

Treatment Options

Children with kidney failure have a few options to choose from, depending on the severity of their disease. The primary goal is to have a successful transplant, however viable kidneys are not always available and some children are not strong candidates for transplants.

In some cases a nephrectomy is a solution that can make childhood disease easier to manage.

In most cases parents choose home dialysis options either home hemodialysis or peritoneal dialysis.

Transplants

In adults, most transplanted kidneys come from donors who have just perished. However, about half of the kidney transplants in children come from a living donor, usually a parent or other close family member.

Those who do not have a relative able to donate a live kidney need to enter the United Network for Organ Sharing (UNOS) managed Organ Procurement and Transplantation Waiting List. ⁽¹⁾ Candidates' ages and length of time on the waiting list are factors in the donor point system. Children aged 18 and under get extra points compared with adults, because they are likely to receive the greatest benefit from a donated kidney. ⁽²⁾

- **Living Donor Kidney** - A kidney from a living donor often has advantages over a kidney from a recently deceased individual. ⁽³⁾
 - ? A kidney from a parent is guaranteed to match on at least three of six proteins, which means it is less likely to be rejected.
 - With a living donation, there is additional time to pre plan and schedule the operation.
 - Shortens the number on the waiting list.
 - Psychological benefits of knowing that the donation came from a caring family member.
 - Live kidneys are more likely to be in good condition, because they do not need to be transplanted.

Pre-emptive renal transplantation - Is a transplantation before complete renal failure has occurred.

- Recent research out of the University of Washington shows increased graft and patient survival among preemptive transplant patients and the authors suggest that education of both the patients and the physicians could make preemptive transplantation an option for more children.
- Another article published in *Touch Nephrology*, cites the benefit of reduced

morbidities from not being subjected to dialysis and reduced transplant rejection.

- Of course, ethical issues do come about with this topic, especially how patients would be selected given the abundance of individuals on the waiting list. (4)

?For children with ESRD who are awaiting a transplant, not a strong candidate or choose not to have surgery, dialysis is the only option.

Dialysis is a treatment used to clean the blood and remove waste when the kidneys are no longer able to do so.

There are two major types of dialysis:

- **Hemodialysis** can be done in the clinic or at home. In hemodialysis a machine is used with a special filter called a dialyzer that acts as an artificial kidney to remove wastes products and toxins from the blood.
- **Peritoneal dialysis** uses the lining of the child?s abdomen as a filter to remove fluids and toxins from the blood. A special catheter is used to introduce clean fluid and remove contaminants.

Partners in Care Treatment Team

Understanding the members of the healthcare team is vitally important to ensure the best possible care is given.

As a parent or guardian you are the most important member of the team. You are the eyes and ears of the medical staff and will help convey your child?s thoughts and feelings to the rest of the team. You will also have the task of providing moral support and reassurance as a parent. It is important to remember that you are not alone and resources such as support groups and counselors are available to help you through the daily challenges.

- **Pediatrician** ? is the child?s primary doctor, who will likely be the first to diagnose or suspect kidney issues. Depending on their expertise, they will refer to a specialist and likely to a nephrologist. The pediatrician will continue to be a valuable resource even after referral.
- **Nephrologist** ? is a doctor that specializes in the care of kidneys and understands potential disorders. If possible, children should see a specialist that works primarily in pediatrics. The nephrologist is the one who will help manage any issues and provide referral to a transplant center or dialysis clinic.
- **Dialysis Nurse** ? if dialysis is needed, a nurse trained in dialysis will be the hands on expert to either perform dialysis in the clinic or teach the parent or guardian how to perform one of the home options. The nurse is an excellent resource to determine what type of dialysis might be right.
- **Transplant Coordinator** ? if a transplant is the chosen route, the transplant coordinator will be your main contact. They will schedule additional medical exams and ensure the paperwork is filed to put the child on the transplant list.
- **Social Worker** ? in either dialysis or transplantation, a social worker will work with you to handle the day to day situations that occur. They are an excellent resource and can help locate financial resources and recommend social services such as counseling.
- **Counselor** ? is a trained expert that will be a source of support for the entire family

during the new and stressful times ahead. Their services can range from just being someone to listen to conflict and financial resolution.

- **Genetic Counselor** ? is an expert in genetics that can help figure out the exact root cause of the disease. They help to preemptively treat conditions and help with future family planning.
- **Dietician** ? is the expert who will help the child learn to live with the new restrictions of being a dialysis or transplant patient. Nutrition is often overlooked, but is extremely important to the health and well-being of the patient. Dieticians can help develop meal plans to deal with nutritional deficiencies and provide alternatives to already established family favorites. (3)

References

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3. National Kidney & Urologic Diseases Information Clearinghouse (NKUDIC). (2010). Treatment Methods for Kidney Failure in Children. Retrieved from <http://kidney.niddk.nih.gov/kudiseases/pubs/childkidneydiseases/overview> [3].
4. Segoloni, Giuseppe, Toqnarelli, Guiliana. Pre-emptive Kidney Transplantation. *European Nephrology*, 2010; 4 (1): 85-8. Retrieved from <http://www.touchnephrology.com/articles/pre-emptive-kidney-transplantation> [4]
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6. Organ Procurement and Transplantation Network, About Transplantation. Retrieved from <http://optn.transplant.hrsa.gov/> [6].

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Links

- [1] http://www.unos.org/docs/Living_Donation.pdf
[2] <http://www.ncbi.nlm.nih.gov/pubmed/20827196>
[3] <http://kidney.niddk.nih.gov/kudiseases/pubs/childkidneydiseases/overview>
[4] <http://www.touchnephrology.com/articles/pre-emptive-kidney-transplantation>
[5] <http://emedicine.medscape.com/article/1012654-treatment#aw2aab6b4b4>
[6] <http://optn.transplant.hrsa.gov/>