

External Jugular IV Cannulation

RN Verification Program

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What Will Be Covered Today?

- **Indications/Contraindications**
- **Basic Anatomy of the Neck**
- **Preparation for Placement**
- **Technique for Placement**
- **What to Document**



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Introduction

- Obtaining IV access can often be a major problem for patients and healthcare providers.
- Delays in IV access lead to delays in patient care and expose patient to undue pain and anxiety, both of which are bad for patients and healthcare providers.
- This impacts patient satisfaction scores and consequently impacts the amount of revenue the hospital earns.



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Consider EJ with These Patients:

- Arrest victims
- Anorexia
- Substance Abuse
- Hypothermic
- Drowning
- Renal failure
- Cancer
- Elderly
- Debilitated
- Pediatric
- Trauma
- HIV/AIDS
- Sepsis
- Home Health
- Shock



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Indications



- External jugular vein cannulation is indicated in a **critically ill patient >12 years of age** who requires intravenous access for fluid or medication administration and in whom an extremity vein was not attainable.
- External jugular cannulation can be **attempted initially in life threatening events** where no obvious peripheral site is noted.

Contraindications



- Patient cannot tolerate being flat.
- Patient is actively vomiting.
- Patient is agitated, moving head.
- Patient has a neck mass.
- Patient has a VP shunt on side of intended insertion

Continued...



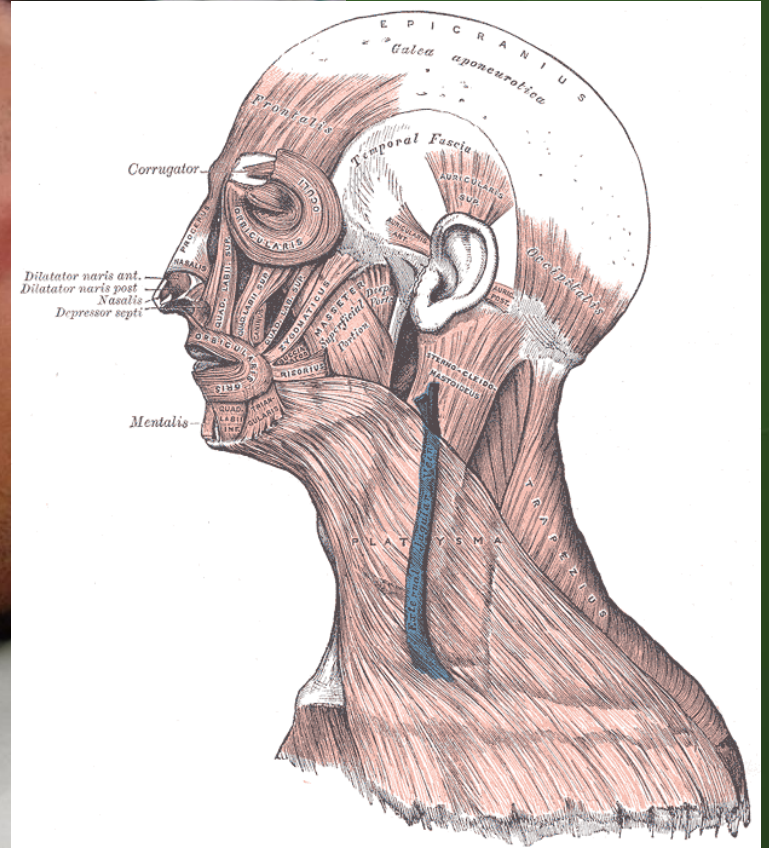
- Cervical Spine Trauma
- Soft tissue neck trauma
- Circumferential burns to the neck
- Inability to identify anatomical landmarks for cannulation
- Evidence of infection at or near the intended insertion site

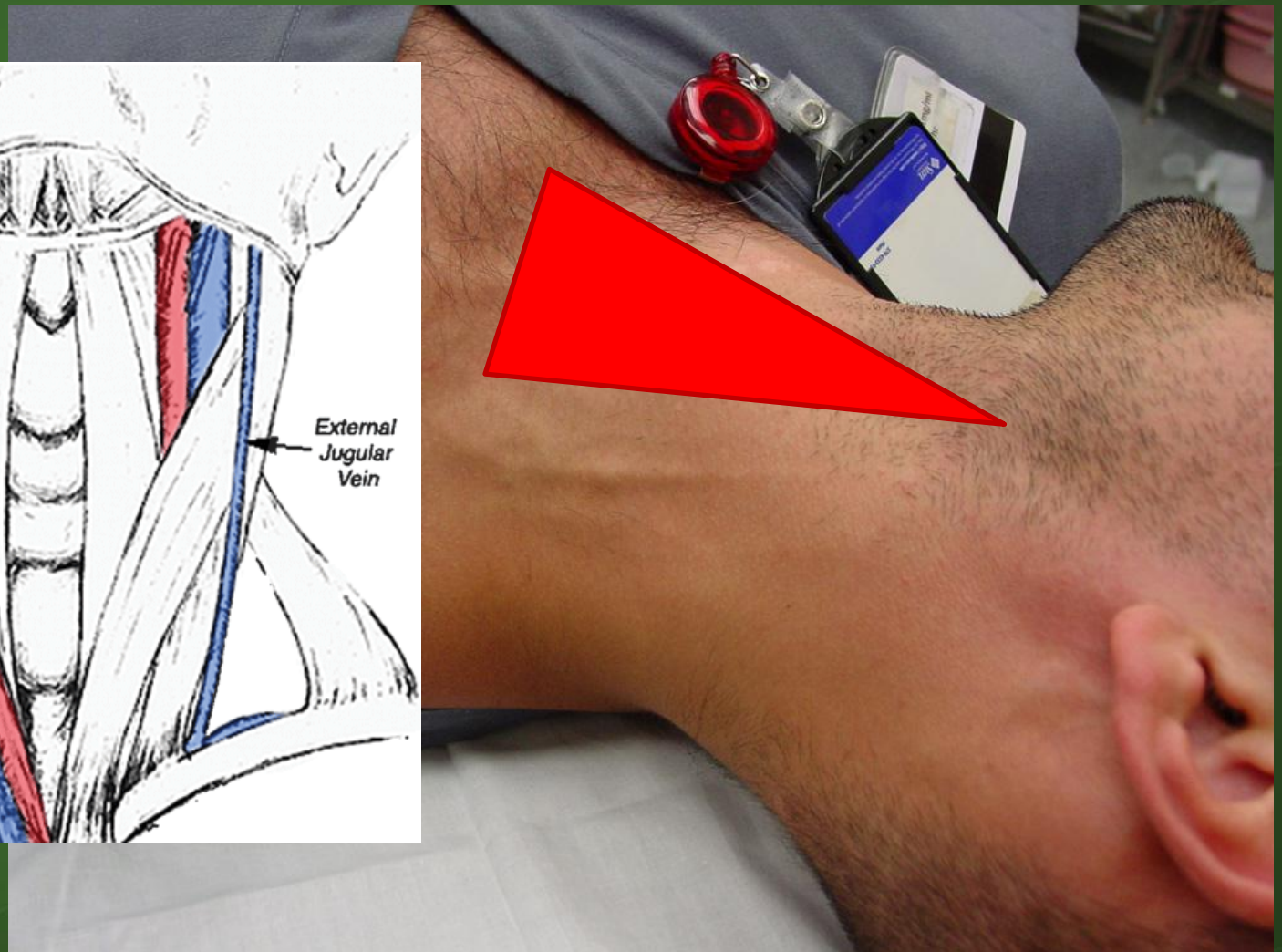
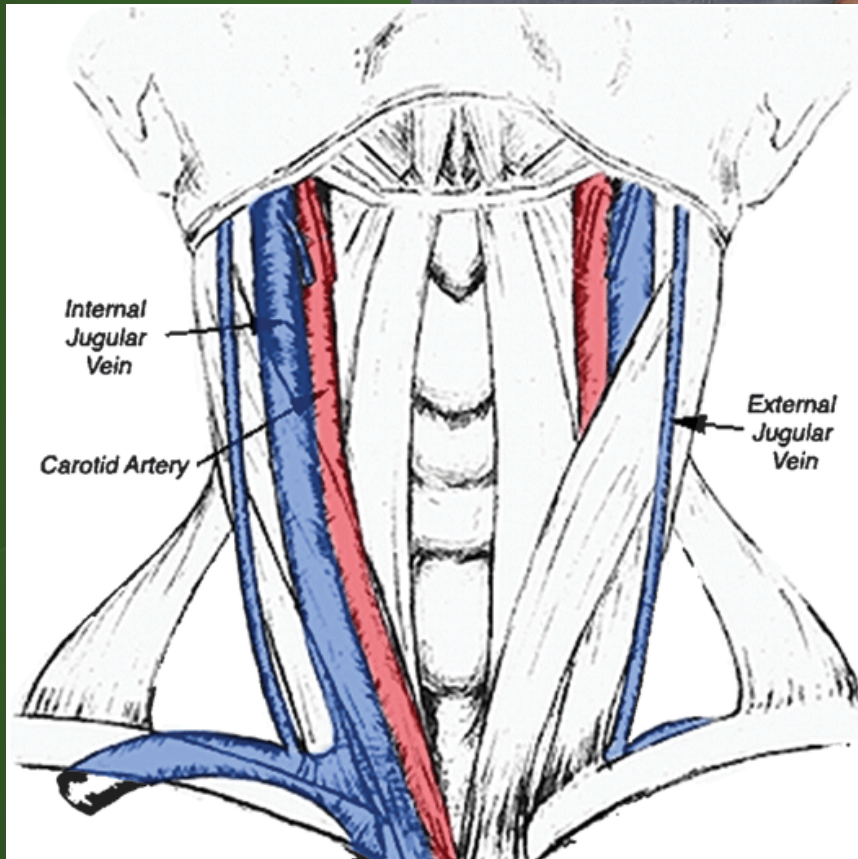
Basic Anatomy

- **Anatomical location of the EJ**
- **What structures to avoid**



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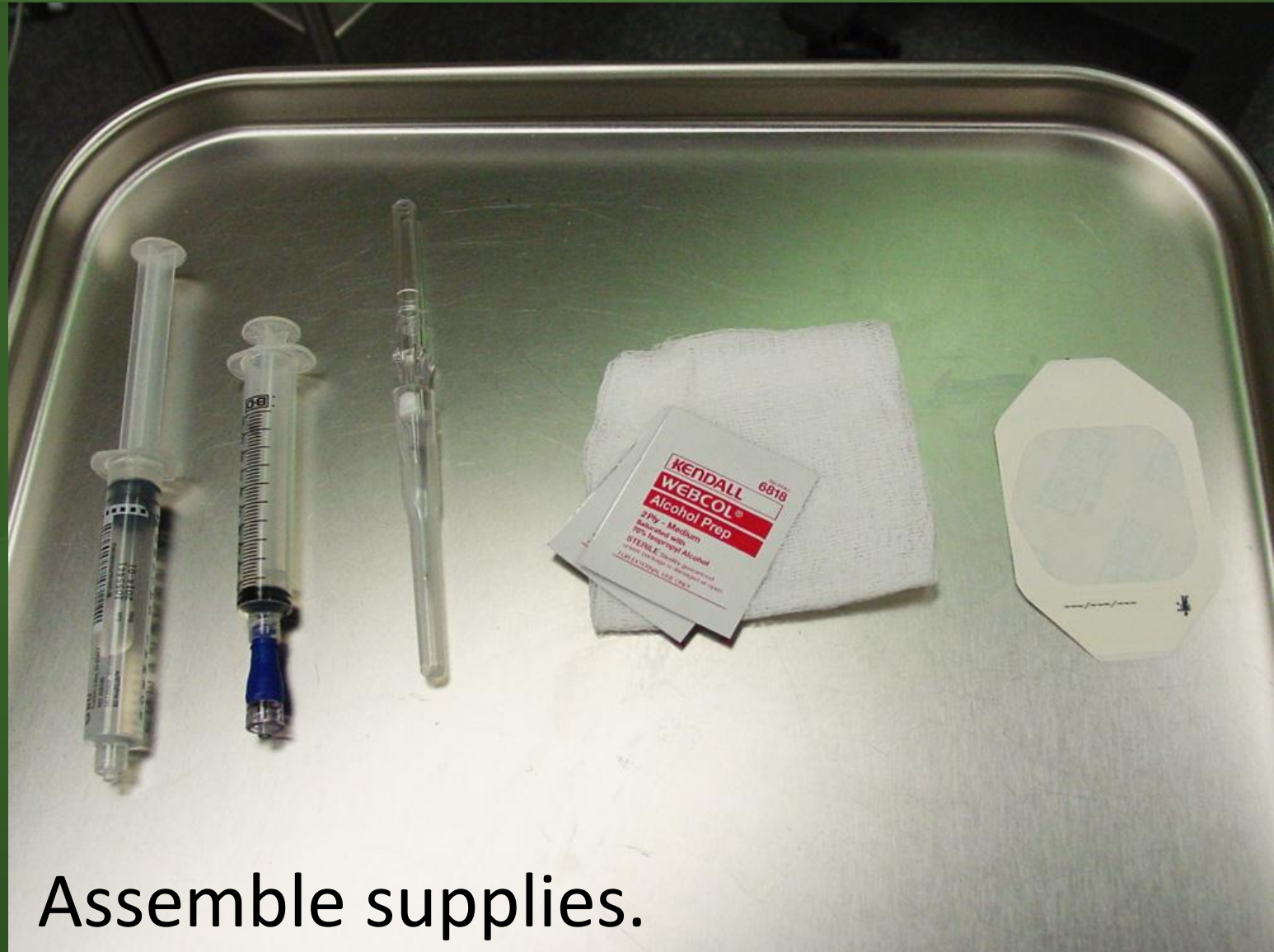


Preparation

- **Verify physician order.**
- **Assemble equipment.**
- **Explain procedure to patient/family/caregiver.**
- **Wash hands or use alcohol gel/foam**
- **Put on non-sterile gloves.**
- **Place the patient supine and head down if possible. This helps to distend the jugular veins and reduces the possibility of an air embolism**
- **Turn the patient's head away from the side of the neck you intend to use.**



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Assemble supplies.



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Place patient in trendelenburg.



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Turn head towards contralateral side.

Technique



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- **Identify** the external jugular vein.
- **Cleanse** venipuncture site using chlorhexidine gluconate sponge with vigorous side-to-side prep and allow to dry.
- Lightly place a finger of the non-dominant hand just above the clavicle to produce a **tourniqueting effect**.
- Use the thumb of that same hand to **pull traction** above the puncture site.
- **Puncture the vein** midway between the angle of the jaw and the clavicle and cannulate the vein in a **shallow and superficial manner**.



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- **Confirm placement** of catheter/needle by witnessing flashback.
- **Remove the IV catheter needle** according to manufacturer's directions, activate safety device, and discard in appropriate receptacle.
- **Attach IV tubing** or **saline lock device** primed with IV solution to hub.
- **Apply transparent dressing** and tape to catheter to secure, avoiding circumferential dressing or taping.



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Complications:

- Hematoma
- Infection
- Air Embolism
- Infiltration



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FAQs:

- Can I draw blood from an EJ?
Yes.
- Can I put pressors thru an EJ?
Yes, but monitor closely.
- Should I use an infusion pump?
Yes, typically.
- Can radiology give contrast thru EJ?
Yes, but NOT typically for angio.



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Nursing Measures:

- Monitor site for signs of complications:
 - Redness
 - Warmth
 - Infiltration
- Use IV infusion pumps.
- Use luer-lock connectors.



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Documentation should include:

- Size of catheter
- Site location
- Type of IV fluids infusing or if catheter was capped off
- How patient tolerated procedure



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- **Who** can insert an EJ?
 - RN's with a minimum of 2 years experience that have completed an external jugular intravenous catheter insertion program and validated competency
 - Licensed Physicians, Certified Registered Nurse Anesthetist (CRNA)
- **Who** can **Validate competency**?
 - Attendings.
 - Senior residents.
- **What** do I do with my completed competency validation form?
 - Make a copy to keep for yourself.
 - Give original to your ANC to place in your file.

Highlights

- Ask MD before attempting EJ placement.
- Clean the Skin! Scrub, Scrub, Scrub
- No blind sticks! If you can't see it, do stick it.
- Remain shallow and superficial when inserting.
- Assure that you have blood return.
- An attending or senior resident must observe and check-off for validation.



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