

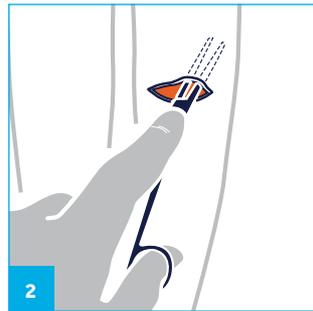
# PERITONEAL DIALYSIS

## Modified Seldinger technique using pull-apart sheath introducer

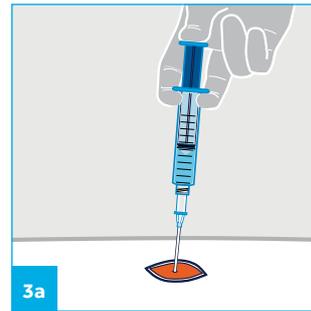
THE PROCEDURE AND TECHNIQUES DESCRIBED DO NOT REPRESENT ALL MEDICALLY ACCEPTABLE PROTOCOLS; PHYSICIANS SHOULD ALWAYS USE THEIR PROFESSIONAL DISCRETION AND FOLLOW HOSPITAL PROTOCOL



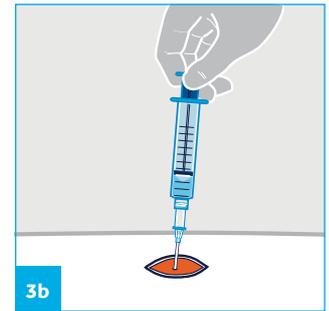
**1** Make a 1.5 to 2.0 cm incision at the selected abdominal entry site.



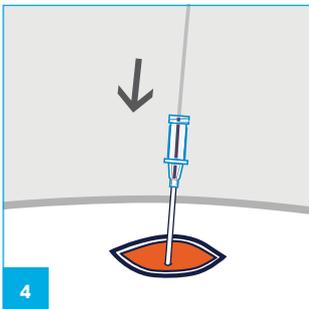
**2** Use blunt dissection to form a pocket for the preperitoneal cuff (if applicable).



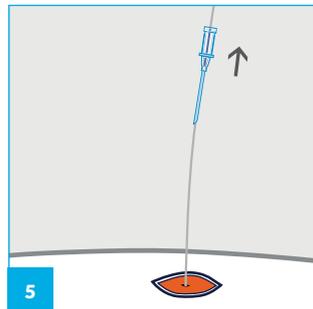
**3a** Attach the introducer needle to a 10 mL syringe filled with heparinized saline. Insert the needle through the incision into the peritoneal cavity and carefully inject the saline. Aspiration of peritoneal fluid indicates that the needle tip is in the peritoneal cavity.



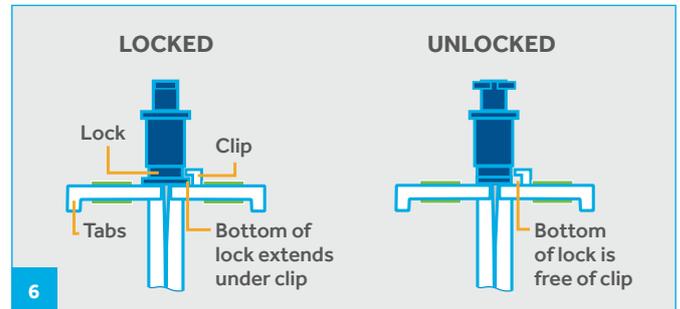
**Caution:** Do not advance the needle further; it could injure the viscera.



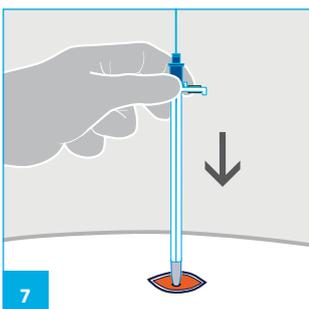
**4** Immediately remove the syringe and insert the guidewire through the introducer needle, directing it caudally and posteriorly. Advance the wire approximately one-fourth its length (approximately 18 cm).



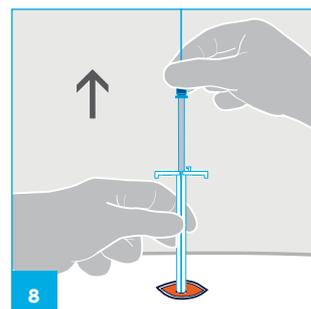
**5** Withdraw the introducer needle, leaving the guidewire in the peritoneum.



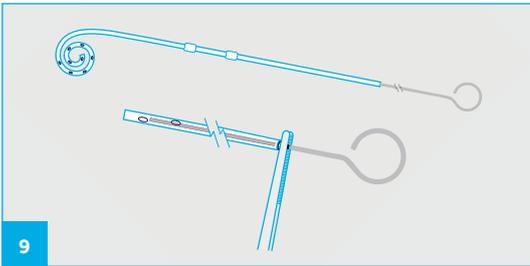
**6** Check that the dilator is locked within the introducer sheath to prevent separation of the two components during insertion. To lock the dilator, rotate the dilator so that the flange on its hub locks under the clip on the sheath.



Thread the pull-apart introducer over the end of the guidewire. **Caution:** To avoid damaging the tissue and the sheath tip, do not let the sheath advance over the dilator. The two must be grasped as one unit. Advance the introducer into the peritoneum, gently rocking it back and forth to assist passage through the tissue. Do not force the introducer into the peritoneum. Do not insert it further than necessary for the patient's size and access site. Ensure that the guidewire does not move further into the peritoneum.



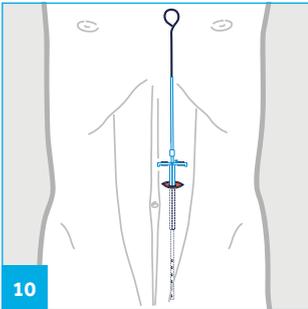
Hold the sheath in place and gently remove the dilator and guidewire. Unlock the dilator from the sheath by rotating the dilator so the flange is free of the clip on the sheath (see step 6).



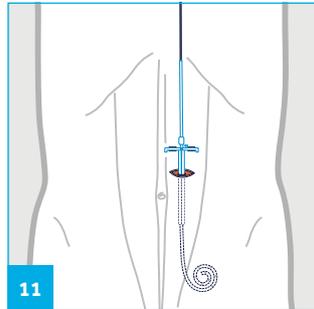
Roll the cuffs between thumb and index finger to expel air.  
 If using the straightening stylet, lubricate the catheter with sterile normal saline and insert the stylet into the catheter.  
**Note:** If not using a catheter straightening stylet, lubricate the catheter with sterile, water-soluble lubricant, then follow institution insertion protocol.

Position the stylet about 4 mm above the tip of the catheter. Clamp a hemostat on the stylet (do not clamp the catheter) to prevent it from advancing further toward the tip.

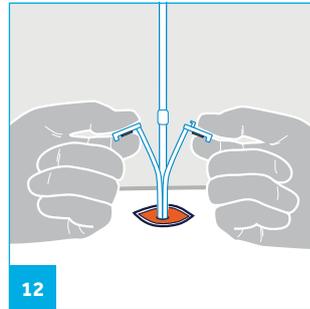
**Caution:** Do not insert the stylet beyond the tip of the catheter. This can cause injury during insertion.



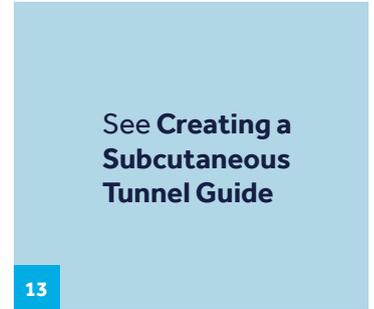
**10**  
 Insert the catheter with the catheter stylet into the sheath, directing it toward the desired position.



**11**  
 Remove the catheter straightening stylet. Confirm drainage by infusing and draining dialysate.  
**Note:** Confirming drainage immediately after insertion does not guarantee permanent function. There is a 5% incidence of drainage problems caused by catheter migration occurring within a week after placement.<sup>1</sup>

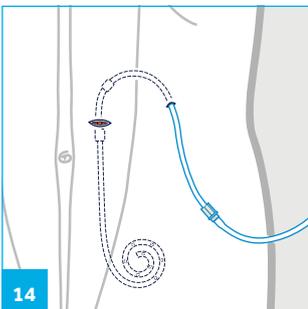


**12**  
 Grasp the tabs of the sheath. While holding the catheter in place, pull the tabs outward simultaneously to peel the sheath from the catheter.

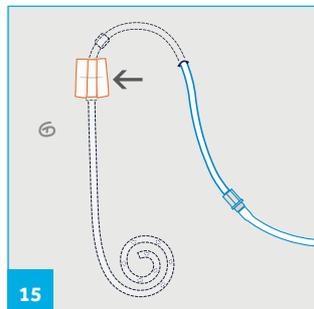


**13**  
 Create a subcutaneous tunnel.

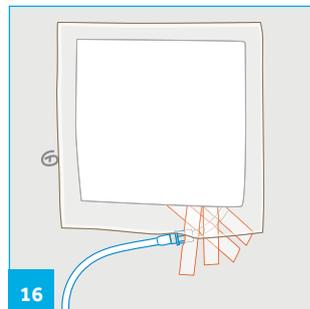
See **Creating a Subcutaneous Tunnel Guide**



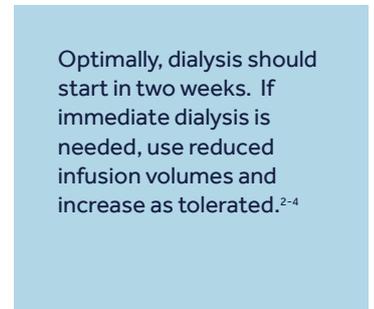
**14**  
 After creating a subcutaneous tunnel, attach the adapter and clamp provided and ensure there are no kinks or twists in the catheter. Attach a transfer set and assess catheter function. Infuse 1 to 2 L of standard dialysate or minimally heparinized saline (1000 U/L).



**15**  
 If there is no leakage of solution and good outflow is obtained, close the subcutaneous tissue and the entry site with absorbable suture in a subcuticular fashion. Do not suture the exit site. Complete incision closure with sterile adhesive strips.



**16**  
 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 dressing 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>2-4</sup>

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

1. Perras S, Zappacosta AR, Mattern M. Comparison of two techniques for percutaneous peritoneal dialysis catheter placement. ANNA J. 1985;12(5):307-310.  
 2. Crabtree JH, Fishman A. A laparoscopic method for optimal peritoneal dialysis access. The American Surgeon. 2005;71(2): 135-143.  
 3. Haggerty S, Roth S, Walsh D, et al. Guidelines for laparoscopic peritoneal dialysis access surgery. Surg Endosc. 2014;28(11): 3016-3045.  
 4. Argyle™ peritoneal dialysis catheters and kits [instructions for use]. Mansfield, Ma; 2018.

IMPORTANT: Please refer to the instructions for use for complete instructions, contraindications, warnings and precautions.

© 2019 Medtronic. All rights reserved. Medtronic, Medtronic logo and Further, Together are trademarks of Medtronic.™\* Third party brands are trademarks of their respective owners. All other brands are trademarks of a Medtronic company. Argyle™ is a trademark of Cardinal Health, Inc., used under license. 07/2019-US190375-[WF#3174287]