WE CLAIM:

~~1. A system for providing peritoneal dialysis~~ to a patient comprising:

a single catheter that is placed in the patient and is coupled to an end of a first fluid line;

at least one reservoir of dialysate having a volume of at least one and one half the patient's fill volume, that is coupled to an end of a second fluid line; and

a single pump for pumping the dialysate from the reservoir into and out of the patient.

2. The system of Claim 1 further including a force transducer coupled to the reservoir of dialysate for monitoring the amount of dialysate pumped into the patient.

3. The system of Claim 1 wherein the pump is a reversible roller pump.

4. The system of Claim 1 wherein the pump is a personal cycler.

5. The system of Claim 1 further including a pressure detection system in fluid communication with the pump.

6. The system of Claim 1 further including means for physically vibrating the reservoir of dialysate during dialysis.

7. A method for dialyzing a patient comprising ~~the steps of:~~

~~placing a single catheter in a peritoneum of the~~ patient;

providing at least one reservoir of dialysate having a volume of at least three liters;

coupling the reservoir of dialysate in fluid communication with the catheter; and

pumping the dialysate into and out of the peritoneum using a single pump.

8. The method of Claim 7 including coupling the reservoir of dialysate to a force transducer for monitoring the amount of dialysate pumped into the patient.

9. The method of Claim 7 wherein the step of pumping the dialysate is further defined by using a reversible roller pump for pumping the dialysate.

10. The method of Claim 7 wherein the step of pumping the dialysate is further defined by using a personal cycler for pumping the dialysate.

11. The method of Claim 7 including placing a pressure detection system in fluid communication with the pump.

12. The method of Claim 7 wherein the volume of dialysate is at least five liters.

13. The method of Claim 7 including the further step of applying physical vibration to the reservoir of dialysate when pumping the dialysate into and out of the ~~peritoneum.~~