

Dialysis

What is dialysis?

The function of the kidneys is to clean our bodies of waste products and extra fluid. Some illnesses affect kidney function. The waste products build up and the body cannot work properly.

Dialysis is the removal of excess fluid and waste products from the blood by a method other than through the kidneys. There are 3 types of dialysis: peritoneal dialysis, hemofiltration, and hemodialysis.

Your child may need to be moved to a different unit or area for the dialysis.

A central venous line (CVP) and/or an arterial line will be put in. Blood samples can be taken from these lines. Blood samples are done often to help determine how long to continue dialysis. Fluids, medicines, and nutrition will be given by IV.

Peritoneal dialysis

Peritoneal dialysis (PD) is the form of dialysis most often used with children. If your child needs PD, a surgeon will place a catheter (tube) into the abdomen (belly). Dialysate, a fluid that absorbs the waste products, is given (instilled) through the tube. It is left in place for up to 2 hours, and then is drained out through the tube. The process is repeated as often as needed.

The nurse will change the PD tubing down to the PD catheter, as well as the bandages around the catheter daily. This will be done with a sterile technique to help prevent germs from infecting the abdomen.

A culture of the PD fluid will be done every day. If an infection does occur, antibiotics will be given.

Hemofiltration

Hemofiltration is a short-term method of dialysis. It is often the method chosen when the child is very ill and the kidneys have lost the ability to produce adequate amounts of urine. The child's blood continuously flows out through a large IV, through a machine with a filter, and back to the body through another IV.

If the filter is unable to remove all of the waste products, dialysate is circulated through the filter to remove more waste products.

Your child will receive citrate or heparin, medicines to help prevent blood clots from forming in the tubing and filter.

If the kidney function has not improved after the illness has been treated, a form of long-term dialysis will be needed, such as PD or hemodialysis.

Hemodialysis

Hemodialysis is a long-term method of dialysis using a hemodialysis machine. A catheter (tube) is put into a large vein. Blood is removed from one part of the catheter, pumped through the machine, and returned to the body through another part of the catheter. The process takes a few hours and can be done as often as every day. Your child will receive heparin to prevent blood from clotting in the machine.

This form of dialysis is not well tolerated by very sick or very small children because they can easily get too much or too little fluid in their body. Therefore this type of dialysis is used for school-age children and older.

Children who are on hemodialysis after going home, can have the IVs capped off (disconnected from the machine) between dialysis runs and can move around freely.

How should I prepare my child?

Preparation will depend on what illness is present, as well as the current state of the child. During dialysis, but especially hemofiltration, your child may have to keep still. There may also be some discomfort involved. Discuss with the nurse or child life specialist what would be the best approach for preparation.

Sedation and pain medicine are used to keep the child still and comfortable while on hemofiltration and PD. If large amounts of sedation are needed, a breathing tube and a ventilator (breathing machine) may be needed. This is especially the case for very young children who will not be able to understand the need to remain still.

What else do I need to know?

The doctors and nurses will keep you updated on your child's progress. How often and for how long dialysis is done will depend on your child's illness, lab test results, and body fluid balance.

Questions?

This sheet is not specific to your child but provides general information. If you have any questions, please ask the doctor or nurse.

For more reading material about this and other health topics, please call or visit the Family Resource Center library, or visit our Web site: www.childrensmn.org.

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