

**PROCEDURE**

**TITLE: CONTINUOUS AMBULATORY PERITONEAL DIALYSIS – CAPD**

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**PURPOSE:** To outline the steps to carry out exchanges for patients receiving CAPD.

**SUPPORTIVE DATA:**

- Therapy usually includes 4-6 exchanges every 24 hours.
- There are three phases to Peritoneal Dialysis (PD), instill, dwell and drain. Each varies in length depending on the number of exchanges per day and physician orders. The final exchange dwells overnight and is drained the following morning.

**EQUIPMENT LIST:**

1. Peritoneal dialysis solutions per physician order
2. Masks (2)
3. Gloves (sterile and non sterile)
4. Povidone-iodine
5. Tape
6. Sterile 4x4 gauze (4) and one (1) split gauze
7. Spring scale
8. Plastic hemostats
9. Heating pad (Aqua-K)
10. Transfer set if needed (adapting from Fresenius to Baxter supplies)
11. Catheter caps

**CONTENT:**  
**Preparatory Phase:**

**PROCEDURE STEPS**

1. Gather equipment.
2. Warm solution in an Aqua-K pad before solution exchange.  
  
**NOTE:** If medication needs to be added to the bag, collaborate with pharmacy on getting solutions prepared.
3. Explain the procedure to the patient.
4. Weigh patient after the peritoneum has been drained and prior to instilling the next exchange.
5. Make sure the door is closed during the procedure and draw the patient privacy curtains.
6. Limit visitors and other hospital staff entering the room if possible during the procedure.
7. Wash hands with antibacterial soap and put on mask. Have patient put on a mask.

**KEY POINTS**

Solutions, catheter caps, transfer set and spring scale are obtained from the stock room. All other supplies are located on nursing units. NO Microwave. Heating device to be set slightly above room temperature.

Best done with first exchange of the day.

To maintain patient privacy and for infection control purposes, a private room is optimal.

**Performance /Initiation Phase**

1. Follow patient's CAPD instructions as ordered by physician.
  - a. Verify dialysis solution and any medications added to solution.
  - b. Verify instill, dwell and drain times.
2. Check for expiration date, clarity and any leakage for each dialysate bag.

Reduces possibility of errors.

Physician orders should include infusion, dwell and drain times.

Assess for contamination of dialysate

	3. Remove the solution bag from the outer wrap. Hang it on an IV pole and place drainage bag on the floor on a blue disposable pad.	The blue pad helps visual contents in the drainage bag.
	4. Prime the tubing by breaking the frangible in the tubing at the already connected area of the bag and tubing. Prime all tubing prior to it entering patient.	Decreases chance of introducing air into the abdominal cavity.
	If patient already has existing bag and tubing in place :	
	5. Open appropriate clamps for drain outflow process as the priming was already done.	Reduces transmission of microorganisms. Reduces contamination, standard precaution.
<b>Drain/outflow cycle:</b>	6. Remove cap with sterile 4x4.	Ensure a tight connection.
	7. Connect catheter to dialysate tubing. 8. Unclamp to permit drainage from peritoneal cavity.	Enhances gravity outflow.
	9. Place drainage bag below mid-abdominal area.	Dialysate solution should be clear. Note is there is blood, fibrin or fluid is cloudy
	10. Evaluate drainage for clarity and color.	Turning patient side to side assists the drainage process.
	11. Clamp when effluent is completely drained. Allow at least 20-30 minutes or as prescribed by physician.	
	12. Clamp tubing exiting the patient to the drainage bag.	
	13. Weigh the drained fluid using a PD spring scale and discard in appropriate receptacle.	
	14. Proceed to instillation phase.	May weight the drained fluid after full cycle completed. After the peritoneal cavity has drained, another bag of solution is instilled. Once that is completed, the whole set up is removed. At which time it is optimal to weight the contents prior to disposal.
<b>Instillation Cycle:</b>	15. Open the catheter and the clamp on the tubing and allow the dialysate to flow into the patient's peritoneum.	Assure the tubing was primed.
	16. The solution should be allowed to go in as quickly as possible, taking care that no air enters the patient.	Follow physician orders if flow rate is prescribed. Usually takes about 10 minutes.
	17. When complete, clamp the dialysate tubing.	Helps prevent backflow, prevents air from entering peritoneal cavity.
<b>Dwell Cycle:</b>	18. Disconnect the tubing and apply a new sterile cap.	Disconnect equipment as now the patient will dwell and can be ambulatory.
	19. Repeat steps for exchanges	Dwell time permits peritoneal membrane to exchange fluid, electrolytes and toxins from the blood.
<b>Discontinuation and Exit Site Care</b>	When <b>all</b> exchanges are completed:	
	1. Disinfect, disconnect connections and discard tubing. Disinfect catheter tip and securely place sterile cap on end.	
	2. Inspect catheter site	
	3. Follow physician orders for exit site care.	

4. If no specific orders are noted for exit site care, remove any dried blood or debris with normal saline or peroxide.
5. Then cleanse site with chloraprep stick, allow it to dry and place sterile split 4x4 around catheter.
6. Secure the peritoneal dialysis catheter on the sterile gauze pad with tape.
7. Cover the area with an additional sterile gauze pad and tape.

Documentation

1. Document patient's tolerance of the procedure such as pain, discomfort or signs of complications and condition of exit site.
2. Document if cultures were obtained and sent to lab.
3. Document vital signs and weight associated with dialysis procedure.
4. Complete PD flowsheet noting:
  - a. solution type, volume
  - b. time to infuse
  - c. dwell time
  - d. drain time
  - e. assessment of drainage
  - f. amount of fluid returned and ending fluid balance.
5. Patient education regarding sterile technique, physician orders for treatment plan, reinforcement of understanding of previous information regarding PD.

**References:**

Lynn-McHale Wiegand D. AACN Procedure Manual for Critical Care. 6<sup>th</sup> Edition. 2011. WB Saunders . Procedure 114, page 1048-1056.

Perry A. and Potter P. Clinical Nursing Skills and Techniques. 6<sup>th</sup> Edition. 2004, Elsevier Mosby. Pages 1106-1113