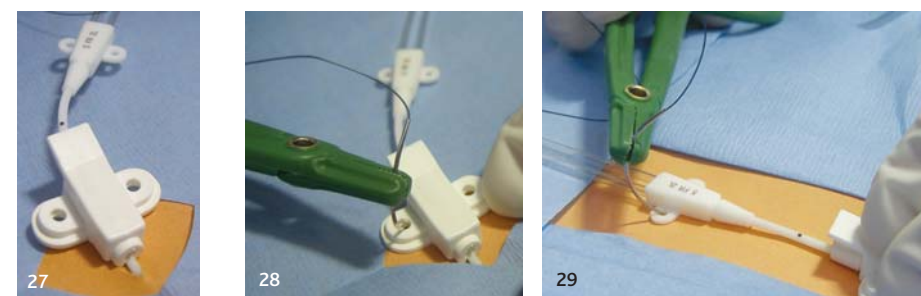
The wire exits that channel as you advance the catheter (19). Advance catheter tip through the dilated skin entry; a rotating action may ease passage of tip through tissue (19). Do NOT force the catheter; if resistance is encountered, repeat the dilation procedure (12-16). Advance catheter until either the hub is at the skin site, or the predetermined depth is reached (21).



Withdraw the guide wire whilst holding the catheter in place (22). Once removed, cap the distal channel (23) with your preferred cap; aspirate & flush with heparinised saline. Suture in place (24).



If the entire catheter length is not implanted, use the clamp provided to anchor proximal tubing. Do NOT suture with catheter wall/sheath exposed, as shown in picture 25! To do this, separate the hard plastic backing from the soft rubber catheter grip (26). Ease the grip over the catheter at the required position and then re-attach the plastic cover (27).



The grip now holds the catheter firmly (28). Suture the clamp eyelets first (29) before suturing the catheter hub (30) to minimise risk of displacement. The catheter should now be securely fastened to the patient. Dress and protect catheter site and lumen tubing as appropriate.