

PD in a Pinch: Low-volume PD

Any type of dialysis can have some bumps in the road. With peritoneal dialysis (PD), hernias or PD catheter problems may interrupt the usual treatment routine. Most often, these types of issues lead to placement of a temporary hemodialysis (HD) catheter and use of HD for some number of days or weeks. But, you may have another option: low-volume PD.

What is Low-volume PD?

Low-volume recumbent-only (LVRO) PD uses lower-than-usual volumes of dialysate fluid, prescribed by your nephrologist. Exchanges (most often by cyclor) are done only while you lie flat (recumbent). During the day, you would stay dry or use a low fluid volume. Over a few weeks, you slowly increase the volume of each exchange until you reach the normal level again.

LVRO PD may allow your peritoneum to rest and heal after hernia repair, catheter replacement or repositioning, or other abdominal surgery. LVRO is *less dialysis than usual*, so you would not want to use this technique any longer than you have to.

Research on Low-volume PD

In one series of a dozen patients who had hernia repair surgery, low-volume PD (1.0 to 1.5 liters) was done with 6 exchanges per day (after a 1-3 day period after surgery with no PD). Patients resumed their regular PD routine by 2-4 weeks after surgery, and they all did well, with no dialysis-related problems and no need for hemodialysis.¹

Another study used low-volume PD to help patients recover from PD catheter placement itself. Two groups of patients were compared: in group 1 (203 patients) stayed dry for 3-5 days after the catheter was placed, before it was used for the first time. In group 2 (159 patients), researchers rinsed out each patient's peritoneum until the dialysate was clear, then did low-volume PD exchanges with a cyclor every 2 hours until it stayed clear. The group 2 patients had a significantly lower rate of catheter failure (no catheters failed).²

A smaller study done in the Netherlands found that 38 of 40 patients were able to continue PD after simultaneous catheter removal and insertion in the opposite side of the abdomen, using low-volume PD. Patients in this study stopped PD for one day after surgery, and stayed dry during the day.³

Avoiding In-center HD

If you are used to doing PD at home or at work, on your own schedule, you may not want to give up control for a temporary switch to HD. And hemodialysis catheters have many risks of their own, including the potential for serious infection that can lead to sepsis (blood poisoning). Arming yourself with information about low-volume PD can help you talk to your nephrologist about whether this might be an option for you if you ever need it.

References

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