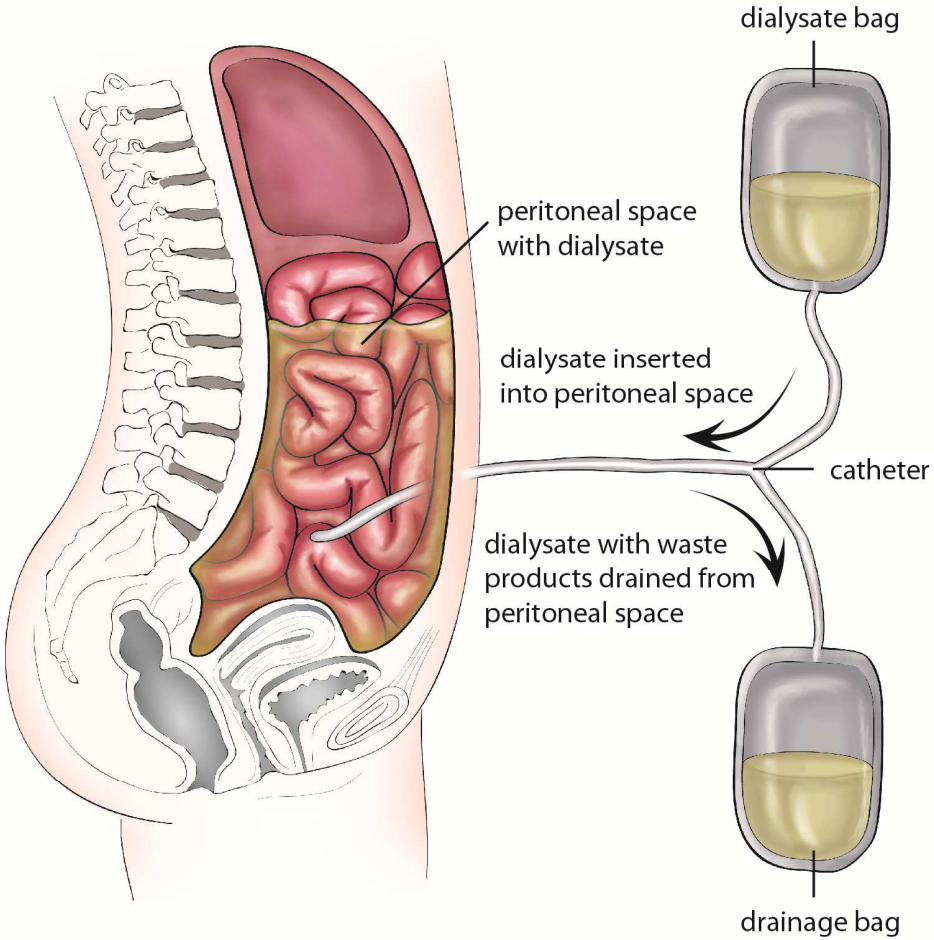
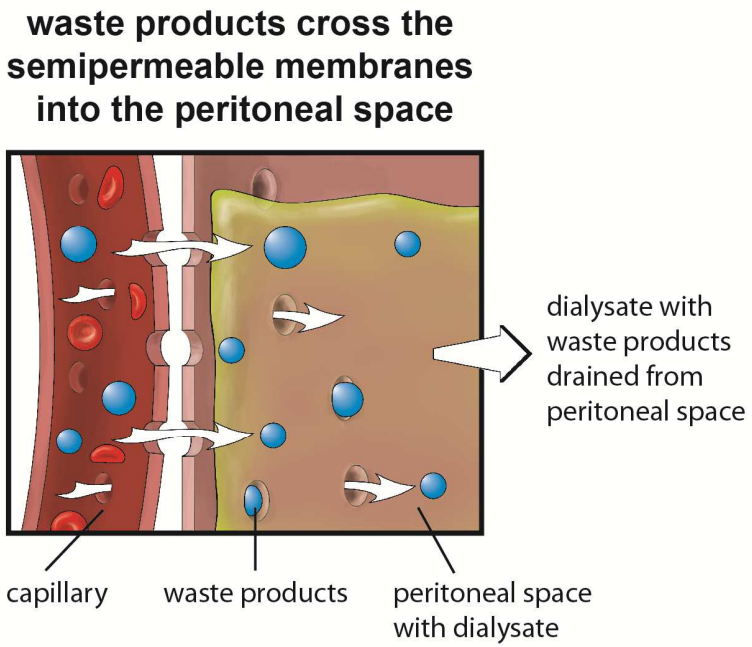
How to talk with the in-center patient about Peritoneal Dialysis (PD)

-Common myths about PD and how to handle them-

SKC In-service May 2016

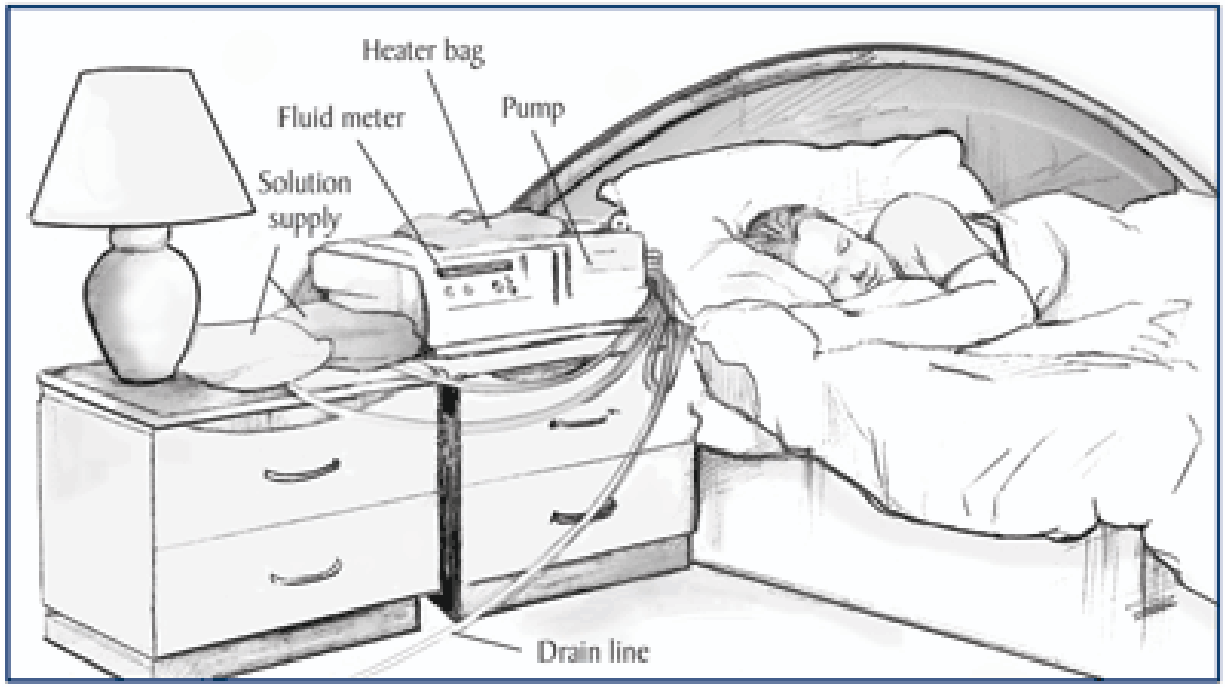
PD Basics





Continuous ambulatory peritoneal dialysis (CAPD)

PD Basics



Automated PD, Continuous cycling PD (CCPD), Nocturnal intermittent PD (NIPD)

Contraindications to PD

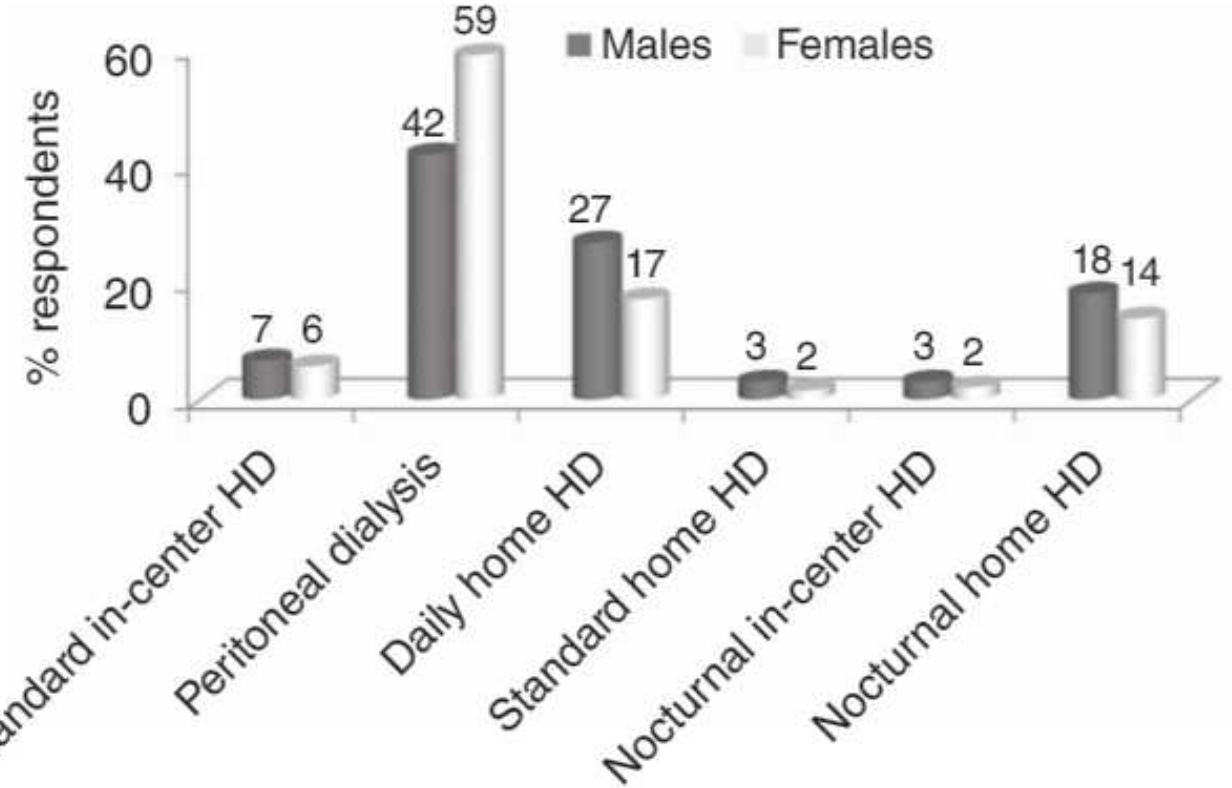
1) Patient does not have a peritoneum (usually not fixable)

2) Patient does not have a home (potentially modifiable)

There are only 2 contraindications to PD! If the patient has a peritoneum and a place to provide the therapy, they can do PD.

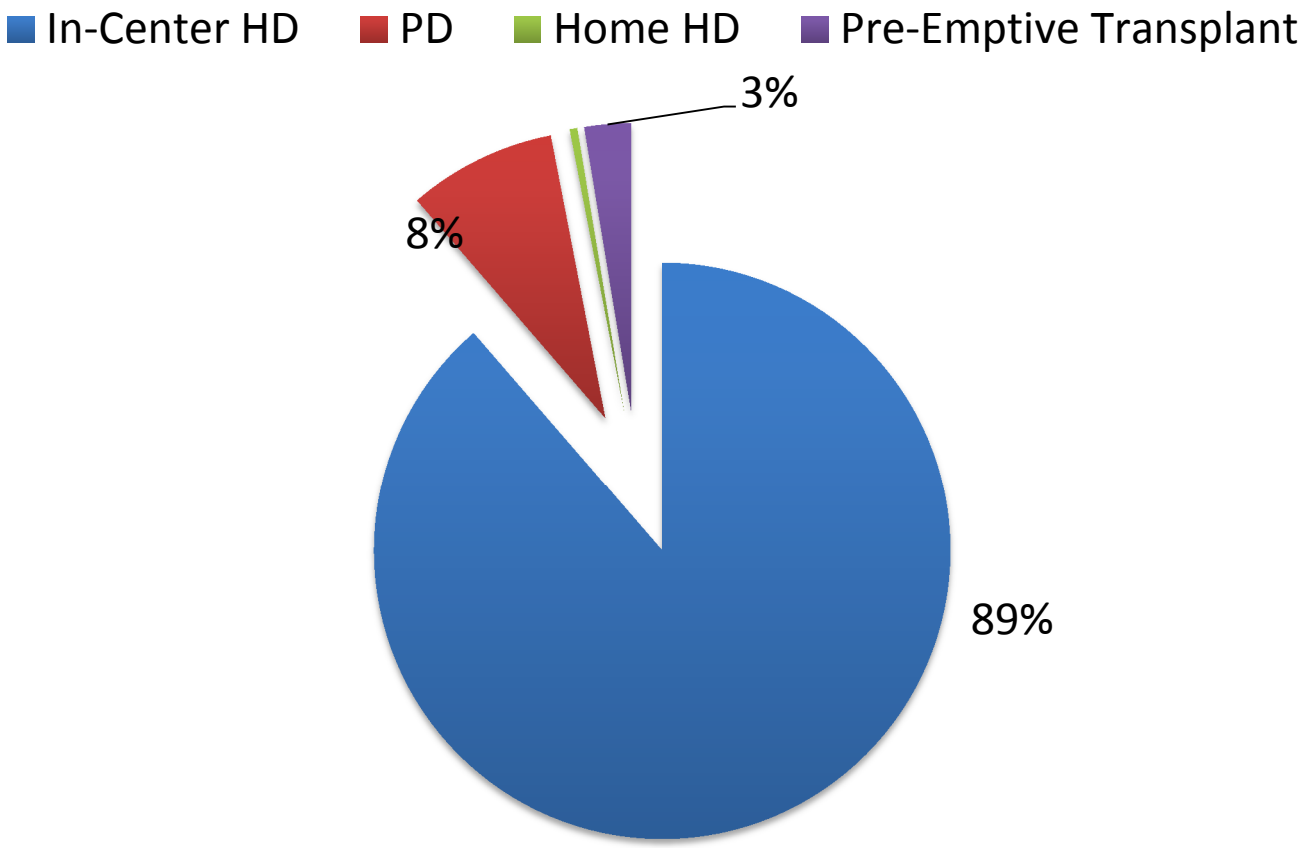
Any other “barriers” represent a failure of the dialysis provider to meet the needs of the patient

What Nephrologists would choose for themselves if faced with ESRD…



Hemodialysis International 2012; **16**:242–251

Patient Incident Modality



Source: USRDS 2014 ADR

Cost of therapy

One year of hemodialysis can cost up to **$72,000**, while a year of peritoneal dialysis costs **about $53,000**, according to information from the U.S. Renal Data System. Oct 11, 2014

Common Misconceptions

- I heard PD clearance is not as good as HD…
- I heard that survival is not as good in PD patients…
- I heard that PD can cause more infections than HD…
- I heard that you can only do PD if you have someone to help you at home…
- I heard that you can't do PD if you don't urinate anymore…
- I heard that you can't take as much fluid off with PD…
- I heard that your diet has to change after going on PD…
- I heard that you can't do PD after you have had surgery on your abdomen…

I heard PD clearance is not as good as HD….

PD Clearance

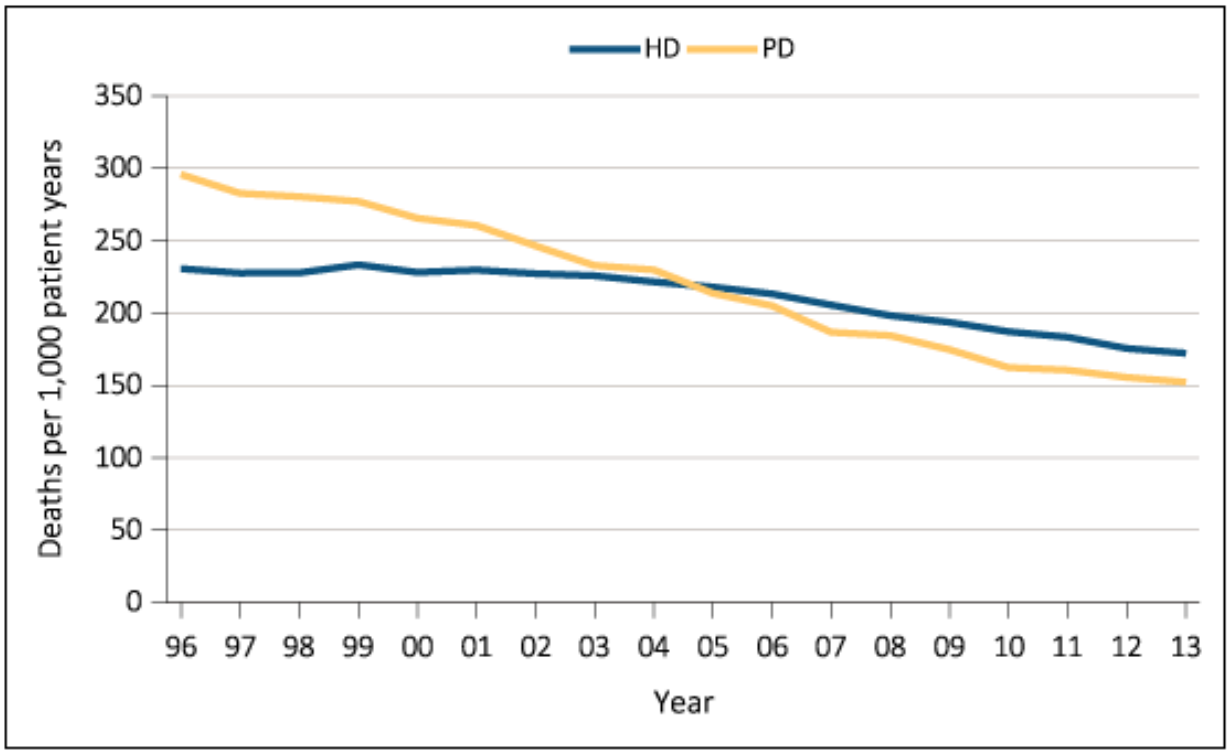
- Tends to be more gentle and continuous
- Benefit for having daily dialysis (no weekends)
- HD tends to be faster, more efficient clearance per unit time
- Kt/V for hemodialysis is not the same as Kt/V for peritoneal dialysis
- Clearance of larger or middle molecules may be better or equivalent
- PD patients tend to run higher BUN / creatinine levels at baseline
- Residual renal function can significantly contribute to clearance, can affect how rigorous the PD regimen is.

Bottom line is clearances are not as important as how the patient is feeling. Patients can still feel well while having less small molecule clearance.

I heard that survival is not as good in PD patients…

Mortality, USRDS 2015

(b) Hemodialysis and peritoneal dialysis



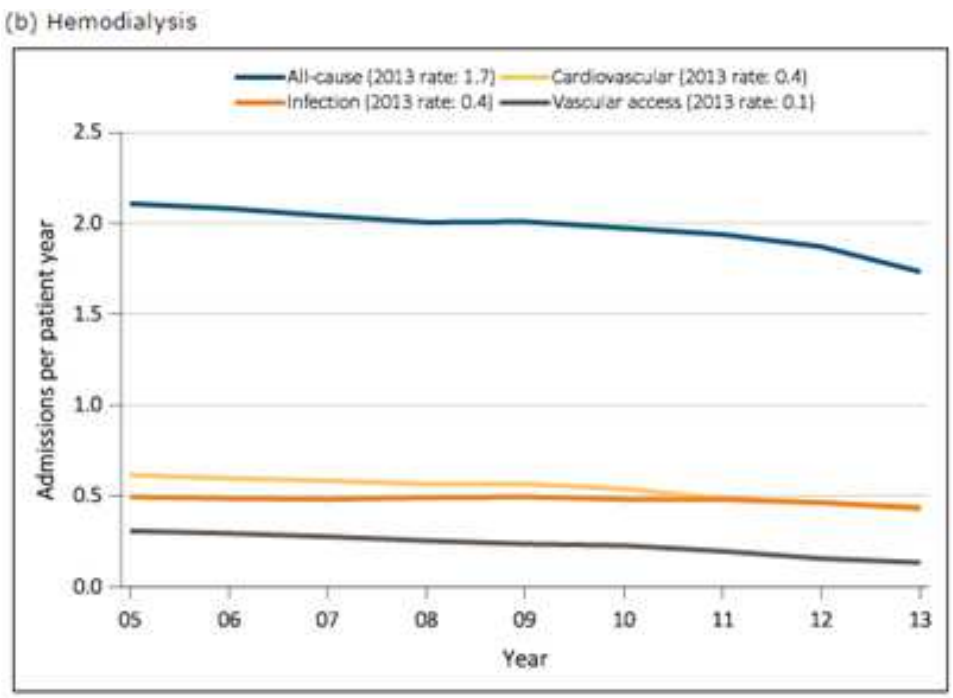
Data Source: Reference Tables H.2_adj , H4_adj, H.8_adj, H.9_adj, and H.10_adj; and special analyses, USRDS ESRD Database. Adjusted for age, sex, race, ethnicity, primary diagnosis and vintage. Ref: period prevalent ESRD patients, 2011. Abbreviations: HD, hemodialysis; PD, peritoneal dialysis.

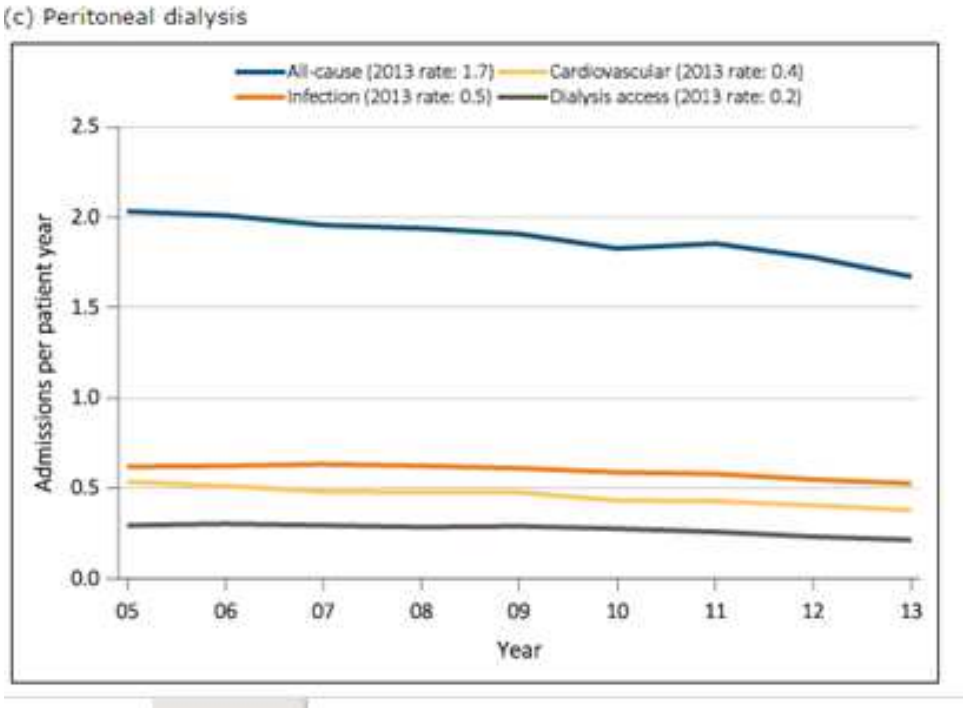
Despite improvements in survival on dialysis over the years, adjusted survival for hemodialysis patients who were incident in 2008 is only 55% at three years after ESRD onset. For peritoneal dialysis patients, adjusted survival is 66% at three years.

I heard that PD can cause more infections than HD…

- Hemodialysis-related infections are often blood stream related, can lead to complications such as loss of access, endocarditis, septic emboli, osteomyelitis
- PD related infections most commonly encountered are exit site catheter infections and peritonitis. They can usually be treated with outpatient antibiotics, often do not lead to a loss of access or inability to continue dialysis (except in rare cases)
- Exit site catheter infections are treated with oral antibiotics
- Peritonitis is treated by putting antibiotics in peritoneal fluid

Hospitalization for Infection by Modality





Data Source: Reference Tables G.1, G.3, G.4, G.5, and special analyses, USRDS ESRD Database. Period prevalent ESRD patients; adjusted for age, sex, race, & primary cause of kidney failure; ref: ESRD patients, 2011. Abbreviation: ESRD, end-stage renal disease.

I heard that you can only do PD if you have someone to help you at home…

Assisted or unassisted PD?

- Many patients do PD on their own without assistance
- Patients incapable of doing PD on their own can have a family member trained to provide the PD
- Patients can do PD in select nursing homes with nursing assistance

I heard that you can’t do PD if you don’t urinate anymore…

PD and residual renal function

- Patients can do PD without any residual renal function
- This usually means they will not have any dry periods, i.e. they will always need fluid in the abdomen
- Just like with HD it means they have to pay even closer attention to fluid and diet

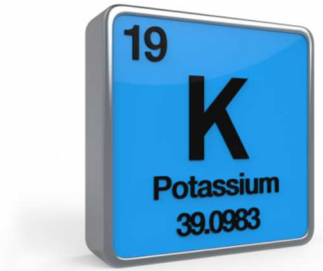
I heard that you can’t take as much fluid off with PD…

PD and fluid management

- Ultrafiltration can be adjusted by adjusting the PD prescription
- A typical prescription would provide 0-1.5 L of ultrafiltration daily based upon need
- PD provides more gentle / continuous UF
- No off days, UF every day
- High dose diuretics are often utilized to assist with fluid removal
- Just like with HD some patients need to continue on blood pressure medications
- Just like with HD, PD patients usually need to continue on strict sodium restriction

I heard that your diet has to change after going on PD…

Dietary concerns with PD

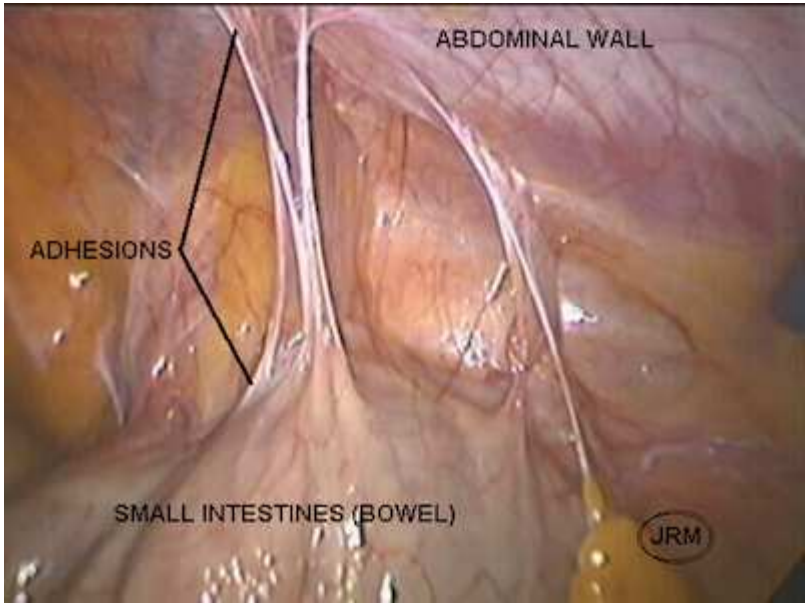


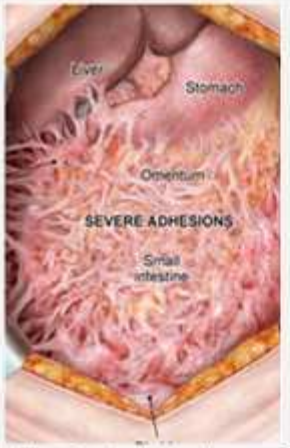
- Mostly the diet stays the same
- Exception is potassium, PD patients often loose additional potassium in the PD fluid and sometimes have to be placed on high potassium diets or medications to increase the potassium level
- There is some albumin loss in the PD fluid but this is usually not clinically significant

I heard that you can’t do PD after you have had surgery on your abdomen…

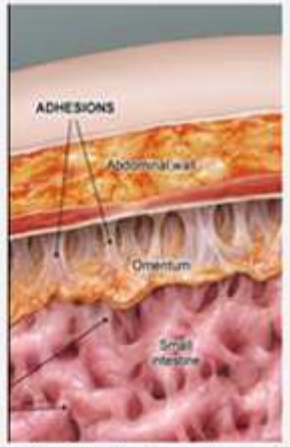
Abdominal Surgeries and PD

- Abdominal adhesions, if extensive can make it impossible to do PD
- Sometimes adhesions form after past abdominal trauma or surgical procedures
- There is no definitive way to know if a patient will have adhesions based on history alone, surgeon has to take a look inside to find out if PD is possible





Adhesions between loops of intestine



Adhesions between loops of intestine and abdominal wall

Take home points:

- Clearance / adequacy should be tailored to the needs of the patient. PD is not inferior in its ability to adequately remove uremic toxins
- Mortality does not significantly differ based on modality chosen
- Infections are complications seen in both HD and PD patients. PD related infections are often easily treatable in the outpatient setting. Hospitalization rates due to infections are similar in HD and PD patients
- Unassisted or assisted PD is possible. PD in a nursing home setting is possible
- At this time, PD is not possible for a homeless patient
- Fluid removal and volume balance can be achieved easily in most PD patients
- Anuria is not a contraindication to PD
- PD patients have similar diets to HD patients except they can eat more potassium
- Prior abdominal surgeries put the patient at risk for abdominal adhesions. If adhesions are extensive PD cannot be done. History of abdominal surgery alone does not preclude a patient from doing PD.

Bottom line:

Dialysis modality is a patient choice. The patient should choose what is best for him/her after considering recommendations from healthcare providers and carefully weighing all the options.

Patients do listen to you and respect your opinion!