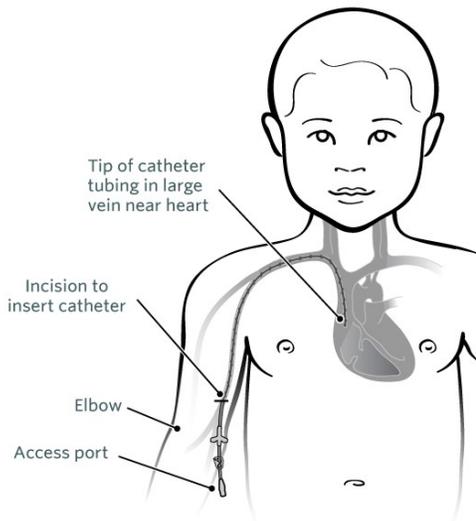


PICC Lines

Peripherally inserted central catheter



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<https://www.chop.edu/treatments/peripherally-inserted-central-catheter-picc>

What is a PICC line and why is it used?

- ❖ A catheter that can be inserted into the basilic, cephalic, or brachial vein → enters the superior vena cava (SVC)¹ ♥
- ❖ Sterilely placed by an MD, NP, PA or in IR
- ❖ ≥20 cm depending on patient size¹
- ❖ **Types:**
 - Single, double, or (rarely) triple lumen
 - Power injectable ~ for IV contrast and high injection rates up to 5 ml/sec & 300 psi²
- ❖ **Used for:**
 - Short, intermediate, or long-term intravenous access (days to months)
 - TPN/lipids, IV antibiotics, infusions, IVF
 - Repeated lab draws

How is a PICC line maintained?

- ❖ Aseptic technique and frequent hand hygiene³
- ❖ Continual staff & patient/family education about how to care for a PICC → ↓ CLABSIs³
- ❖ Use of chlorhexidine (CHG)-impregnated sponge dressings (Biopatch) → ↓ CLABSIs⁴
- ❖ Daily baths with CHG cloth wipes → ↓ CLABSIs⁵
- ❖ Sterile cap and “dressing changes every 5-7 days in the absence of visible soiling or a break in the seal of the dressing”⁴
- ❖ Change IV tubing every 96 hours or every 24 hours for lipids & blood products⁴
- ❖ **To intermittent flush with heparin or 0.9 NS?!**
 - Insufficient evidence that either heparin or 0.9 NS is superior in preventing occlusion⁶



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What are potential complications?²

- ❖ Central line-associated bloodstream infections (CLABSIs)
 - Preventable with CLABSI bundles & education!
- ❖ Dislodgement/malposition of the catheter
 - Often d/t frequent movement of children
- ❖ Occlusion of the catheter
- ❖ Thrombus formation
- ❖ Catheter breakage
- ❖ Phlebitis

Troubleshoot?!

- ❖ **Suspected CLABSI?** → obtain both catheter & peripheral blood cultures⁴; txt requires appropriate systemic antibiotics and may necessitate removal of the PICC³
- ❖ **Catheter occlusion?** → Alteplase shown superior to Urokinase for return of CVC function in pediatric patients⁷
 - **Urokinase:** 5000 IU/ml; left for 30 min before removal & repeated if necessary³
 - **Alteplase:** 30 min dwell-time; additional 90 min if unsuccessful⁷
 - >30 kg: up to 2 doses of alteplase 2 mg (2 mL)⁷
 - <30 kg: up to 2 doses of alteplase 1 mg/mL⁷
- ❖ **Catheter breakage?** → often can be repaired by the inserting provider³

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