

NewYork-Presbyterian
Weill Cornell Medical Center



Weill Cornell Medical College



Kidney and Pancreas Transplant Program

Information for Transplant Candidates: What You Need to Know about Kidney & Pancreas Transplantation



**AMAZING
THINGS
ARE
HAPPENING
HERE**



You have the power to *Donate Life*SM

Our Kidney & Pancreas Transplant Program

INNOVATIVE AND HIGHLY
EXPERIENCED TRANSPLANT TEAM

This booklet is designed to introduce you to the basic concepts of kidney and pancreas transplantation. If you or someone you love needs a kidney and/or pancreas transplant, we hope that you will find the booklet to be a useful resource.

NewYork-Presbyterian/Weill Cornell Transplant Program is one of the most experienced and advanced programs in the United States. On average, we perform over 200 living and deceased donor kidney transplants each year, with the **largest Living Donor Kidney Program** on the East Coast and the third largest in the country. Through **cutting-edge techniques** and treatment approaches, combined with the **safest, most personalized care**, we pride ourselves on enabling our patients **to resume healthy and active lives**.

With over 50 Years of experience, we have the longest history of kidney transplantation in New York, performing New York's first kidney transplant in 1963. Our kidney transplant outcomes are among the best in the New York region.

As a proud part of NewYork-Presbyterian, rated #1 hospital in the New York City area and #3 kidney disease center in the U.S. by U.S. News and World Report in 2014, we **maximize opportunities** for transplantation for all patients who come to us. Our leadership in innovative research, along with expertise in treating diverse patient populations and complex cases, allows us to **perform a high volume of transplants with excellent outcomes**.



Who Is Eligible for a Kidney Transplant?

A kidney transplant is recommended for people who have serious kidney dysfunction and will not be able to live without dialysis or a transplant. Some of the most common kidney diseases for which transplants are done include diabetes mellitus, high blood pressure, polycystic kidney disease, glomerular disease, congenital kidney disorders (inherited and usually present at birth), and systemic lupus erythematosus.

In general, **kidney transplant candidates must be healthy enough to undergo the kidney transplant surgery**. Patients may not be able to receive a transplant if they have severe heart or lung disease, recent cancer, or a significant history of non-adherence to medical care such as missing dialysis sessions or being non-compliant with medications. **Patients can be transplanted once on dialysis, or sometimes even before they begin dialysis** (called a “pre-emptive” transplant) as long as the **glomerular filtration rate** (“GFR” - a test of your kidney function) is less than 20 mL/minute.

What are the Different Types of Donors?

Living Donors (*kidney transplantation only*)

Family members or individuals who are unrelated (spouses, friends, co-workers, neighbors, etc.) can donate one of their kidneys to someone who is in need of a kidney transplant. This type of transplant is called a **living donor transplant**. Individuals who donate a kidney can lead healthy lives with the kidney that remains. **You must be at least 21 years old to be a living donor at NYP/Weill Cornell, but there is no upper age limit for being a donor.**

Here is a brief description of the types of living donors:

- **Living Related:** These are kidney transplants from a relative such as a parent, brother, sister, aunt, uncle, cousin or child.
- **Living Unrelated:** These are kidney transplants from people unrelated to the recipient such as husband, wife, partner, friend, co-worker, or neighbor.
- **Altruistic:** These donors want to donate a kidney but do not have a specific recipient in mind. There are several ways an altruistic donor can find someone to donate to, including joining registries of people who need a kidney but have an incompatible living donor.



Photo: Parents Brian and Evette each donated a kidney to twin sons Alan and Brian.

For more information, visit our Living Donor Kidney Center Online at:
www.WeillCornellTransplant.org/LivingDonor

Deceased Donors (*kidney and/or pancreas transplantation*)

Many organs that are transplanted come from deceased organ donors. **Deceased organ donors** are people who are brain dead and cannot survive their illness. Parents or spouses can also agree to donate a deceased relative's organs. Donors can come from any part of the United States. This type of transplant is called a deceased donor transplant. A person receiving a deceased donor kidney transplant usually receives only one kidney, but in rare situations, he/she may receive two kidneys from a deceased donor. **We take great care in selecting and matching the proper organ for each patient listed with us. This is how we ensure the best possible outcomes for our patients.** There are certain types of deceased donor organs you may consider accepting through a separate consent process. You can learn more about these, and other kinds of deceased donors, on Page 7 of this guide.



Photo: Wanda Harris received a kidney and pancreas transplant, thanks to the generosity of a deceased donor who gave the gift of life.

Starting in December 2014, deceased donor kidneys will be given a **Kidney Donor Profile Index (KDPI score)***. This is a score of 0-100%, based on how long the kidney is expected to last. The lower the score, the better the expected function. For example, donor kidneys with a KDPI of 20% are expected to work longer than 80% of other donor kidneys. The KDPI score will help to ensure the best possible success and long-term function of the donated kidney.

***You can find out more about kidney transplant distribution and KDPI scores on Pages 12-13 of this guide.**

Kidney Transplant Outcomes

The NewYork-Presbyterian/Weill Cornell Kidney Transplant Program has:

- Excellent patient survival and organ survival rates
- National Leadership in Living Donor Transplant Volumes and Kidney Paired Exchange
- Innovative non-invasive testing methods for kidney rejection and a dedicated aftercare team of experts to help transplant patients live the best quality of life possible.



The Scientific Registry of Transplant Recipients (SRTR) calculates this data by comparing similar patient populations and experiences at centers across the country. Notably, **our excellent outcomes** have occurred in the setting of **high transplant volumes in a diverse and often complicated patient population**. We are incredibly proud of our program's record of success and believe these results are a **direct result of our dedication to providing the best patient care possible**.

Please refer to our data insert for more detailed information about our excellent outcomes.

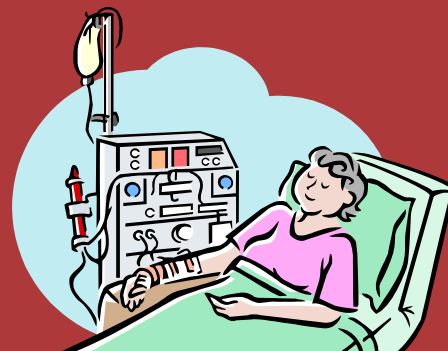
The Importance of Early Referral for Transplant

Getting a transplant evaluation in the early stages of kidney disease will improve your chances of long-term survival.



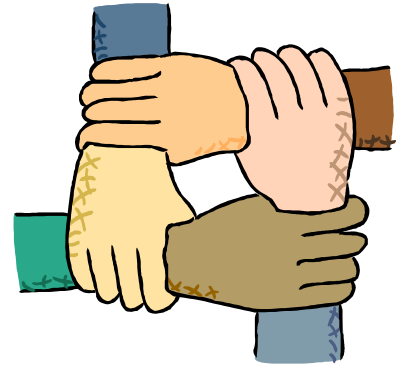
Patients who are not yet on dialysis but meet the medical definition of kidney failure (a creatinine clearance or "GFR" at or below 20 ml/minute) can grow their waiting time once they have been added to the transplant waiting list. Therefore, early referral is very important.

If you began dialysis before you were listed for a transplant, your waiting time will be calculated from your first dialysis date.



What is Compatibility?

When coming forward for transplant, you may hear the term “**compatibility**” used quite often. This term simply means that we will be **determining if you and a potential donor are a good match**. Several tests, described below, will be performed to assess your compatibility with your potential donor.



Blood Type Compatibility

When looking at blood type compatibility, we use the same rules that are used for blood transfusion compatibility.

A person with this blood type:		A donor with this blood type:
A	Can receive a kidney from	A, O
B		B, O
AB		A, B, AB, O
O		O

Antigen Matching

Each person has unique markers on the cells in their body that help the immune system know when a foreign cell enters the body (for example, through a blood transfusion or transplant). **There are 6 of these unique markers (also called antigens) that we try to match in transplantation.** These antigens are inherited from your parents. For parent-to-child or child-to-parent transplant, there is always a 3 out of 6 match. For siblings, that match is 0, 3, or 6 out of 6 matches.

Although matching can be important (for example, a 6 out of 6 match is known to be superior to other matches for kidney transplantation), it is not critical to the success of transplantation. In fact, many transplants that we perform have a 0 out of 6 match, and the recipients do well. **Therefore, when you receive your match results, remember that the match is not a critical factor in determining your compatibility.**

Crossmatch Compatibility

During the **crossmatch, your blood is mixed with the blood of your potential donor to determine if you are compatible.** Some people who need a transplant will react against their donor. This reaction occurs because the person needing the kidney has developed antibodies, which are proteins made by the immune system when the body is exposed to foreign antigens (described above) through blood transfusion, prior transplant, and/or pregnancy.

If your potential donor has antigens that match some of the antigens that you have antibodies against, this can cause a reaction (also called a “positive crossmatch”). If the crossmatch is positive, we will look at how strong the reaction is. **Remember that just because there is a positive crossmatch does not mean that you will no longer be able to have a transplant. There may be other options available.**



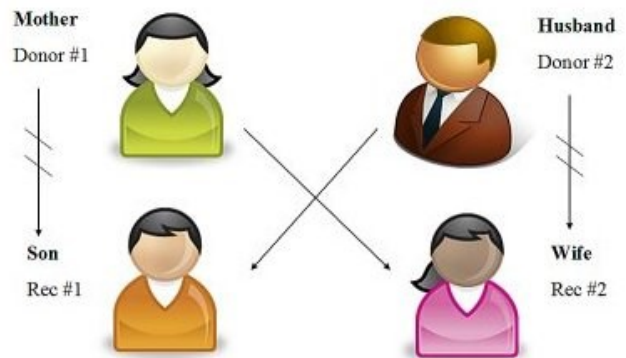
What Are the Options When a Kidney Transplant Candidate and their Potential Living Donor Are Not Compatible?

The need for transplantable organs is critical. Over 550,000 people in the U.S. have end-stage kidney disease requiring dialysis and/or transplant. However, the number of deceased donors available to provide organs for transplant is not growing at the same rate. **The best way to increase the number of organ donors is through living donation. If you have a willing but incompatible donor, it is important to remember that there are other options, which are briefly outlined below.**



Kidney Paired Donation:

Approximately **one-third of patients** that need a kidney transplant who come forward **with potential living donors will be incompatible with their donor(s)**. This amounts to a large number of people who need a kidney and have a willing donor whose kidney doesn't "match" them. One way to help solve this problem is to enter the incompatible donor and recipient into a **larger pool of other incompatible donor and recipient pairs**.



This “**Kidney Paired Donation (KPD)**” allows you and your donor to be listed in a national database that gives both of you the ability to be matched with other donors and recipients who, like you, are in need of a compatible match. They may be located in different parts of the country. Using this database, the donor surgery will only be performed when a suitable match has also been found and scheduled for the recipient.

Our transplant team is one of the most experienced in the U.S. in working with living donor kidney transplant chains. By working with pools like the National Kidney Registry, we have been able to transplant over 75% of our incompatible donor/recipient pairs.



One benefit is that the recipient avoids the additional therapy needed for positive crossmatch or ABO incompatible transplants, which is described below. In addition, compatible pairs may also choose to participate in KPD in order to find a better genetic or age match for the recipient, or to avoid antibodies that may be harmful to the kidney in the long-term. **This matching process has greatly increased the ability of patient with willing but incompatible donors to receive a transplant.**

Photo: When he found out he was an incompatible donor for his mother, Corey donated a kidney through the Kidney Paired Donation Program, enabling her to receive a kidney in return, as part of a chain.

What Are the Options When a Donor and Recipient Are Not Compatible? Continued.

Transplanting Patients Who Have a Positive Crossmatch with Their Donor:

As mentioned earlier, some patients have developed antibodies which cause them to have a reaction against their donor. In some cases, we can reduce the antibodies and improve the crossmatch results by treating the patient who needs the kidney with medications and/or treatments that can decrease antibody levels. If antibody levels are sufficiently reduced and the crossmatch results improve, the transplant may be able to go forward.

Blood Type Incompatible Transplants:

For certain combinations of blood types, the incompatibility can be reduced by treating the person who needs the transplant with a treatment similar to what is described above for positive cross match transplants, and the transplant may be able to go forward.

Transplant from a Deceased Donor:

Even if a patient needing a transplant has potential living donors, all patients are placed on the transplant waiting list for a deceased donor kidney (transplant from someone who has died and donated their organs) once they are determined to be eligible for a kidney transplant. That way, the patient can begin to accumulate waiting time in case the living donor(s) is incompatible and the options listed above are not feasible.



Here is a brief description of other types of deceased donors:

- **CDC High Risk Donor:** CDC High Risk Donors are deceased donors who require extra testing because they have risk factors for infections due to past social behaviors. Because these donors receive many extra tests, the risk that recipients would receive an organ with an infection such as HIV, Hepatitis C, and/or Hepatitis B is extremely small (less than 0.05%). The potential donor may be in this category due to a history of high-risk sexual activity, IV drug abuse, from being in jail, or due to certain medical conditions. There is a less than 0.05% risk that the donor developed the infection too recently to be detected by standard tests, or that there is a false-negative result. Patients need to sign a separate consent to receive a kidney from this type of donor.
- **Hepatitis C Positive Donor:** Kidney transplant candidates with hepatitis C infection may sign up to receive a kidney from a donor who also had hepatitis C. Only patients who have actively replicating hepatitis C virus would be considered for this type of transplant.
- **Pediatric Donor:** Some deceased donor transplants come from children who passed away. In kidney transplantation, most pediatric kidneys are transplanted separately, although in some cases, both kidneys may be given to one recipient. Although these kidneys are small at the time of transplant, they grow over time and function very well in an adult.



Photo: Glenn's kidney transplant enables him to live a more active life, free from dialysis.

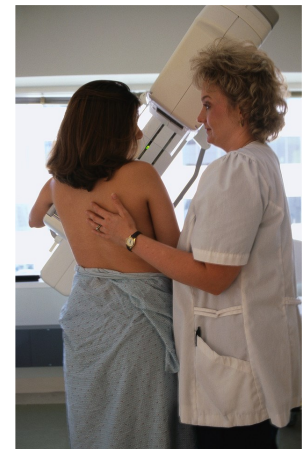
How Do I Get Evaluated for Kidney Transplant?



If you would like to be evaluated for a kidney or pancreas transplant, please call our pre-transplant office at (212) 746-3099. You will be transferred to a Transplant Assistant, who will go over a brief telephone screening questionnaire, will schedule you for a pre-transplant evaluation appointment, and will send you some paperwork that you will need to bring to your evaluation appointment. This paperwork includes an appointment confirmation letter, demographic (face sheet) and insurance questionnaires for you to review prior to the visit, and a list of test results that you should bring with you to the appointment. If you have **any potential living donors**, please have them **contact our Living Donor Team at (212) 746-3922 BEFORE your initial appointment.**

If you have had any of the following medical tests performed in the past year, you should bring a copy of the results with you to the evaluation appointment. This will help to speed-up your evaluation time.

- Electrocardiogram (EKG) and any other tests you may have had on your heart (*such as echocardiogram, stress test*)
- Chest x-ray
- Pap smear (*women*)
- Mammogram (*women age 40 or over or strong family history of breast cancer*)
- Prostate specific antigen (PSA) (*men age 45 or over*)
- Colonoscopy (*all patients age 50 or over*)
- List of all of your physicians and their telephone numbers



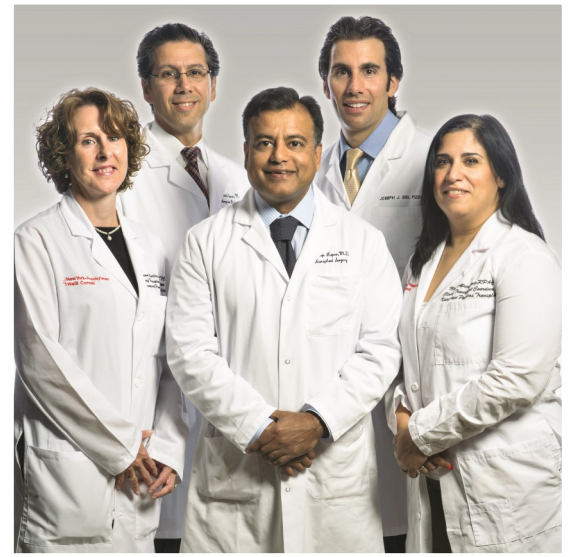
NYP/Weill Cornell Starr 8 Transplant Outpatient Clinic

Pre-Transplant Evaluation Appointment



We strongly encourage you to bring a friend or relative with you to your appointment to help you remember the information you will receive.

- Usually 5 to 6 hours long, including:
 - Registration
 - Individual meetings with:
 - Kidney doctor and transplant surgeon
 - Social worker
 - Transplant coordinator
 - Financial coordinator
 - Dietician, if needed



NYP/Weill Cornell Kidney donor and recipient teams for our living donor kidney program.

- Testing including:
 - Blood draw for laboratory and compatibility tests, including routine hematology and biochemical tests, tissue typing, blood type test, antibody profile, viral studies (HIV, Hepatitis B & C)
 - Electrocardiogram
 - Chest x-ray
- Scheduling of other appointments and consultations needed to complete the evaluation process
 - Abdominal ultrasound or CT scan



Additional Testing

Based on your medical history and family history, you may require other testing in addition to those tests listed above. Examples may include:

- Cardiology (if you have symptoms of or known heart disease)
- Hepatology (if you have symptoms of or known liver disease)
- Hematology (if you have had problems with your blood such as clotting or bleeding)
- Vascular (if you have known vascular disease or have had a stroke)
- Pulmonary (if you have symptoms of or known lung disease)
- Psychiatric (if you have a diagnosed psychiatric condition, substance abuse, or non-adherence)

What Happens When My Evaluation is Complete?



Dr. Sandip Kapur meets with our 4,000th kidney transplant recipient.

Once you successfully complete all of the required testing to see if you can receive a kidney or pancreas transplant, the Weill Cornell Transplant Team meets to discuss your case, and determines whether or not you are a suitable candidate for a transplant.

If it is determined that you are a good candidate, you will be added to the national transplant waiting list, which is maintained by the United Network for Organ Sharing (UNOS). Even if you have a potential living donor, you will still be placed on the transplant waiting list. **You will receive a letter in the mail letting you know your status and outlining your responsibilities.**

Your Responsibilities

While you are waiting for your transplant, it is **your responsibility** to keep us up-to-date about your condition, contact information, etc.

Monthly

Every month, **patients on the transplant waiting list are required to send in a blood sample** that is used by our tissue-typing lab in the event that a potential donor comes up for you. For most patients on the kidney transplant waiting list, this blood sample can be sent by your dialysis unit. However, for patients not on dialysis, other arrangements will need to be made to ensure that we receive the monthly blood sample. **Ultimately, it is your responsibility to ensure that this is done.**



Periodically

Your Transplant Coordinator is your primary contact person while you are awaiting your transplant. **It is your responsibility to keep your Transplant Coordinator up-to-date about the following:**

- **Contact information:**
 - Any changes to your address, phone number, etc. should be immediately reported to your Transplant Coordinator so that we can find you when an organ becomes available
 - Notify your coordinator if you are on vacation, out of the country, etc.
 - Changes to your dialysis unit or physician should also be reported to us
- **Medical Condition**
 - Please report any new medical conditions (such as heart attack, infection) to your Transplant Coordinator
 - Report any hospitalizations to us and be prepared to send us copies of paperwork related to the hospitalization
- **Insurance**
 - Please notify us of **any change to your insurance** so we can make sure your coverage for your transplant and medications is adequate under your new policy



Patient Resources

Our website www.WeillCornellTransplant.org offers many additional resources for patients and potential living donors.

Kidney Champion Program

For people who need a kidney transplant, asking friends, co-workers, community members, and even family to consider donating a kidney can be a challenging task.

We encourage patients to identify a "Kidney Champion"—someone who is willing to ask around and educate people about kidney disease, and the options available to patients with the disease. Kidney champions can provide important information so that the patient does not have to feel awkward speaking to others about their health condition, including their treatment options—dialysis or transplantation.

Find tools and templates to help educate others about living donation. For more information, visit www.WeillCornellTransplant.org/KidneyChampion



Nutrition for Transplant Patients

Nutrition plays an important role both before and after transplant. A registered dietitian works closely with the transplant team to help optimize your health before and after transplant. Prior to transplant you may require a special diet to compensate for kidney disease or dialysis, for better blood sugar control, or to help you lose weight. After transplant appropriate nutrition is essential to promote healing and recovery, as well as to avoid any harmful interactions with transplant medications. Here you can find resources and guidelines for a pre- and post- transplant diet. Visit our "Patient Resources" section for more information.



Newsletter

Sign up for our newsletter at www.WeillCornellTransplant.org/Newsletter (available through email and mail delivery) to learn about the latest events, research, and educational happenings at NewYork-Presbyterian/Weill Cornell.

Social Media

Follow us on Facebook and Twitter for timely news updates and stories:

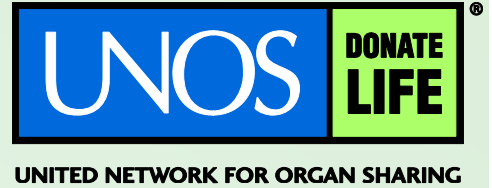
 [Facebook.com/CornellTransplant](https://www.facebook.com/CornellTransplant)

 [Twitter.com/CornellKidney](https://twitter.com/CornellKidney)



Receiving an Organ on the Transplant Waiting List and the Kidney Allocation System

The **United Network for Organ Sharing (UNOS)** is responsible for matching organs from deceased donors with people on the transplant waiting list in the United States. UNOS receives data from medical centers throughout the country regarding adults and children who need organ transplants. The transplant team that currently follows you is responsible for sending the data to UNOS, and updating them as your condition changes.



UNOS has introduced a new computer-based matching system to help people have the best success and long-term function with their transplanted kidney. Groups of people who are hard to match with kidneys, based on their blood type or immune sensitivity, will also get additional priority.

As described on Page 3, **every deceased donor kidney** offered for a transplant has a **Kidney Donor Profile Index (KDPI) score**. This is a score that ranges from 0 to 100%, based on how long the kidney is expected to function. The lower the score, the better the expected kidney function. A KDPI score of 20% means that the kidney is likely to function longer than 80% of other available kidneys.

What goes into a KDPI score?

The KDPI is calculated based on facts about the donor that affect how long the kidney is likely to function. These factors include:

- Age
- Height
- Weight
- Ethnicity
- Serum creatinine (a measure of kidney function)
- Stroke as cause of death
- History of high blood pressure
- History of diabetes
- Exposure to hepatitis C virus
- Whether the donor died due to loss of heart function or loss of brain function.



Each **kidney transplant candidate** will get an individual **Estimated Post-Transplant Survival (EPTS) score**. This score also ranges from 0 to 100 percent, based on how long the candidate will need a functioning kidney transplant compared to other candidates. A person with an EPTS score of 20% is likely to need a kidney longer than 80 percent of other candidates.

What goes into an EPTS score?

The EPTS is calculated based on facts about the candidate that affect how long you are likely to need a kidney. These factors include:

- Age
- Length of time spent on dialysis
- Having received a previous transplant (of any organ)
- Current diagnosis of diabetes

- **KPDI of 20% or less:** These kidneys will first be offered to patients with an Estimated Post Transplant Survival (EPTS) score of 20% or less—those who are likely to need a transplant the longest. If a kidney with a KPDI of 20% or less is not accepted by any of these patients, it will be offered to any other person who would match, regardless of their EPTS score.
- **KPDI of 21-84%:** These kidneys will be offered to the majority of transplant candidates—those who have an EPTS greater than 20%.
- **KPDI of 85%:** These kidneys may take longer to work and may not last as long as kidneys with a lower KPDI, but allow patients to be transplanted sooner. Our center is very experienced in evaluating whether these donors would be suitable for our patients. Patients will need to provide a separate consent to receive a kidney from this type of donor.

How Am I Notified When an Organ Becomes Available?



When a potential transplant becomes available for you, **you will first receive a call from a Transplant Coordinator**, who will make sure that you are available and well enough to undergo transplant. This is why **it is critical to keep your Transplant Coordinator up-to-date about any changes to your contact information and medical condition, as described on page 10**. You will be instructed when to come to the hospital so that you can be prepared for the transplant.

Even if you are called into the hospital, it does not guarantee that you will receive a transplant; sometimes the organ may go to someone higher on the list at another center. In addition, there may be a reaction when the donor's blood is mixed with your blood (called a positive crossmatch), which may indicate that you should not receive that organ due to high risk of rejection. Or, a biopsy of the donor organ could show that the organ is not suitable for transplantation. In these cases, you will be sent home once these tests results are received.

What Should I Expect During the Surgery and for My Recovery?

If all goes well and you are designated to receive the transplant, the surgery generally takes about 2 to 4 hours. It is performed under general anesthesia, and you will spend several hours in the recovery room after the surgery. **As you can see from the diagram below, the transplant kidney does not replace your old kidneys.** The transplanted kidney is placed through a 5-6 inch incision in the lower abdomen on the front side of the body. A diagram of pancreas transplantation can be seen on page 14. **If you are doing well, you will be transferred to the Transplant Unit within 12 hours of your kidney transplant surgery, and will likely be in the hospital for 4 to 6 days.** For pancreas transplant recipients, you will spend a couple of days in the surgical intensive care unit before being transferred to the Transplant Unit and will likely be in the hospital a total of 6 to 8



Photo: Josephine (right) received a kidney from her sister, Fran (left).

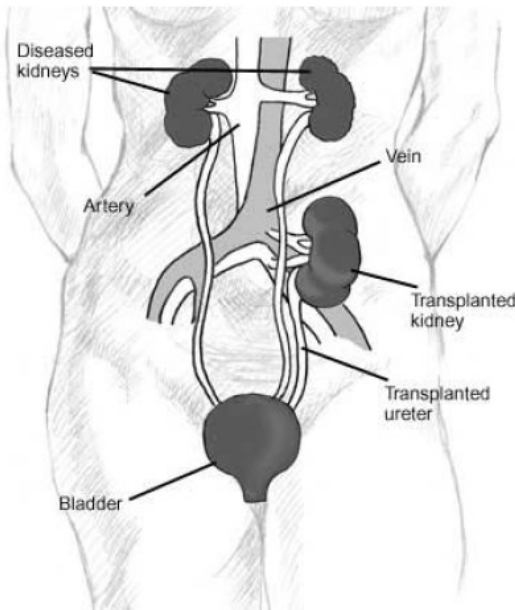


Image courtesy of: National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.

days. Once on the transplant unit, you will begin your recovery period that includes having your diet advanced, getting out of bed to walk, and participating in numerous educational sessions with nurses, pharmacists, nutritionists, social workers, and others.

After you are discharged from the hospital, you should expect to come back to the transplant clinic 2 to 3 times a week for the first month, then weekly for the next two months, then less frequently, depending on how you are doing. You will also be able to return to the kidney doctor who was caring for you before our transplant. We will work closely with your doctor to manage your transplant, and you will continue to visit our Transplant Center periodically to ensure that your transplant is functioning well, according to the schedule below. However, more frequent visits to the transplant center may be needed depending on your post-transplant course or if you choose to participate in a research study. **Transplant recipients can generally return to work about 3 months after their transplant surgery.**

Post-Transplant Follow-Up Visit Schedule

	1 st Month	Months 2 and 3	Months 4 to 6	Months 6 to 12	Years 1 to 3	After Year 3
Our Transplant Center	Twice a week	Once a week	Once a month	Every 3 months	Every 3 months	Every 6 months
Your Doctor	-	-	Every other week	Once a month	Every 3 months	Every 6 months

What are the Risks Associated with Transplantation?

If you are considering transplantation, it is very important that you understand the risks associated with receiving a transplant. **Please do not hesitate to ask questions if you do not understand some of the risks or if you would like more information.**

Transplant Surgery & Recovery:

- The risk of this surgery is similar to other operations that require you to undergo general anesthesia:
 - You may experience one or more of the following associated with your surgery: pain, bleeding, reaction to anesthesia, and infection
- If you receive a deceased donor kidney transplant, there is about a 30 to 40% chance that the kidney will not work right away and you may require dialysis for a brief period of time until the kidney fully “wakes up” and begins to function effectively. In rare cases, the kidney may never wake up and you may require another transplant.



After Transplant:

- Emotions may be strong after your transplant, including anxiousness and depression
- Transplanted organs do not last forever, so there is a good chance that you may require more than one transplant over the course of your lifetime, particularly if you are young at the time of your first transplant.
- Medications given to prevent rejection of the transplant can cause both short- and long-term side effects. We will closely monitor you for side effects for as long as your transplant continues to function and beyond.
- Financial issues may develop after transplantation
 - ***If you experience any change in your insurance coverage or job status after transplant, your medical care may be compromised.*** Therefore, it is critical to discuss all potential issues with your social worker.
 - You may face extra expenses related to child care needs, transportation, and housing, and may have lost wages during your recovery period

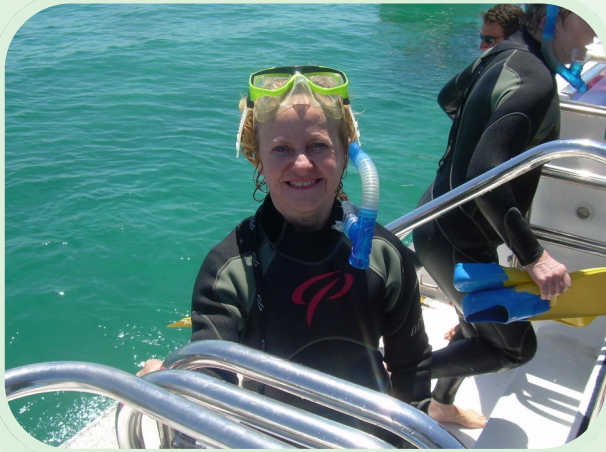
What are the Benefits of Having a Transplant?

Transplantation offers patients the opportunity to lead a more normal life with improved quality, due to:

- Freedom from dialysis (*kidney transplantation*)
- Freedom from insulin injections (*pancreas transplantation*)
- A less restricted diet
- Better quality of life
- An improved sense of well-being



Photo: Damien received a kidney from his mother, Susan.



Transplant recipients often feel better very quickly after their transplant. In addition, kidney transplantation leads to better patient survival compared to remaining on dialysis.

Photo: Dorothy, a kidney transplant recipient, pursues her love of travel.

Becoming Familiar with Transplant Medications

As a transplant candidate, it is important for you to begin to **become familiar with the transplant medications that you will take once you receive your transplant.** The number of medications that you take right after the transplant may seem overwhelming at first, but keep in mind that the number of medications will decrease over time, and **by one year after your transplant, you will be on significantly fewer medications.**



Most patients will go home after transplant taking medications only twice a day, approximately 12 hours apart. We do our best to keep your medication regimen as simple and straightforward as possible. We will provide you with a list of your medications, complete with pictures and a chart on how many pills to take at what time. We will also fill your pill box for you before you leave the hospital in order to give you a smooth transition from the hospital to your home.

Becoming Familiar with Transplant Medications, Continued.

Anti-rejection medications (also called immunosuppressants)

- Tacrolimus (Prograf®)
- Mycophenolate mofetil (CellCept®) or Mycophenolic acid (Myfortic®)

At the time of transplant, you will receive several medications through an IV (through a tube that goes into your bloodstream) while you are in the hospital. These medications are called “induction” immunosuppression because they provide a higher level of protection against rejection surrounding the time of transplant.

Our immunosuppression philosophy is a “Less is More” approach, where we minimize the amount of anti-rejection drugs as much as possible, tailored to the needs of the individual patient.

You will also start taking oral medications to suppress your immune system while you are in the hospital. These medications are also called “**maintenance**” immunosuppressants because you will continue to take them for as long as your transplant continues to function. Most patients will take and go home on the two maintenance immunosuppressants listed at the top of this page.



Some patients will also need to go home on prednisone, particularly those kidney recipients who are already taking prednisone or those who have a higher risk of transplant rejection, and all pancreas transplant recipients.

Medications to Prevent Infection

Because you will be taking medications that suppress your immune system, you may be more susceptible to infections after your transplant. In order to protect you from infections that are well known to occur after transplant, we give you several medications that prevent infection, including

- **Sulfamethoxazole/Trimethoprim (Bactrim)** to protect from certain bacterial infections. Taken for one year after transplant.
- **Valganciclovir (Valcyte)** to protect you from certain viral infections. Taken for 6 months after transplant.
- **Clotrimazole (Mycelex)** to protect you from certain fungal infections. Taken for 1 to 3 months after transplant.

Other Medications

All patients will be on a few other medications: one to prevent constipation, and a blood pressure medication that we feel is beneficial to kidney function (as long as your blood pressure isn't too low). We will also let you know which, if any, of the medications you were taking before transplant will need to be continued. These may include blood pressure medications, heart medications, cholesterol-lowering medications, and medications to treat diabetes.



Photo: Evan is a proud kidney transplant recipient.

Pancreas Transplantation

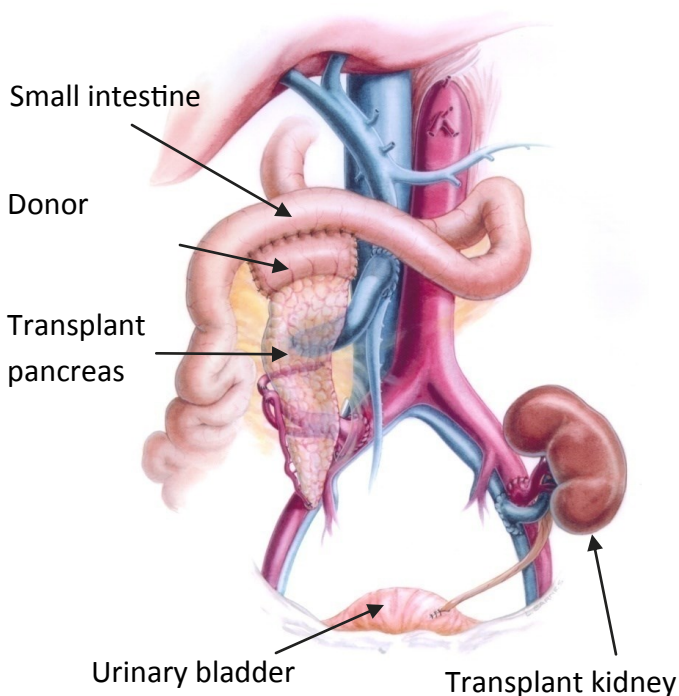
Pancreas transplantation is an option for a select number of patients with Type 1 diabetes mellitus. Type 1 diabetes generally occurs in children or young adults, and is also known as “juvenile diabetes”. The pancreas is an organ that produces enzymes that help break down the food we eat. The pancreas also produces the hormone insulin, which helps sugar get into your cells to give them energy. Type 1 diabetes is an autoimmune disease that causes the patient’s body to attack and destroy the insulin-producing cells within the pancreas.

Because Type 1 diabetes destroys the insulin-producing cells, patients with the disease must inject insulin in order to survive. Otherwise, blood sugar levels in the bloodstream rise to dangerous levels, and the cells cannot get the energy that they need to function. Despite the availability of insulin, type 1 diabetes can be difficult to manage since keeping blood sugar levels within the normal range is challenging. Most patients have wide swings in blood sugar, and experience symptoms associated with both low blood sugar (such as shaking, sweating, hunger, irritability) and high blood sugar (such as increased thirst, increased urination, tiredness). Over time, high blood sugar levels in the blood have bad effects on the kidneys, eye, nerves, and blood vessels, and can lead to kidney failure, blindness, nerve damage, amputations, and heart disease.

Patients with type 1 diabetes may be eligible for a pancreas transplant if they meet at least one of the following criteria:

- Kidney failure requiring dialysis and transplant
- Prior kidney transplant that is functioning well
- Difficulty managing blood sugar levels despite best efforts
- Hypoglycemic unawareness (no longer have typical symptoms of low blood sugar)

Based on the criteria above, there are several types of pancreas transplants that a patient may be eligible for:



Simultaneous Pancreas Kidney Transplant is an option for patients who need a kidney transplant but do not have a living donor. Patients are placed on the deceased donor waiting list for a donor that can provide both organs.

Pancreas after Kidney Transplantation is for patients who have already received a kidney transplant & qualify for a pancreas transplant due to inability to control their diabetes despite aggressive medical care. These patients often experience hypoglycemic unawareness, a dangerous complication of diabetes.

Solitary Pancreas Transplantation is for patients without kidney disease who have life-threatening complications of diabetes, such as hypoglycemic unawareness.

What are the Benefits of Pancreas Transplantation?

Pancreas transplantation is not a “cure” for diabetes, since the patient must take medications to prevent the immune system from rejecting the pancreas however, benefits of pancreas transplant include:

- Normalization of blood sugar and hemoglobin A1c levels
- Restore classic symptoms of low blood sugar
- Prevent development and/or worsening of the complications of diabetes that occur in the eyes, nerves, heart, kidney, and blood vessels
- Improved patient survival for those patients needing a kidney transplant
- Protect the transplanted kidney from complications of diabetes



The following websites contain additional information that may be of interest to patients wishing to learn more about kidney and/or pancreas transplantation:

Transplant Living Website	www.transplantliving.org
National Kidney Foundation	www.kidney.org/transplantation
New York Organ Donor Network	www.savelivesny.org
Patient Educational Brochures	www.unos.org/donation/index.php?topic=patient_brochures
Transplant Fact Sheets	www.unos.org/donation/index.php?topic=fact_sheets
Transplant Outcomes	www.srtr.org
Pancreas Transplant	www.nlm.nih.gov/medlineplus/pancreas transplantation.html

Find more resources and information in the “Patient Resources” section of our website at www.WeillCornellTransplant.org.

What Can the Weill Cornell Transplant Program Offer You?

An Experienced, High-Volume Kidney and Pancreas Transplant Program

A Dedicated Team of Transplant Professionals

Experience with a Diverse Patient Population

We transplant people of all ages, races, and with medical conditions such as heart disease, HIV, and Hepatitis C

Personalization of Immune Therapy

Thanks to the increasing number of anti-rejection medications available, we are able to personalize the regimens of our patients

Long History Utilizing Cutting Edge Immune Therapy for Our Patients

Steroid free maintenance regimen in over 75% of our patients

New and Exciting Basic Science Research that Can be Applied at Your Bedside

Non-invasive monitoring for rejection using urine tests

Among the Largest National Experience with Living Donor Kidney Transplant Chains

Enabling living donor kidney transplants for people who might otherwise wait a long time for a transplant from a deceased donor

Largest National Experience with LaparoEndoscopic Single Site Surgery for Living Kidney Donors

Surgery for Living Kidney Donors Now Uses Just One Incision

Largest Living Donor Kidney Program on the East Coast and Third Largest in the U.S.

Excellent Patient Outcomes and Transplant Longevity

NewYork-Presbyterian is the # 1 hospital in the New York metropolitan area, # 6 hospital in the U.S., and the # 3 kidney disease center in the U.S., according to the U.S. News & World Report 2014 “America’s Best Hospitals Survey”



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