How to Add Antibiotics to the PD Solution Bags

If there are concerns for peritonitis you should always bring your child to Seattle Children’s or your local emergency department.

What do I do before I start?

Gather these supplies and place them on a clean surface:
- Antibiotic
- Sterile Water vials if needed
- Syringes and needles
- Alcohol swabs
- Mask and gloves
- Dialysate bags – 2 L (liter) cycler, 3L cycler, 5 L cycler, 1.5 L Ultrabag, 2.5 L Ultrabag

Check the bag(s) of dialysate for:
- Solution (dextrose concentration)
- Expiration date
- Amount and appearance (Is there anything floating in the solution?)
- Leaks

Check medicine and sterile water vials for:
- Expiration date
- Flip top securely in place and vial intact (means it has not been tampered with)

How do I mix the antibiotics?

There may be times you will need to mix a powder antibiotic with sterile water to turn the medication into a liquid form. This liquid form will allow you to add the antibiotic to the dialysate bags.

How to mix the powdered antibiotics (typically: vancomycin)

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Scrub the top of the sterile water vial with an alcohol swab for 15 seconds, let dry for 15 seconds.
4. While the sterile water vial is drying, scrub the top of the vancomycin vial with an alcohol swab for 15 seconds. Let dry for 15 seconds.
5. Add about 5 mls of air to the sterile water vial.
6. Draw 10 mls of sterile water into the syringe and add it to the powdered antibiotic vial.

To Learn More
• Dialysis Unit 206-987-3985
• After hours, weekends and holidays call the hospital at 206-987-2000 and ask for the nephrologist on call
• Ask your child’s healthcare provider
• seattlechildrens.org

Free Interpreter Services
• In the hospital, ask your nurse.
• From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.
7. Gently mix by rolling the vial between your hands or using a “swirling” motion. It must become clear.

8. Draw antibiotic into the syringe to be added to the dialysate bag(s). See the Pharmacy Medication Label for the right dose (amount) of antibiotic to add to each bag.

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**How to prepare the premixed antibiotics (typically: gentamicin)**

Some antibiotics are in premixed vials (already in liquid form).

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Scrub the top of the liquid antibiotic vial with an alcohol swab for 15 seconds, let dry for 15 seconds.
4. Add about 1 mL of air to the premixed vial
5. Draw antibiotic into the syringe to be added to the dialysate bag(s). See the Pharmacy Medication Label for the right dose (amount) of antibiotic to add to each bag.

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**How do I add the medicines to the dialysate?**

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Line up all the bags on the clean surface.
4. Scrub each medicine port on the bags with an alcohol swab for 15 seconds, let dry for 15 seconds.
5. Insert the needle of the syringe into the medicine port at the inner circle mark (looks like a bullseye). If it feels hard to push the needle in, then pull back and gently try again. Be sure not to push the needle through the side of the medicine port.
6. Once the needle is in place, push on the syringe plunger to add the antibiotic to the bag.
7. Remove the needle from the bag and throw the whole syringe in the appropriate sharp’s container.

*Use one syringe for each antibiotic/medicine for each bag of dialysate.*

(For example, if you are using 5 bags, you will need 5 syringes for each antibiotic.)

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**How do I give my child the medicines?**

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Set up as you normally do. Remember to gently shake the bags to mix the antibiotics.
4. Start your dialysis routine no sooner than 3 to 6 hours after giving the loading dose of antibiotics.
5. Take antibiotics with each dialysis as instructed—do not miss a dose.
6. Finish all days of antibiotic therapy even if your child is feeling better.
7. Your child may also be instructed to take an antifungal medicine orally (by mouth) while on the antibiotics.
If there are concerns for peritonitis you should always bring your child to Seattle Children’s or your local emergency department.

Ideally a loading dose of antibiotics is given at Seattle Children’s by Dialysis Nursing staff or your local emergency department.

If you are instructed to give a loading dose at home, follow these instructions:

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Prepare antibiotics following “How to Add Antibiotics to the PD Solution Bags.” You will be using an Ultrabag for a loading dose. Do Not Use a cycler bag.
4. Flush your child’s peritoneal cavity.
5. If connected to the cycler, disconnect from cycler then connect to the Ultrabag with no antibiotics added and do some in and out flushes.
6. If not connected to cycler, then connect to the Ultrabag with no antibiotics added and do some in and out flushes.
7. Disconnect from the Ultrabag used to flush.
8. Connect to the Ultrabag containing the antibiotics.
9. Drain any leftover flush solution.
10. Then using normal fill volume, instill dialysate solution with antibiotics.
11. Clamp.
12. Disconnect and cap PD (peritoneal dialysis) catheter with MiniCap.
13. Antibiotic needs to dwell for 3 to 6 hours or per instructions from Nephrologist.
How to Add Heparin to the PD Solution Bags

What do I do before I start?

Gather these supplies and place them on a clean surface:

- Heparin vials
- Syringes and needles
- Alcohol swabs
- Mask and gloves
- Dialysate bags – 2 L (liter) cycler, 3L cycler, 5 L cycler, 1.5 L Ultrabag, 2.5 L Ultrabag

Check the bag(s) of dialysate for:

- Solution (dextrose concentration)
- Expiration date
- Amount and appearance (Is there anything floating in the solution?)
- Leaks

Check medicine and sterile water vials for:

- Expiration date
- Flip top securely in place and vial intact (means it has not been tampered with)

How to prepare the heparin

The heparin vial is premixed.

1. Scrub the top of the heparin vial with an alcohol swab for 15 seconds, let it dry for 15 seconds.
2. Add about 1 mL of air to the heparin vial and then draw heparin into the syringe to be added to the dialysate solution bag. See the Pharmacy Medication Label for the right dose (amount) of heparin to add to each bag.

How do I add the medicines to the dialysate?

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Line up all of the bags on the clean surface.
4. Scrub each medicine port on the bags with an alcohol swab for 15 seconds, let dry for 15 seconds.
5. Insert the needle of the syringe into the medicine port at the inner circle mark (looks like a bullseye). If it feels hard to push the needle in, then pull back and gently try again. Be sure not to push the needle through the side of the medicine port.
6. Once the needle is in place, push on the syringe plunger to add the heparin to the bag.
7. Remove the needle from the bag and throw the whole syringe in the appropriate sharps container.
How to Add Antibiotics to the PD Solution Bags

**Maintenance dosing with cycler**

1. Set up as you normally do. Remember to gently shake the bags to mix the heparin.
2. Start your dialysis routine as you normally do.
3. When therapy is complete, discontinue as you normally do.

**Loading dose with Ultrabag (manual)**

1. Put on a mask.
2. Wash your hands and wear gloves.
3. Flush your child’s peritoneal cavity. This can be done one of two ways:
4. If connected to the cycler, leave connected and bypass the dwells.
5. If not connected to cycler, then connect to the Ultrabag and do some in and out flushes.
6. Disconnect from the cycler or Ultrabag used to flush.
7. Connect to the Ultrabag containing the antibiotics.
8. Drain.
10. Disconnect and cap PD (peritoneal dialysis) catheter. Needs to dwell for 3 to 6 hours.