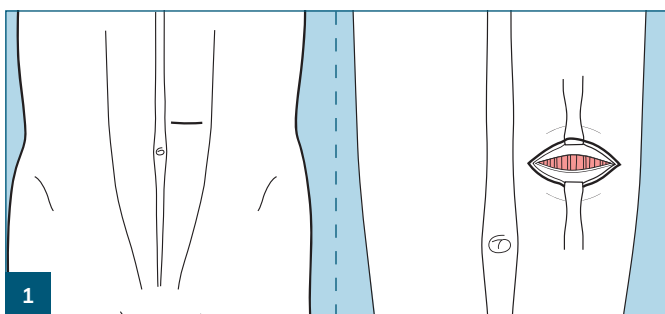


# Peritoneal dialysis

## Peritoneal dialysis catheter insertion guide — Using an open surgical procedure

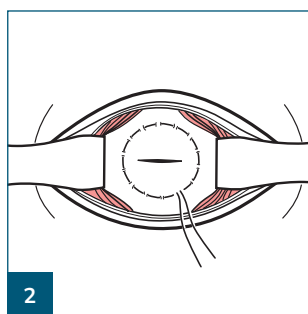


The procedure and techniques described do not represent all medically acceptable protocols; physicians should always use their professional discretion and follow hospital protocol

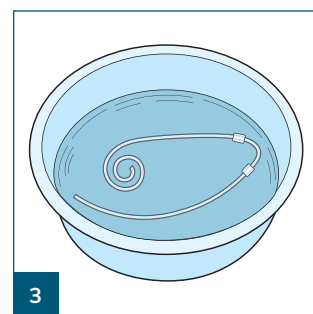


To reduce leakage and hernia risk, we recommend insertion through the rectus sheath and muscle. Make a 3 to 4 cm transverse incision through the skin and subcutaneous tissue. Ensure hemostasis, preferably with cauterization.

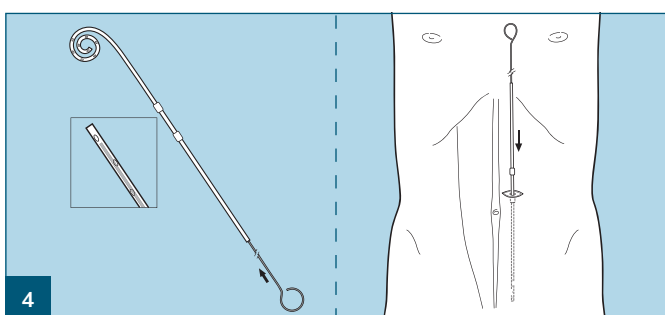
The anterior rectus sheath is exposed and may be infiltrated with more local anesthetic. Make a transverse incision in the anterior rectus sheath.



Separate the rectus muscle down to the posterior rectus sheath. Place a purse-string suture through the posterior rectus sheath, transversalis fascia and peritoneum. Make a small incision, approximately 5 to 6 mm, in the peritoneum to accommodate the catheter.

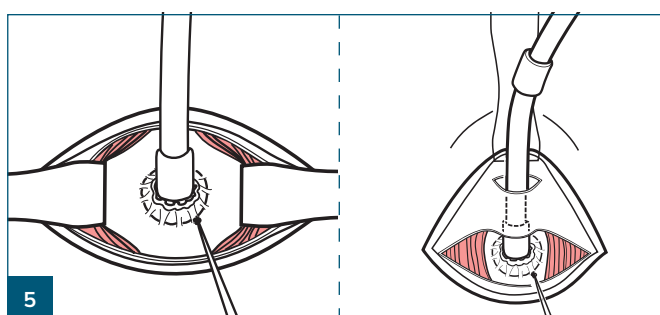


Immediately before insertion, soak the catheter in sterile saline. Gently squeeze the cuffs to expel air.

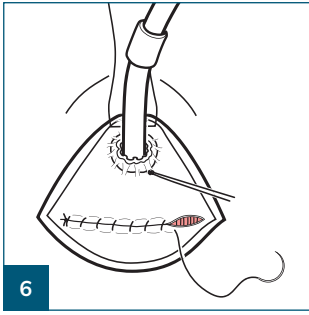


Thread the catheter onto a long, blunt stiffening stylet. To protect the bowel, a tiny portion of the catheter overlaps the tip of the stylet.

Insert the catheter caudally into the deep pelvis if there is no resistance. Correct positioning can be confirmed in the awake patient by a sensation of "rectal pressure." When the catheter is half to three-quarters inserted, remove the stylet and push the catheter the rest of the way into the pelvis.



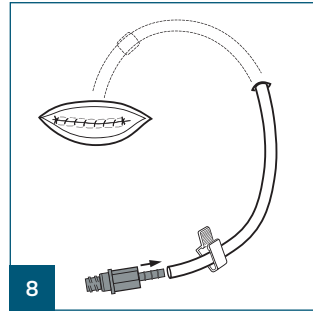
Tie the purse-string suture securely. Position the cuff longitudinally on the posterior rectus sheath above the transverse incision, make a small stab wound in the anterior rectus sheath above the transverse incision, and pull the catheter through this incision. Use another purse-string suture here to make the area watertight.



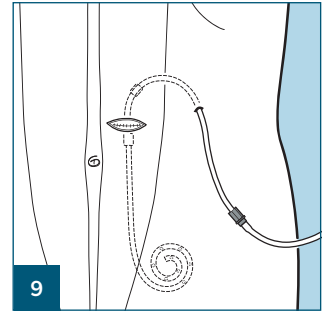
**6** Close the anterior rectus sheath with a nonabsorbable suture in an uninterrupted fashion. This will help to avoid leakage.

**7** See [Creating a Subcutaneous Tunnel Guide](#)

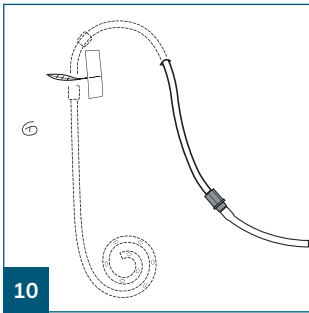
Create a subcutaneous tunnel.



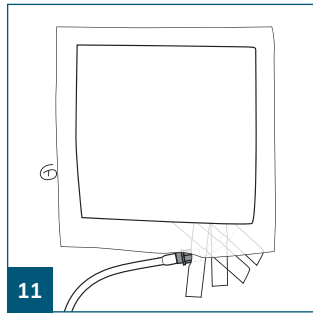
**8** Attach the adapter and clamp provided. Ensure that there are no kinks or twists in the catheter.



**9** Attach a transfer set and assess catheter function. Infuse 1 to 2 L of standard dialysate or minimally heparinized saline (1000 U/L). Check the wound for leaks and hemostasis.



**10** At least 200 mL of solution should drain within one minute. If good flow is obtained, close the subcutaneous tissue and the entry site with absorbable sutures. Do not suture the exit site. Complete incision closure with sterile adhesive strips.



**11** Tape the catheter to the skin to minimize movement at the exit site. Place several layers of gauze dressings over the area and tape securely. The dressings should remain in place for one week unless there is bleeding or excessive drainage at the site.

Optimally, dialysis should start in two weeks. If immediate dialysis is needed, use reduced infusion volumes and increase as tolerated.<sup>1,2,3</sup>

**For more information:**  
**In the United States, call 800-962-9888**  
**Outside the United States, call 508-261-8000.**

1. Crabtree JH, Fishman A. A laparoscopic method for optimal peritoneal dialysis access. *The American Surgeon*. 2005;71(2): 135-143.  
 2. Haggerty S, Roth S, Walsh D, et al. Guidelines for laparoscopic peritoneal dialysis access surgery. *Surg Endosc*. 2014;28(11):3016-3045.  
 3. Argyle™ peritoneal dialysis catheters and kits Instructions for Use. Mansfield, MA: Medtronic; 2019.

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