Steps for a Safe Treatment

What you will learn:

• Three things to do before every PD exchange
• How to get ready for PD treatment
• What to do after PD treatment
• What to do if you have problems related to safe treatment
Maintaining a clean environment and performing proper aseptic technique are very important. Your nurse will teach you about how to clean and handle your supplies in preparation for your PD treatment. Whenever you need to review proper technique, use this booklet as a refresher.

For additional resources on PD, check out: www.pdempowers.com

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Importance of a Clean Environment

Although they sound similar, there are important differences in what it means for something to be “clean”, “aseptic” and “sterile”.

Clean means you have removed most, but not all, of the germs. Maintaining a clean environment is very important.

Aseptic technique is how you maintain a clean environment to reduce the risk of contaminating your sterile PD equipment.

Sterile means something is completely free of all germs.

Your nurse will teach you about how to clean and handle your supplies in preparation for your PD treatment.

Be careful with sterile supplies

These supplies are sterile and require extra caution:

**CAPD**
- Inside of the **MiniCap** disconnect cap
- Transfer set tip, after the **MiniCap** disconnect cap is removed
- Patient connector end of the **UltraBag** Solution Delivery System, after the pull ring is removed

**APD**
- Luer connections attached to the cassette, after the caps are removed
- Inside of the **MiniCap** disconnect cap
- Inside of the **FlexiCap** disconnect cap
- Transfer set tip, after the **MiniCap** disconnect cap is removed
- Outlet port on the solution bags, after the pull ring is removed

Use extra caution when handling sterile supplies to avoid contamination.

Common areas for contamination in a PD treatment

It’s important to use good techniques to avoid germs during a PD treatment. Here are the most common areas of contamination:

- Connection to **UltraBag** System
- Ports on solution bags
- Connection to your transfer set

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Three Things to Do Before Every PD Exchange

Weigh yourself and record it

Take your blood pressure and record it

Do a physical assessment
Check yourself for swelling. Examples of where you may see extra fluid are puffy eyes, or swelling in your legs and/or ankles.

Resources for safe treatment. Your nurse will give you detailed information to guide you through a safe PD treatment. Review all of the PD brochures and guides with your nurse.
Get Ready for Your PD Treatment

1 Prepare your work area
Make sure your work area is clean and you have plenty of space for all the supplies being used.

Here are several options to clean the surface:

- Disinfecting wipes or a disinfecting product recommended by your nurse
- A mild household cleaner
- Bleach water, prepared and used this way:
  - Mix ¾ cup of regular bleach per gallon of water
  - Prewash surface
  - Wipe with bleach solution and let stand for 5 minutes
  - Rinse and let air-dry

2 Gather your supplies
Here are supplies you need in your work area:

CAPD
- Mask
- Hand sanitizer
- UltraBag Solution Delivery System
- Two red UltraClamp tubing clamps
- MiniCap disconnect cap (consider having an extra MiniCap disconnect cap available)

APD
- Mask
- Hand sanitizer
- Solution bags
- Disposable set with cassette
- Drain line extension or drain bag
- MiniCap disconnect cap (consider having an extra MiniCap disconnect cap available)
- FlexiCap disconnect cap (optional)
- Patient extension line (optional) available

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Get Ready for Your PD Treatment continued

3 Use aseptic technique

- Wear a mask. This protects the connections from contamination by germs that may come from your nose and mouth.
- Wash and dry your hands thoroughly, as you’ve been taught.
  - Hand washing makes your hands clean, not sterile. After hand washing, touch only your PD supplies and equipment.
  - If you do touch something else, wash and dry your hands again or use hand sanitizer.

! Remember which parts of your supplies are sterile!

4 Check your solution bags

Be sure to check the bags before each PD treatment.
- Use the word SEAL to help you remember the four things to check:

  **S**
  **E**
  **A**
  **L**

  **Strength** (the strength of the solution is correct)
  **Expiration date** (the expiration date has not passed)
  **Amount** (the correct volume of PD solution)
  **Leaks** (gently squeeze the solution bag to make sure there are no leaks)
Do final checks on each bag before you begin

- Is the PD solution clear? Can you see through the bag?
- Are the medication port (a resealable rubber injection site for adding medications) and pull ring in place?
- Check the frangibles (breakable stoppers) in the solution bag. Is the frangible in the solution set intact (not broken)?

You should be able to answer yes to these final checks. If not, discard that bag of solution and replace it with a bag that is acceptable.

Steps before you connect and disconnect

- Always use aseptic technique when handling your solution bags and supplies.
- Place your transfer set where you can reach it easily.
- Put on your mask.
- Wash and dry your hands.
Get Ready for Your PD Treatment continued

7 Place your solution bag correctly

- Position one bag of solution properly on the heater pan so that the solution bag covers the heat sensor button. This should be the bag that you will connect to the line with the red clamp.
- Place the other solution bags on a flat, stable surface. To prevent bags from falling, do not stack bags on top of each other.
- The APD drain line can go into your bathtub, shower or toilet. Do not place the drain line into a receptacle that sits higher than the level of your cycler.
- Use the correct number of drain bag(s) or drain line(s) as instructed by your PD nurse.

⚠ Leave an air gap (space) between the end of the drain line and any fluid in the drain or container when using a drain line extension.

⚠ Do NOT use external heating sources such as a microwave, stove, heating pad, or immersion in hot water to warm bags. This may result in an overheated solution which may cause patient harm.

8 Start your PD connection procedure
What to Do After Your PD Treatment

How to dispose of waste materials

• Empty all fluids from dialysis solution bags and tubing into a toilet. For patients performing manual dialysis treatment, clamp or tie the tubing to prevent leakage.
• For patients performing automated dialysis treatment, oversized drain bags are available. It is recommended that this bag be kept on a cart to aid in the transportation to the bathroom for disposal.
• Sometimes drain lines are used to transport the used dialysis solution from the patient to a drain for disposal. This drain line is usually set up in a bathtub, shower, or sink.
  – Choose a drain option that is close to your bed, or area where you will be doing treatments.
  – Choose a drain option where the flow will be downhill, not uphill.
  – Be sure the drain is clean and free from hair or other debris.

Clean the drain used for waste at least weekly. To clean, run hot water down the drain while pouring down a mild bleach solution of 1 quart of water and 1/4 cup of bleach. This will help to prevent bacteria growth in the drain. After sanitizing, remove the drain and clean away any hair or debris. Then replace the drain.
How to dispose of dialysis supplies

As with all waste generated at home, it is your responsibility to dispose of your dialysis waste materials. The following instructions will help with your disposal practices:

• Most dialysis materials can be placed in a plastic garbage bag, sealed tightly, and put in the household trash. Ask your dialysis clinic for instructions if you are not able to dispose of materials at home.
• Do not place plastic bags, tubing, or other dialysis waste in recycling containers.
• Do not throw away garbage in any dumpster or waste container other than your own.
• If a waste hauler refuses to pick up the waste materials, it is often due to lack of knowledge or information about home-generated waste. Talk with the waste hauler and provide them with a copy of this page, or contact your dialysis clinic for assistance.
• The cardboard boxes, in which your dialysis products are delivered, and the overpouches from your dialysis solution bags are fully recyclable. Check with your local waste disposal agency for recycling guidelines for your area.
What to Do If You Have Problems Related to Safe Treatment

What to do if PD solution does not flow in or out

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• One or more clamps may be closed</td>
<td>• During drain: Make sure there is no <strong>UltraClamp</strong> tubing clamps on the drain line and the transfer set twist clamp is open</td>
</tr>
<tr>
<td></td>
<td>• During fill: Make sure there is no <strong>UltraClamp</strong> tubing clamps on the fill line and the transfer set twist clamp is open</td>
</tr>
<tr>
<td></td>
<td>• Make sure the frangibles are broken</td>
</tr>
<tr>
<td>• The tubing or catheter is kinked</td>
<td>• Straighten out the tubing and the catheter</td>
</tr>
<tr>
<td>• The catheter, tubing, or frangible is blocked by fibrin</td>
<td>• Gently squeeze the line or bend the frangible back and forth to loosen the fibrin and allow the fluid to pass</td>
</tr>
<tr>
<td></td>
<td>• Complete the exchange and call your nurse to report the presence of fibrin</td>
</tr>
</tbody>
</table>
### What to Do If You Have Problems Related to Safe Treatment continued

#### What to do if PD solution does not flow in or out Continued

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Constipation</td>
<td>• Talk to your nurse or dietician about your diet and ways to prevent constipation</td>
</tr>
<tr>
<td></td>
<td>• Take stool softeners and/or laxatives, as directed by your PD nurse or physician</td>
</tr>
<tr>
<td>• Air in the CAPD system fill line</td>
<td>• Close the transfer set twist clamp</td>
</tr>
<tr>
<td></td>
<td>• Remove the clamp from the drain line so that air can purge from the fill line to the drain line</td>
</tr>
<tr>
<td></td>
<td>• Gently squeeze the solution bag and observe air and fluid flowing into the drain bag</td>
</tr>
<tr>
<td></td>
<td>• Reclamp the drain line</td>
</tr>
<tr>
<td></td>
<td>• Open the transfer set twist clamp and try to fill again</td>
</tr>
</tbody>
</table>
What to do if drained solution looks different

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
</table>
| The drained fluid is cloudy                                            | • Call your PD nurse immediately  
|                                                                        | • Do not wait for the next treatment  
|                                                                        | • Save the fluid in the drain bag  
|                                                                        | • Take it with you to the dialysis unit or emergency department, as directed |
| The drained fluid has white strands (fibrin) in it                     | • Call your PD nurse, as directed                                     |
| The drained fluid is pink                                              | • Call your PD nurse, as directed                                     |
| The drained fluid is dark yellow, but clear                            | • Call your PD nurse, as directed                                     |
| You accidentally drop your transfer set after you remove the **MiniCap** disconnect cap. | • Call your PD nurse, as directed                                     |
What to Do If You Have Problems Related to Safe Treatment continued

What to do if PD solution leaks during an exchange

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The CAPD system tubing came apart from the transfer set</td>
<td>• Close the transfer set twist clamp</td>
</tr>
<tr>
<td></td>
<td>• Place a new sterile <strong>MiniCap</strong> disconnect cap on the transfer set</td>
</tr>
<tr>
<td></td>
<td>• Do not complete the exchange</td>
</tr>
<tr>
<td></td>
<td>• Call your PD nurse immediately</td>
</tr>
<tr>
<td>• The transfer set came apart from the catheter</td>
<td>• Place a clamp on the catheter to stop drainage</td>
</tr>
<tr>
<td></td>
<td>• Do not complete the exchange</td>
</tr>
<tr>
<td></td>
<td>• Call your PD nurse immediately</td>
</tr>
<tr>
<td>• There is a hole in the exchange system</td>
<td>• Close the transfer set twist clamp</td>
</tr>
<tr>
<td></td>
<td>• Disconnect your transfer set from the exchange system and put on a</td>
</tr>
<tr>
<td></td>
<td>new <strong>MiniCap</strong> disconnect cap</td>
</tr>
<tr>
<td></td>
<td>• Call your PD nurse immediately</td>
</tr>
</tbody>
</table>

If you are having other problems with your PD treatment, please contact your PD nurse.
# What to do if the solution is too cold or flowing too fast or if there is air in your line

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The solution is too cold</td>
<td>• Warm the solution bags as instructed by your nurse</td>
</tr>
<tr>
<td>• The solution is flowing into the peritoneal cavity too fast and is</td>
<td>• Drain the cold solution and start using the warmed solution</td>
</tr>
<tr>
<td>associated with abdominal pain or discomfort</td>
<td>• If the pain or discomfort continues, call your PD nurse immediately</td>
</tr>
<tr>
<td>• There is air in the patient line</td>
<td>• Partially close the transfer set twist clamp to slow down the flow of</td>
</tr>
<tr>
<td></td>
<td>PD solution</td>
</tr>
<tr>
<td></td>
<td>• Lower the IV pole to slow down the flow of PD solution</td>
</tr>
<tr>
<td></td>
<td>• Always flush the lines before you open the transfer set to fill,</td>
</tr>
<tr>
<td></td>
<td>as instructed by your PD nurse</td>
</tr>
<tr>
<td></td>
<td>• Air in the peritoneal cavity may cause shoulder pain. Pain in the</td>
</tr>
<tr>
<td></td>
<td>shoulder may indicate other medical problems. Call your PD nurse</td>
</tr>
<tr>
<td></td>
<td>immediately if the pain persists or becomes more intense.</td>
</tr>
</tbody>
</table>
New Words

Aseptic technique
A series of steps to keep an area as germ-free as possible.

Clean
Free from dirt, but not germ-free.

Contamination
When germs are introduced into a clean or sterile object or environment. For example, you accidentally dropped your transfer set after you removed the MiniCap disconnect cap.

Frangibles
Breakable stoppers in the tubing of the solution.

Medication port
A resealable rubber injection site for adding medications into the solution bag.

Pull ring
A rubber covering that protects the sterile patient connector on the solution bag.

SEAL
A word to help you remember the four things to check on a new solution bag:
S — Strength
E — Expiration date
A — Amount
L — Leaks

Sterile
Completely free of germs.
PD Training: Patient Training Self-test

Steps for a Safe Treatment

1. Which things should you do before each PD treatment?
   a. Eat a healthy snack and take a nap
   b. Weigh yourself, take your blood pressure, and do a physical assessment
   c. Take your temperature and call your PD nurse

2. After you have washed and dried your hands, they are considered clean, not sterile.
   True  False

3. Aseptic technique is used to keep germs from coming in contact with sterile supplies.
   True  False

4. Which areas are most often contaminated during a PD treatment?
   a. Connections to solution bags
   b. Ports on solution bags
   c. Connection to your transfer set
   d. All of the above

5. If you touch the inside of the MiniCap disconnect cap, the cap is contaminated.
   True  False

6. One of the options for cleaning your work area is a mild household cleaner.
   True  False

7. What should you check on your solution bag before each PD treatment?
   a. Strength
   b. Expiration date
   c. Amount
   d. Leaks
   e. All of the above

8. If a solution bag looks cloudy, it should be discarded before you begin a treatment.
   True  False

9. Always wear a mask when you connect or disconnect from your transfer set.
   True  False

10. What should you do if the drained fluid is cloudy?
    a. Call your PD nurse
    b. Tell your doctor at your next clinic visit
    c. This is nothing to worry about

Patient Signature: ________________________________________
Date: ________________________________

Answers: 1-b, 2-True, 3-True, 4-d, 5-True, 6-True, 7-e, 8-True, 9-True, 10-a

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Rx Only. For safe and proper use of the devices mentioned herein, refer to the Instructions for Use.
PD Training: Patient Checklist

Steps for a Safe Treatment

Patient Name: ____________________________________________________________
Person Trained: __________________________________________________________
Relationship to Patient: ____________________________________________________
Completed by (Signature): __________________________________ Date: ____________

Patient Training/Retraining Checklist Instructions

• The Patient Training Checklist should be used to help track the patient’s progress while being trained, to refresh the learning of a current patient/caregiver or to retrain a returning patient.
• Place the date in the appropriate box as the patient verbalizes understanding of a topic or successfully completes a return demonstration of a procedure.
• If the topic is not applicable (N/A) to the patient, place the date in the N/A column.
• Use Notes section as needed to indicate future training needs.

Things to Know Before Your Treatment

<table>
<thead>
<tr>
<th>Patient demonstrates or verbalizes understanding of:</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

Three things to do before every PD treatment

• Weigh yourself and record weight
• Take blood pressure and record it
• Do a physical assessment

Clean, aseptic and sterile

• Clean: most, but not all, of the germs have been removed
• Aseptic technique: reduces the risk of contamination of sterile PD equipment
• Sterile: completely free of germs

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<table>
<thead>
<tr>
<th>Patient demonstrates or verbalizes understanding of:</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Sterile supplies that should not be touched**

- Inside of the **MiniCap** disconnect cap
- Inside of the **FlexiCap** disconnect cap
- Transfer set tip, after the **MiniCap** disconnect cap is removed
- Patient connector end of the **UltraBag System**, after the pull ring is removed
- Luer connections attached to the cassette, after caps are removed
- Outlet port on solution bags, after the pull ring is removed

**Common areas where contamination can occur**

- Connection to **UltraBag System**
- Ports on solution bags
- Connection to your transfer set

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**Get Ready for Your PD Treatment**

<table>
<thead>
<tr>
<th>Patient demonstrates the following:</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

1. **Prepare the work area**
   - Appropriate work area for PD preparation is identified
   - Approved cleaning agent is used to clean the work area

2. **Gather supplies**
   - **CAPD**
     - Mask
     - Hand sanitizer
     - **UltraBag** Solution Delivery System
     - Two red **UltraBag** tubing clamps
     - **MiniCap** disconnect cap
### Patient demonstrates the following:  
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

**APD**

- Mask
- Hand sanitizer
- Solution bags
- Disposable set with cassette
- Drain line extension or drain bag
- **MiniCap** disconnect cap
- Optional: **FlexiCap** disconnect cap
- Optional: Patient extension line

### 3. Use aseptic technique

- Wear a mask
- Wash and dry hands thoroughly
  - After hand washing, touch only PD supplies and equipment
  - If something else is touched after hand washing, wash and dry hands again, or use hand sanitizer

### 4. Check the PD solution bag using SEAL

- S — Strength of the solution
- E — Expiration date
- A — Amount (correct volume of PD solution)
- L —Leaks are not present
- Also check frangibles in solution bag to be sure frangibles are intact

### 5. Do final checks on each bag before exchange begins

- PD solution is clear
- Medication port and pull ring are in place
- Also check frangibles in solution bag to be sure frangibles are intact
- All three must be OK. If not, discard bag and replace it with one that meets the checks

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### What to Do After Your PD Treatment

<table>
<thead>
<tr>
<th>Patient demonstrates the following:</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

#### 6. Prepare to do the treatment: CAPD
- Use aseptic technique when handling supplies
- Place the transfer set so it can be reached easily
- Put on a mask
- Wash and dry hands

#### 7. Place the PD solution bag correctly: APD
- Place one bag properly on heater pan with bag completely covering the heater sensor button, and do not use other sources of heat to warm the solution bags
- Place other solution bags on a flat, stable surface. Do not stack bags on top of each other
- Run APD drain line into the bathtub, shower or toilet
- Leave an air gap (space) between the end of the drain line and any fluid in the drain or container when using a drain line extension

#### 8. Start your recommended PD connection procedure
- Perform the PD treatment following all instructions
### Problem of PD solution not flowing in or out and what to do

<table>
<thead>
<tr>
<th>Problem</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more clamps may be closed: During drain — make sure there is no tubing on the drain line and the transfer set twist clamp is open. During fill — make sure there is no tubing on the fill line and the transfer set twist clamp is open.</td>
<td></td>
</tr>
<tr>
<td>Tubing or catheter is kinked: Straighten out the tubing and the catheter.</td>
<td></td>
</tr>
<tr>
<td>Catheter, tubing, or frangible is blocked by fibrin: Gently squeeze the line or bend the frangible back and forth to loosen the fibrin and allow fluid to pass. Call your PD nurse.</td>
<td></td>
</tr>
<tr>
<td>Constipation: Talk to your PD nurse or dietician about your diet and ways to prevent constipation.</td>
<td></td>
</tr>
<tr>
<td>Air in the CAPD system fill line: Close the transfer set twist clamp, remove the clamp from the drain line, gently squeeze the solution bag, and observe air and fluid flowing to the drain bag. Then reclamp the drain line, open the transfer set clamp, and try to fill again.</td>
<td></td>
</tr>
</tbody>
</table>

### Problems with drained solution and actions to take

<table>
<thead>
<tr>
<th>Problem</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drained fluid is cloudy: Call PD nurse ASAP. Do not wait for next exchange. Save fluid in drain bag and bring to dialysis unit or emergency department.</td>
<td></td>
</tr>
<tr>
<td>Drained fluid has white strands: call PD nurse, as directed.</td>
<td></td>
</tr>
<tr>
<td>Drained fluid is pink: Call PD nurse, as directed.</td>
<td></td>
</tr>
<tr>
<td>Drained fluid is dark yellow, but clear: Discuss with or call your PD nurse.</td>
<td></td>
</tr>
</tbody>
</table>

### Problem of solution leaking during an exchange and what to do

<table>
<thead>
<tr>
<th>Problem</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPD system tubing came apart from the transfer set: Close the transfer set and place a new disconnect cap. Do not complete the exchange, and call your PD nurse immediately.</td>
<td></td>
</tr>
</tbody>
</table>
Patient demonstrates the following:

- Transfer set came apart from the catheter: Place a clamp on the catheter to stop the drainage, and do not complete the exchange. Close the transfer set clamp, disconnect from the exchange system, put on a new disconnect cap, and call your PD nurse immediately.

- Hole in the exchange system: Close the transfer set clamp and disconnect from the exchange system. Put on a new disconnect cap and call your PD nurse immediately.

Problem of solution being too cold, flowing too fast, or air in the patient’s line

- Solution is too cold: Warm the solution bags as instructed, drain the cold solution, and inflow the warmed solution. If pain continues, call your PD nurse immediately.

- Solution is flowing into the peritoneal cavity too fast and is associated with abdominal pain or discomfort: Partially close the transfer set clamp or lower IV pole.

- Air in the patient line: Always flush the lines as instructed. If pain continues, call your PD nurse.

Final Checks

Lesson reviewed
New words reviewed
Self-test completed

Patient Signature: ____________________________  Date: ____________________

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www.pdempowers.com

6  PD Training: Steps for a Safe Treatment
Notes
Rx Only. For safe and proper use of the devices mentioned herein, refer to the Instructions for Use.