Where Will my New Kidney Come From?

The Organ Shortage

There is a severe shortage of organs for transplant. This means that the wait for a kidney transplant can be many years. The UW Transplant Program has long been a leader in trying to find new ways to increase the number of good organs that can be used for transplant. When you are told you need a kidney transplant, you have options as to where your new kidney will come from. It is very important that you explore these options fully.

Live Donor Kidney Donation

A kidney from a living donor is the best choice and the only way to skip the long waiting time.

There are some things to keep in mind when thinking about using a live donor.

• Is the person willing to donate?
• Is the donor healthy and medically able?

There are many benefits from getting a living donor kidney.

• Better health: Because you were able to avoid a long wait time, you are more likely to be in better health when you receive your transplant.
• Better quality kidney:
  o Studies have shown better success with a living donor kidney transplant.
  o With a living donor, the health of the kidney is well known. The person is over 18 years of age and a healthy person who has had recent complete health testing.
  o Kidneys from living donors often start working right away.
  o Perhaps best of all, long-term outcomes are better with a living donor kidney. The five year success rates for people who have received a kidney from a living donor are about 10% higher than those who receive their kidney from a deceased donor.
• A better match: The donor has a series of health testing to make sure that they are in good health and that the kidney is healthy. Tests are done to check the matching between the donor and the recipient which allows the transplant team a chance to find the best match. Family members often match the best but anyone, friend or acquaintance can get tested for matching.
• Better prepared: The transplant can be planned for a time when both the donor and the recipient are in the best health for surgery.
**Who can donate?**
Anyone can get tested as a living donor: family friend, church acquaintance, facebook friend, etc. Any living donor must be in good physical and mental health. They cannot have had chronic kidney stones, high blood pressure being treated with more than 2 medications, diabetes, or current cancer. Some health problems such as frequent kidney or bladder infections, heart disease, obesity, age, or other major health issues need to be looked at on a case by case basis.

**Related/Unrelated Live Donation**
The two most common living donors are someone who is blood related to the recipient: brother, sister, parent, child, aunt, uncle, cousin, niece or nephew; and someone who is very close to the patient: spouse, fiancés, in-laws and close friends. However, as mentioned before, a living donor can be found through your community, church, and through social media.

**Other Live Donor Options**

**Humanitarian Donation**
There are times when a person comes forward and wants to donate a kidney but does not have a certain person in mind to receive the kidney. We have a system to closely assess these people to decide if they can donate. The donor has the option to start a chain of exchanges with other recipient and donor pairs and the chain would end with a patient from the waiting list, or donate directly to the first person on the waiting list who is a match. The donor may remain unknown if they choose or can be known to the recipient.

To learn more about Humanitarian Donation, and to speak with a program staff member, please call (608) 263-1384.

**Paired Exchange Live Donation**
There are instances when a person cannot donate a kidney to their friend, family member, or loved one because they are not a match. This may be because their blood types do not match, or there can be other tissue matching issues. The paired kidney donation exchange program gives a willing donor the opportunity to help their intended recipient receive a living donor kidney from another individual.

If there is another recipient and donor in the same situation, the paired kidney donation exchange program can be an option. If medically appropriate, each donor could donate his or her kidney to the other recipient. In this way, both recipients would receive a matching kidney from an unrelated living donor. These exchanges can be as simple as 2 pairs or as complex as 6 or more pairs.

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We participate in the National Kidney Registry and the United Network for Organ Sharing (UNOS) Paired Kidney Exchange Programs. With these programs, a kidney from a live donor could be sent to UWHC for you, and your donor’s kidney could be sent elsewhere in the United States. We also have our own internal UW Transplant Exchange Program. With these three options we increase the chances of finding you a matching kidney. For more information please go to www.kidneyregistry.org, speak directly to your transplant coordinator, or call the Paired Exchange Coordinator at 608-263-4298.

Desensitization before Live Donation
In some cases donors who do not match with the recipient because of ABO blood type or crossmatch testing may still be able to be donors. The UW Health Transplant Program kidney desensitization process uses immunosuppressant drugs and a plasma treatment to remove rejection-causing antibodies from the bloodstream. This process is done both in the week/days before and the days/weeks after transplant. It allows patients who would likely reject the kidney transplant to successfully receive their transplant.

During this process harmful antibodies are removed from the blood stream of patients who do not match with their donor through either blood-type or tissue sensitivity. These tissue antibodies, which fight foreign tissues like those found on a donated organ, can cause the organ to reject. These types of antibodies are often produced after being exposed to foreign tissue, such as a past transplant, blood transfusion, or pregnancy. The antibody removal process is called plasmaphoresis, which is like hemodialysis.

To learn more about this, and to speak with a program staff member, please call 608-263-4298.

Deceased Donor Kidney Donation
Some patients may not have a living donor. They will need to go on the list to wait for a deceased donor transplant. Deceased donor kidneys are offered to recipients according to the United Network for Organ Sharing (UNOS) guidelines. The Organ Procurement Organization (OPO) contacts the UW Transplant Program when a kidney is available and tells them who is number one on the UNOS list to receive the kidney. Below are the types of deceased donor kidneys that patients may be offered:

Donation after Brain Death
The most common type of organ donor is a person who suffered from a head injury that caused brain death. “Brain death” occurs when someone does not get enough oxygen, causing the brain to stop working. This is often due to trauma or a stroke. Doctors can tell when someone is brain dead by testing certain reflexes controlled by the brain and by using machines that look at blood flow to the brain. The brain controls breathing so people who are brain dead are in a hospital on a breathing machine called a ventilator. Because of the breathing tube and certain medicines, the person’s body can function even after brain death. This allows the heart to keep beating and supply the kidneys and other organs with blood and oxygen until a transplant team removes the organ.
**Donation after Cardiac Death (DCD)**

Sometimes a patient’s trauma is so severe that doctors cannot save their life, but they do not meet the measures for “brain death.” The doctors then discuss with the patient’s family whether or not to remove life support. If the family chooses to remove life support, the machines are turned off, and the patient is allowed to die peacefully. Sometimes these patients can be organ donors. Transplant teams are called and are present when the life support is turned off. After the patient’s heart stops beating and is declared dead by their doctor, the transplant teams can remove the organs. This is called Donation after Cardiac Death (DCD). Because the heart has stopped beating in these donors, there is a lack of blood flow for a short time to the organs as they are removed. Because of this, kidneys from DCD donors may sometimes take a few days to start working after the transplant. But the outcomes for patients who receive a kidney from a DCD donor are the same as with a brain death donor.

**Donor Scoring-KDPI**

KDPI is a percentage score that ranges from zero to 100 percent. This score is based on transplant research and is associated with how long a kidney is likely to function. Kidneys with high KDPI scores are expected to function for a shorter amount of time than others.

KDPI scores are calculated based on facts about the donor, such as:
- Age, height, weight, and ethnicity
- Cause of death due to loss of heart function, loss of brain function, or stroke
- History of high blood pressure
- History of diabetes
- Exposure to the Hepatitis C virus
- Kidney function (serum creatinine levels)

**What are the risks of getting a kidney with KDPI greater than 85%?**

Kidneys with KDPI of greater than 85 percent come from donors who may have one or more of the above medical factors (advanced age, obesity, diabetes, low kidney function, etc.). Possible risks involved in getting this type of kidney may include:

- A delay in the kidney working right away after transplant, may last from a couple of days to a couple of weeks. This is called delayed graft function. Since the kidney(s) may not work immediately, patients may need to receive dialysis treatments after transplant. Only about 1-2% of kidneys may never work adequately after transplant.

- The kidney may not last as long as kidneys with KDPI less than 85 percent. How long a kidney continues to work is called graft survival. Your provider will explain the differences in outcomes between kidneys with lower and higher KDPI scores.

**What are the benefits of getting a kidney with KDPI >85%?**

Agreeing to receive a kidney with KDPI greater than 85 percent increases your chances of getting a transplant sooner, which may extend your life. This may be especially beneficial for patients who have many health concerns and those having trouble with dialysis. Your waiting time may be decreased by accepting a kidney with a KDPI score of 85 percent or higher.
If I agree to be listed for a kidney with KDPI >85%, will I still be listed for other kidneys?
Yes. When a deceased donor kidney becomes available, the KDPI score will be calculated. The appropriate patient list is run and a patient is chosen to receive the kidney. ALL patients on the list will be able to get a kidney from a donor with a KDPI score less than 85 percent. ONLY those patients who sign a consent to accept a KDPI score of 85 percent or higher will be on the list for donor kidneys with a KDPI score of 85 percent or higher. Those who do not sign this consent form are not eligible to receive a kidney from a donor with a KDPI score of 85 percent or greater.

Patients must sign a consent form that they are willing to accept a kidney from a donor with a KDPI > 85%. If you agree to receive a kidney with a KDPI > 85% you will be placed on the list for a kidney from a donor with any KDPI score from 0% to 100% whichever would become available first.

Do you ever put in two kidneys?
Yes. National data as well as our experience has shown that if you get 2 kidneys from a donor with a KDPI score of >85%, the function is similar to that of one kidney from a donor with a KDPI score of <85%. Therefore, you may be offered 2 >85% kidneys even if you did not consent to one >85% kidney. The two kidneys are placed on one side of the body. Your incision is the same as if you were getting one kidney.

Another situation when 2 kidneys are used is when we have a younger or very small donor. This is referred to as “en bloc” because the kidneys are put in together on one side of your body. Statistics have shown that 2 younger/smaller kidneys have similar outcomes of one adult sized kidney.

“Increased Risk” Donors
You may be offered an organ from a deceased donor that is thought to be at increased risk for spreading certain infections according to the Public Health Service 2013 Guidelines. Donors are considered “increased risk” because of high risk behaviors such as prostitution, intravenous drug use, or homosexuality. It is not the norm to accept organs from such donors unless we feel that the good far outweighs the would-be risk. Blood tests are done on potential donors to look for a virus such as HIV, Hepatitis B or Hepatitis C. However, no test is perfect. False negative results are possible, but very rare. Using data from organ, tissue, and blood donors we know there is a very small chance, 1 in 60,000 to 1 in 2,000,000, which a virus could be passed on. We believe that the risks of getting this type of kidney are very small or we would not suggest that you accept it. The transplant coordinator will inform you at the time that the kidney is offered if it is from an increased risk donor. You would then decide whether to accept this type of kidney. If you choose not to accept the kidney, you will not lose your place on the waiting list.

What will I be told about my donor?
Patient confidentiality laws limit how much we can tell you about your donor. We cannot tell you the donor’s age, gender, or personal or health history. Guidelines for allocating kidneys are set by the United Network for Organ Sharing (UNOS). The Organ Procurement Organization (OPO) informs the UW Transplant Program when a kidney is found and who is number one on the UNOS list to receive the kidney. The OPO has a thorough screening for all would-be donors to attempt to find any illness that could affect the transplant organ or the patient who receives it.
Screening for such an illness can be limited by time constraints between the time that the donor was injured and the organ obtained. We use our best knowledge and judgment to attempt to ensure every organ we transplant will function and will in no way harm the patient who receives it.

**How do I choose?**

There are risks and benefits for each of the above types of kidney transplants. Members of the transplant team can provide more information about this topic. They can help you choose the type of transplant that may be best for your own case.