

BASIC INTERVENTIONAL PROCEDURES

Medicine and Surgery
Harvey Course

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Invasive maneuvers
that a doctor must be
able to perform...



Naso Gastric Tube



Urinary Catheter



Venous Blood
Sampling

NASO-GASTRIC TUBE



Indications

Emptying of gastric contents (e.g. intestinal obstruction, bleeding)

Enteral feeding

Contraindications

Maxillo-facial trauma

Nasopharyngeal or esophageal obstruction

Recent esophageal surgery

NASO-GASTRIC TUBE

Necessary tools

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- Protective gown
- Adequate caliber nasogastric tube (at least 14-16 Ch)
- Glass of water and straw
- Squirt syringe with catheter tip
- Lubricant
- Medical sheet
- Stethoscope
- Band-aid



NASO GASTRIC TUBE

Instruction for use

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- Put on a gown and gloves.
- Check the patency of each nostril by asking the patient which nostril provides the best airflow.
- Place a drape over the patient's chest to keep it clean.
- Choose the side for tube insertion.
- Lubricate the end of the nasogastric tube.
- Gently insert the tip of the tube into the nose and slide it along the floor of the nasal cavity. Expect slight resistance as the tube advances through the posterior nasopharynx.
- Ask the patient to take a sip of water through a straw and advance the tube while swallowing. The patient will swallow the tube, facilitating passage into the esophagus. Continue to advance the tube while swallowing.

NASO GASTRIC TUBE

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- Assess the correct positioning of the tube in the stomach by trying to aspirate with the syringe: the aspiration of gastric material confirms the correct location in the stomach. Alternatively, inject 20-30 ml of air and auscultate with the stethoscope in the left hypochondrium: the perception of a borborygmus confirms the position of the SNG in the stomach.
- Fix the tube to the patient's nose with a 10-12 cm piece of adhesive tape that is cut vertically for half its length and attach the wide half to the patient's nose. Then wrap the ends of the tape in opposite directions around the tube.

URINARY CATHETER



Indications

- ▶ Monitoring of diuresis
- ▶ Relief from acute or chronic urinary retention
- ▶ Treatment of urinary incontinence

Contraindications

- ▶ Suspected urethral injury
- ▶ Recent urological interventions

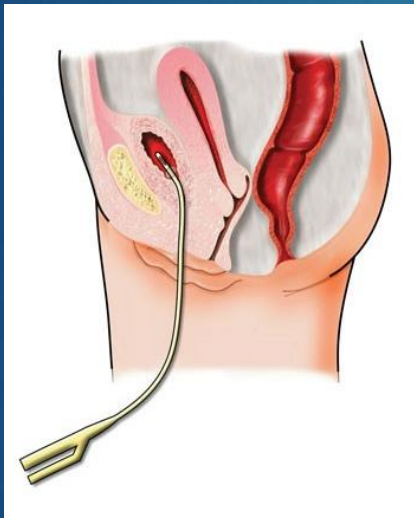
URINARY CATHETER

Necessary tools

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- Sterile drapes and gloves
- Disinfectant (povidone iodine,...)
- Sterile gauze
- Water-soluble lubricant
- Urethral catheter (16 French Foley catheter is appropriate for most adult women, 14 French for adult men)
- 10 mL syringe with water (for inflating the catheter balloon)
- Sterile collection device with tubing

URINARY CATHETER in WOMAN

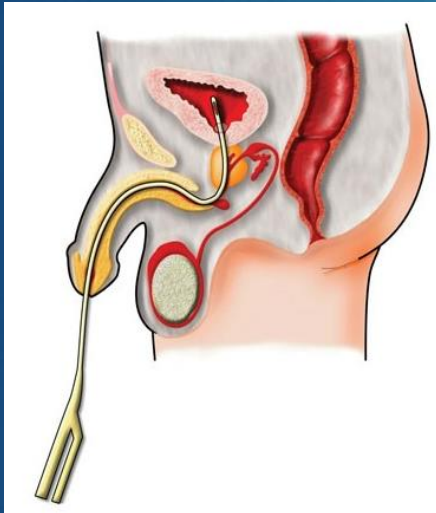


Instruction for use

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- Disinfect the area around the meatus with povidone-iodine. Use a circular motion, starting at the meatus and working outward.
- Place the sterile drape over the pelvis so that the vulva is exposed.
- Apply lubricant to the tip of the catheter.
- Gently stretch the labia majora and expose the urethral meatus, using your non-dominant hand.
- Connect the collection bag to the catheter
- Hold the lubricated catheter and gently pass it through the urethra, using your free hand. Urine should flow freely into the collection tube.
- Inflate the balloon with 10 ml of SF. Resistance or pain may indicate that the balloon is in the urethra and not the bladder.

URINARY CATHETER in MAN



- Disinfect the glans with povidone-iodine while retracting the foreskin. Use a circular motion, starting at the meatus and working outward.
- Place the sterile drape over the pelvis so that the penis is exposed.
- Apply lubricant to the tip of the catheter.
- Grasp the shaft of the penis with your non-dominant hand.
- Connect the collection bag to the catheter.
- Hold the lubricated catheter and gently pass it through the urethra, using your free hand. Urine should flow freely into the collection tube.
- Inflate the balloon with 10 ml of SF. Resistance or pain may indicate that the balloon is in the urethra and not the bladder.
- To prevent paraphimosis, reduce the foreskin after the procedure.

VENOUS BLOOD SAMPLING



Indications

- ▶ Obtaining a blood sample for analysis

Contraindications

- ▶ Infection or hematoma
- ▶ Damaged or swollen extremity
- ▶ Thrombotic or phlebotic vein

VENOUS BLOOD SAMPLING



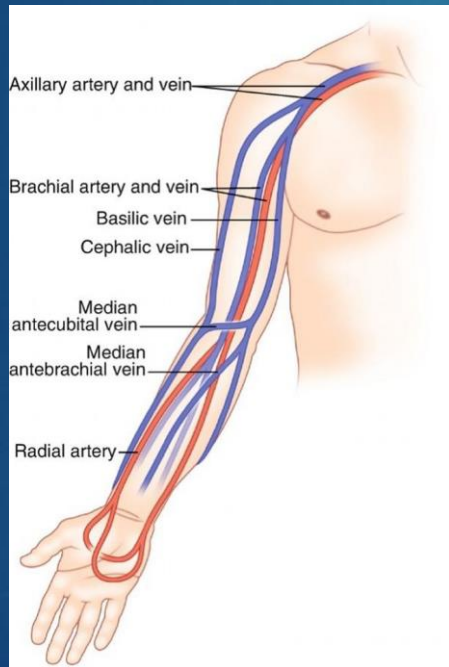
Necessary tools

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- Skin cleansers: alcohol, chlorhexidine, or povidone-iodine swabs or wipes
- Nonsterile gloves
- Tourniquet
- Needle system
- Blood collection tubes
- Dressing supplies (e.g., tape, gauze, bandages)



VENOUS BLOOD SAMPLING



Instruction for use

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- Identify a suitable vein by applying a tourniquet and asking the patient to make a fist: palpate with the index finger to identify a turgid vein.
- Disinfect with antiseptic solution.
- Apply gentle traction on the vein distally using the thumb of the non-dominant hand to prevent the vein from moving.
- Explain to the patient that the puncture is being performed.
- Insert the needle in the direction of venous flow with the bevel facing up, along the midline of the vein at an angle of approximately 45 degrees to the skin.
- Blood will appear at the hub of the needle (called backflow) when the needle tip enters the lumen of the vein.

VENOUS BLOOD SAMPLING



- When blood begins to flow, remove the tourniquet. When using vacuum tubes, push each tube all the way into its holder, being careful not to remove the needle from the vein.
- When blood collection is complete, hold a folded gauze pad at the venipuncture site with your non-dominant hand and in one motion remove the needle and immediately apply pressure to the site with the gauze pad.
- Ask the patient to continue applying pressure to the site.
- Dispose of the needle in the designated container (Halibox).

PERIPHERAL VENOUS CATHETER PLACEMENT



Definition

It is a venous catheter, positioned in a superficial or deep peripheral vein whose tip does not reach the superior/inferior vena cava or the right atrium.

Indications

- ▶ Obtain a permanent venous access route for blood sampling and/or drug infusion

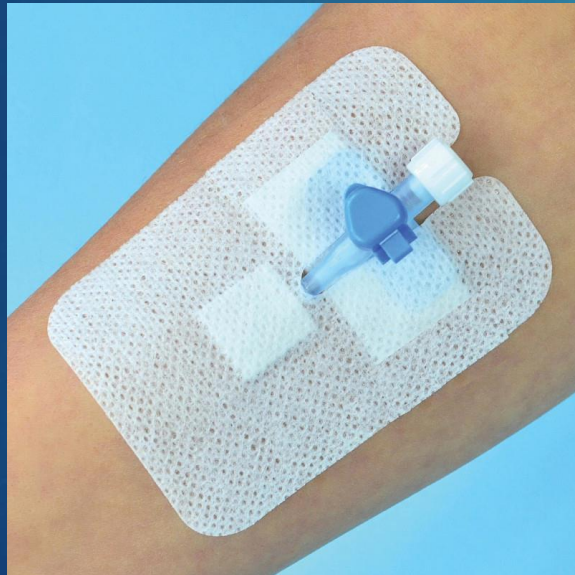
PERIPHERAL VENOUS CATHETER PLACEMENT



Necessary tools

- Cannula needles of various calibers and lengths
- Hemostatic tourniquet
- Antiseptic
- Sterile gauze
- Semi-permeable transparent dressing
- Gloves
- Extension with three-way tap
- Syringe for sampling or infusion of drugs

PERIPHERAL VENOUS CATHETER PLACEMENT



Instruction for use

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- Choose the right gauge of the cannula needle according to the size of the patient's vein.
- Wear disposable gloves.
- Apply the tourniquet 15 cm above the chosen puncture site.
- Invite the patient to open and close their hand.
- Disinfect the puncture site with antiseptic.
- Tighten the skin and puncture the vein with the flute-shaped end of the needle pointing upwards at an angle of approximately 45° .
- Continue the introduction of the cannula needle along the course of the vein.
- Check for blood return into the lumen of the needle
- Keep the stylet still and gently advance the plastic catheter.
- Loosen the tourniquet.
- Exert pressure on the vein proximal to the catheter and remove the stylet.
- Apply the transparent dressing.



Thanks for the attention