Peritoneal Dialysis Patient Selection

Shiva Seyrafian –Nephrologist

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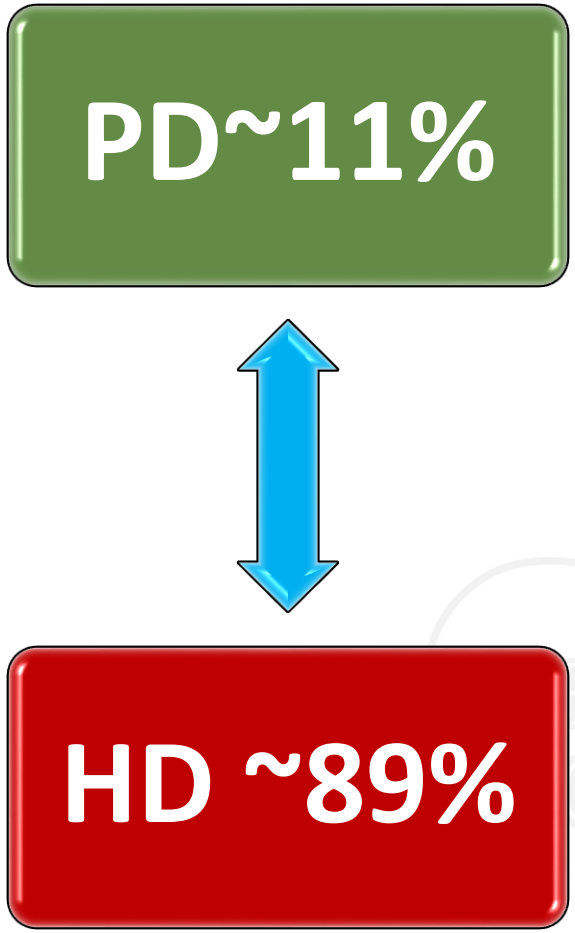
Isfahan Kidney Diseases Research Center

Isfahan University of Medical Sciences

Peritoneal dialysis patient selection

Estimated **3.8 million** people **worldwide** currently rely on some form of **dialysis**



N Engl J Med 2021;385:1786-95

Indications of PD

1. Patient preference
2. Not tolerate hemodialysis (CHF, IHD, vascular access problem, children)
3. Want home hemodialysis but there is not assistant or can not be educated or is not facility)
4. Refractory heart failure without renal failure

Characteristics for Success

1. Center effect
2. Knowledge and experience of nephrologic team (physician and nurse); **the most important factor.**
3. Comorbidity, Body Size, and Peritoneal Membrane Transport Status
4. Psychosocial Relevance of Patient Selection
5. Social support
6. Compliance
7. Financial factors

Advances in Chronic Kidney Disease, Vol 16, No 3, 2009: pp 160-168


Patient
Education

Patient Education and Peritoneal Dialysis selection

Patient–targeted modality education:

✓**3.5–fold** increase in **receiving PD** as their initial dialysis therapy.

50 –60% of the time

Choose PD

AJKD, Volume 68, Issue 3, September 2016, Pages 422-433

Patient Education and Peritoneal Dialysis selection

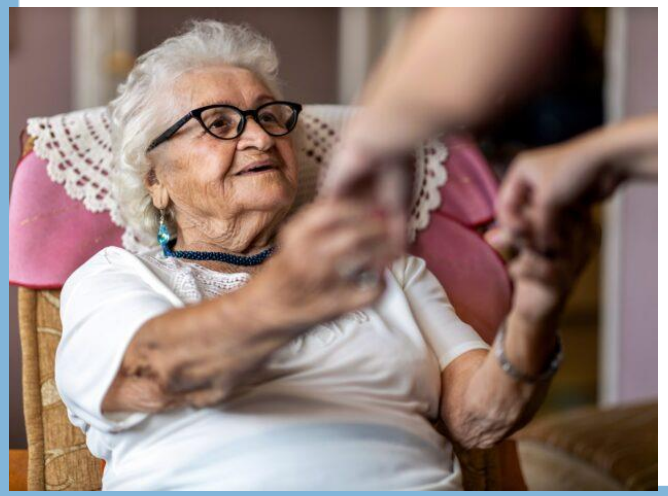
Modality education:

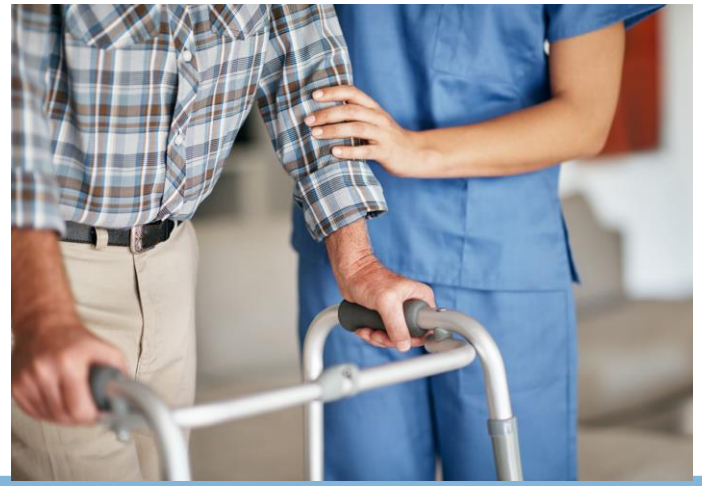
- ✓Physician and nurse educators,
- ✓Over more than 2 days,
- ✓Detailed dietary information
- ✓1-on-1 and group discussions,
- ✓Video and printed material, and
- ✓Included family

AJKD, Volume 68, Issue 3, September 2016, Pages 422-433

The ideal candidate

1- Perform his or her own care





The ideal candidate…

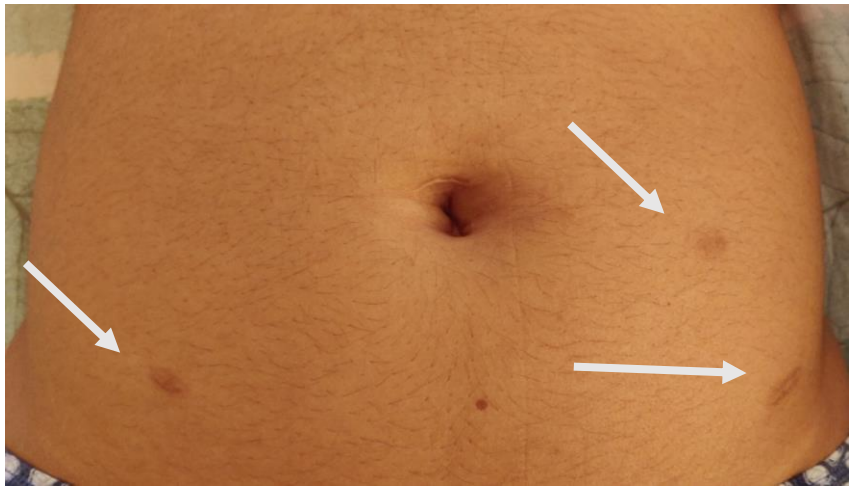
2- Significant residual kidney function

- ✓Provides adequate peritoneal dialysis
- ✓Clearance of kidney function added to the dialysis
- ✓A flexible dialysis schedule more acceptable to patients

The ideal candidate…

3- Minimal or no abdominal surgery

Adhesions resulting from surgery decrease the effective peritoneal membrane surface area, which may limit dialysis.



The ideal candidate…

4- Understands instructions and able to communicate

A minimum threshold cognitive ability is required to understand how peritoneal dialysis works and to communicate when complications arise.

The ideal candidate…

5- Sufficient eyesight, manual strength, and dexterity

Older adults and patients with comorbidities (such as diabetic retinopathy or rheumatoid arthritis) may have difficulty physically performing the procedure.

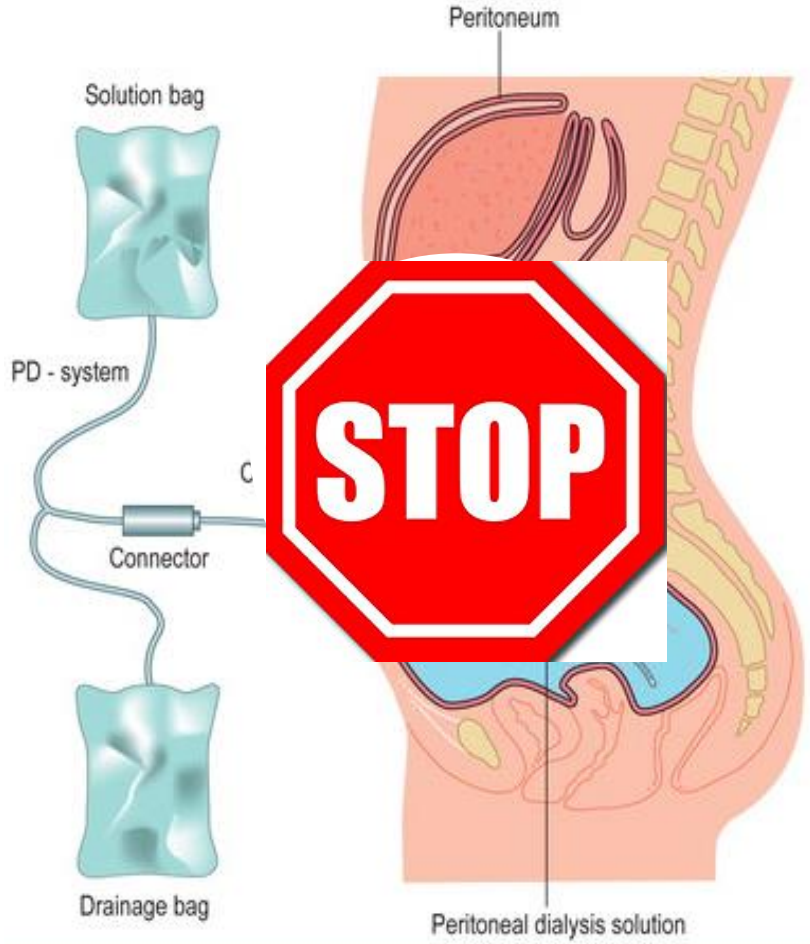
The ideal candidate…

6- Suitable environment to store supplies and perform exchanges

✓**Ideally, the patient should have a room that may be closed off (ie, a bedroom) in order to perform tubing connections in a sterile fashion.**

Potential barriers to peritoneal dialysis

1. Peritoneal scarring
2. Physical, cognitive, or psychological impairment
3. Lack of appropriate environment
4. Anuria or large patient size
5. Active inflammatory process or cancer
6. Surgical ostomies
7. Large abdominal wall hernia
8. Ventriculoperitoneal shunts
9. Morbid obesity
10. Polycystic kidney disease



Uptodate Online®, N Engl J Med 2021;385:1786-95

Potential barriers to peritoneal dialysis..

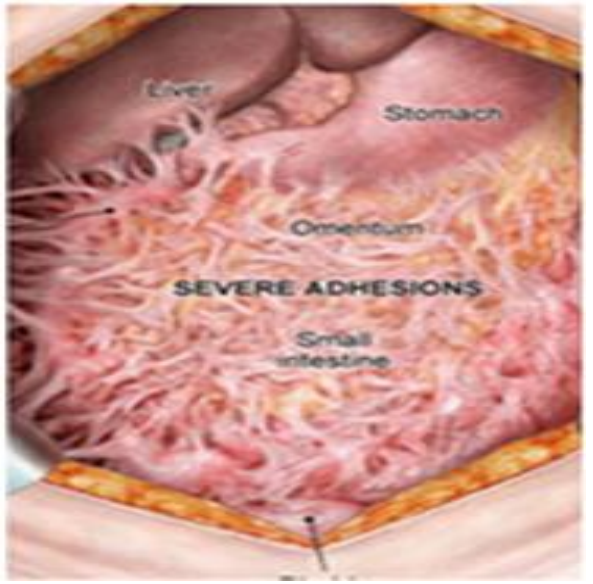
The only absolute contraindication:

Lack of a functional peritoneal membrane

Potential barriers to peritoneal dialysis..

1. Peritoneal scarring:

✓Adhesions limit the free flow of peritoneal dialysate and cause problems with filling, draining, solute clearance, and ultrafiltration.
Prediction of the severity of adhesions without laparoscopy is difficult.



Significant risk factors:

1. Multiple abdominal procedures,
2. A history of a gallbladder or bowel perforation, or
3. Small bowel obstruction related to adhesions.

Potential barriers to peritoneal dialysis..

2. Physical, cognitive, or psychological impairment:
   a) **Lack of vision is not a contraindication.**

Using **connection assist devices.**

Use of a touch technique with the **use of procedural audio instructions** for home reference allowed three patients to perform peritoneal dialysis in their homes without increased risk of peritonitis

Potential barriers to peritoneal dialysis..

2. Physical, cognitive, or psychological impairment..
   b) **Severe developmental delay**,

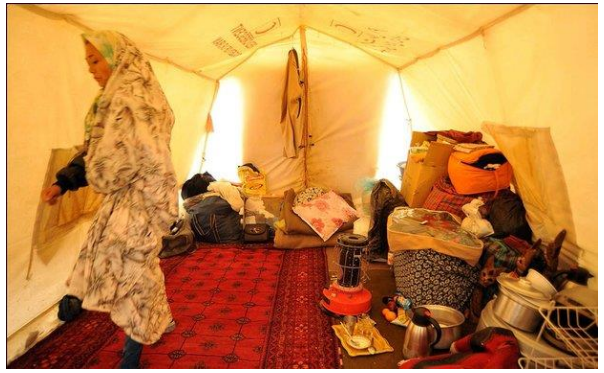
✓**PD with a caregiver:**

Home training staff prior to catheter placement using an artificial catheter/apron setup that mimics the true system.

✓**Patient and caregiver unable:**

Assisted peritoneal dialysis: a health care professional comes to start a nocturnal cycler treatment at night and returns in the morning to take the patient off the machine.

Potential barriers to peritoneal dialysis..



3. Lack of appropriate environment

✓A clean, dry, temperature-controlled location for storage of peritoneal fluids and for performing dialysis.

✓A very small dwelling or is homeless, the lack of storage space may be limiting factor.

4. Anuria or large patient size

High dialysis volume requirement (numerous exchanges or larger volume per exchange).

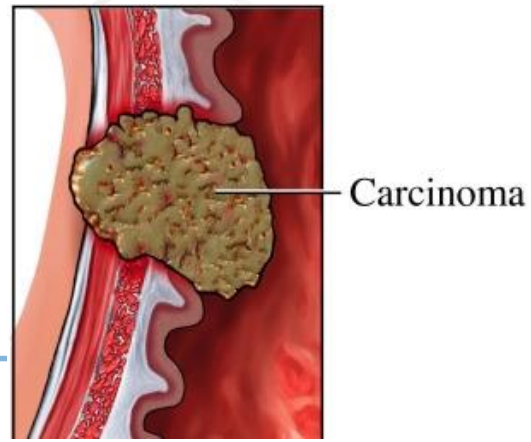
Potential barriers to peritoneal dialysis..

5. Active inflammatory process or cancer

- ✓Active diverticulitis,
- ✓Inflammatory bowel disease
- ✓Abdominal cancer

Develop peritonitis or mechanical catheter problems.

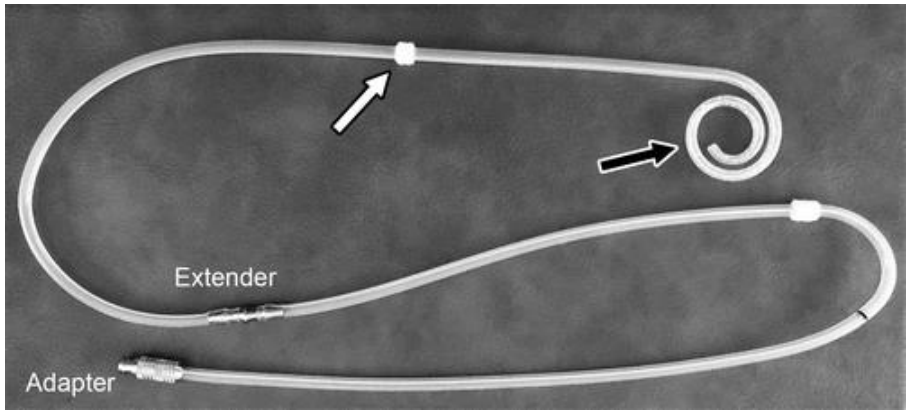
The decision to peritoneal dialysis must be individualized after consideration of the risks and benefits.



Potential barriers to peritoneal dialysis..

6. Surgical ostomies

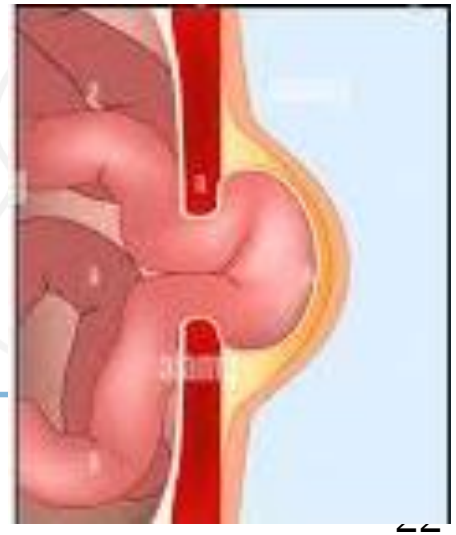
- ✓Risk of exit-site infection.
- ✓A **presternal catheter** for all patients with ostomies.
- ✓The exit site can be easily cleaned.
- ✓Any ostomy leakage will flow in a caudal direction, away from the peritoneal dialysis catheter.



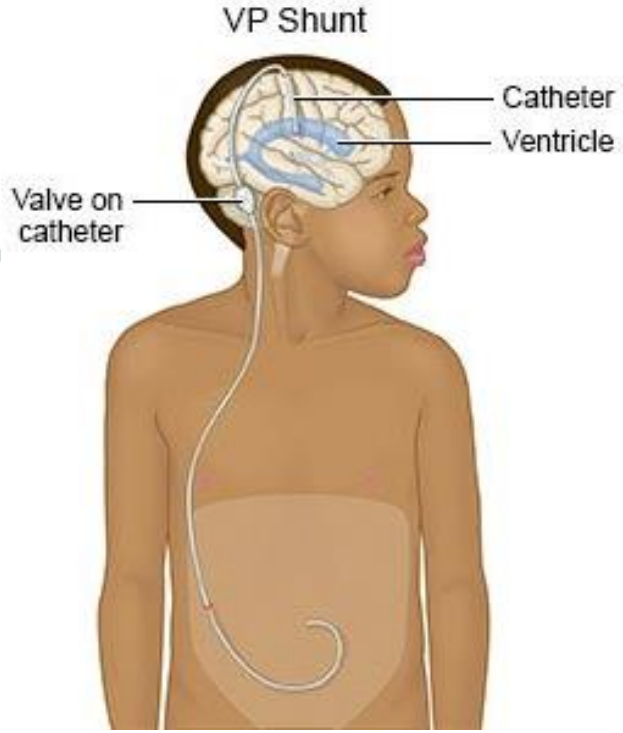
Potential barriers to peritoneal dialysis..

7. Large abdominal wall hernia

- ✓Peritoneal dialysis may worsen the hernia.
- ✓Cosmetically displeasing to patients.
- ✓Unlikely to become incarcerated and not absolute contraindications for PD.
- ✓Evaluated by surgery prior to placement of the catheter.
- ✓Most hernias can be repaired at the time of catheter placement (if the catheter placed surgically) or with a separate surgery prior to catheter placement.



Potential barriers to peritoneal dialysis..



8. Ventriculoperitoneal (VP) shunts

Do not offer peritoneal dialysis to most patients who have a VP shunt, exceptions if no alternative (such as hemodialysis) is available.

VP shunts theoretically increase the risk of peritonitis, shunt malfunction, and ascending infection (ie, meningitis).

9. Morbid obesity

✓Use of a **presternal catheter**

10. Polycystic kidney disease

✓Use of frequent low-volume exchanges (e.g., with APD)

Potential barriers to peritoneal dialysis..

11. **Swimmers**

✓Use of special cover, chlorinated pool

12. **Owing a pet**

✓At least out of the room during exchanges

14. Omphalocele

15. Gastroschisis

16. Diaphragmatic hernia

17. Bladder extrophy

Seminars in Dialysis. 2020;00:1–15

Take home message

1. Experience and knowledge of nephrologic team (physician and nurse) is the most important factor for a successful PD.
2. Patient-targeted modality education causes 3.5-fold increase in receiving PD as initial dialysis therapy.
3. The ideal patient is having minimal abdominal surgery, residual renal function, good cognitive and physical function, suitable environment to do exchange and store.
4. Peritoneal scarring is an absolute contraindication for PD.
5. Presternal catheters are used for ostomies or morbid obesity.
6. Ostomy bag or special covers are used during swimming.


Hope have a nice PD and weather