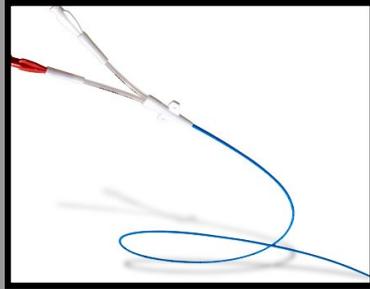
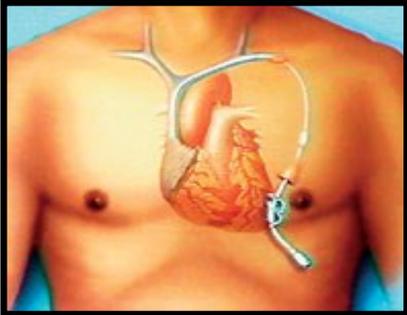


## Types of Catheters

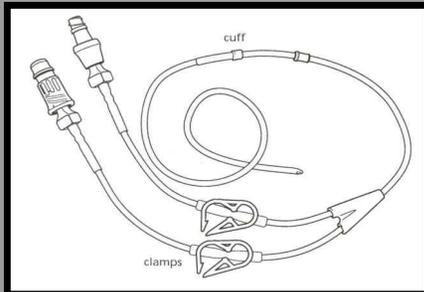
Groshong  
Catheter



Hickman  
Catheter



Broviac  
Catheter



PICC  
Line



SBS Foundation

Educational Series

## Central Line Specifications



Short  
Bowel  
Syndrome  
Foundation



Short Bowel Syndrome Foundation, Inc.  
285 South 68 Street Place  
Suite 307  
Lincoln, NE 68510

*Empowering patients to live fuller  
lives, creating a lifeline of hope.*

## Catheter Specifications

Depending on its use, the catheter is monoluminal, biluminal or triluminal, dependent on the actual number of lumens (1, 2 and 3 respectively). The line is held in place by an adhesive dressing, suture, or staple which is covered by an occlusive dressing. Regular flushing with saline or a heparin-containing solution keeps the line patent and prevents thrombosis. Certain lines may be impregnated with antibiotics, silver-containing substances (specifically silver sulfadiazine) and/

or chlorhexidine to reduce infection risk.



### Total Parenteral Nutrition and the Central Line

TPN is a very concentrated nutritional formula and cannot be given through peripheral veins as it is irritating to the vein. By giving it through a central line into a large vein the TPN gets diluted quickly as there is a greater volume and flow in a central vein versus a peripheral one.



## Types of Catheters

### Non-Tunneled Ports

- Line fixed in place at site of insertion, with the catheter and attachments protruding directly.

### Tunneled Ports

- Passed under the skin from insertion site to a separate exit site, where the catheter and its attachments emerge from underneath the skin.
- Commonly used tunneled catheters include **Hickman, Groshong & Broviac**.
- Hickman lines have a "cuff" under the skin, to prevent bacterial migration and to cause tissue ingrowth into the device for long term securement.
- **Hickman catheters**: require clamps to make sure the valve is closed
- **Groshong catheters**: have a valve that opens as fluid is withdrawn or infused, remains closed when not in use
- **Broviac catheters**: The catheter proceeds to a position just above the heart. In general, a Broviac is tunneled under the skin and brought out on the chest or thigh away from the site where it enters the vein.

### PICC Line

- A **peripherally inserted central catheter**, or "**PICC**", is a central venous catheter inserted into a vein in the arm rather than a vein in the neck or chest.

## Potential Complications

### Catheter associated bloodstream infection

is serious, but can usually be successfully treated with antibiotics. If the infection is bad enough the line may need to be removed.

**Pneumothorax (Collapsed Lung)** (for central lines placed in the chest) the incidence is incumbent and occurs during insertion, higher with subclavian vein catheterization.

**Thrombosis (Blood Clots)** can sometimes form as a result of central line placement.

**Arrhythmias** may occur during the insertion process when the introducer wire comes in contact with the heart. It typically resolves when the wire is pulled back.

### **Remember the 4 "C"s while at home**

- 1) Keep the site **COVERED**
- 2) Keep the site **CLEAN**
- 3) Keep the line **CLAMPED**
- 4) Keep the ends **CAPPED**