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## Seniors Can Benefit from Expanded Criteria Donor Kidney Transplant

Initial Experience at California Pacific is Very Favorable

*by William Bry, M.D. and Laura Miyashita*

**A**s kidney transplantation has grown safer with advances in medications and surgical techniques, an increasing number of dialysis patients over age 60 are pursuing a kidney transplant. In fact, California Pacific's Kidney Transplant Team recently performed a kidney transplant for an 81-year old man from the Central Valley. Unfortunately, with the wait for a deceased donor kidney now close to five years, a senior who is just getting on the waiting list may no longer be a transplant candidate in this timeframe if his or her medical condition deteriorates.

In an attempt to help these patients on the waiting list, a new program initiated at California Pacific in late 2002 helps allocate kidneys from older donors to older recipients. This national initiative is called the Expanded Criteria Donor (ECD) program.



### ***What is an Expanded Criteria Donor Kidney?***

Expanded criteria donor kidneys are defined as:

- Kidneys removed from a donor over age 50 with a history of high blood pressure, stroke or elevated creatinine (the blood test for kidney function); or
- Kidneys from a deceased donor over age 60.

*SENIORS, continued on page 7*

# A Designated Donation Gives Siblings New Lease on Life

Brother and Sister Undergo Kidney Transplants on the Same Day

by *Laura Miyashita*

**O**n June 16, 2004, the White family of Fresno, Calif. felt that they were the lucky recipients of a great miracle. This family, which has been affected by the kidney disease focal and segmental glomerulosclerosis, had two siblings on the transplant waiting list—both for several years. JePahl White, age 29, and his sister were undergoing routine dialysis treatments, each hoping that a kidney would become available first for their sibling, and next for them.

plight. One of these families unfortunately had a tragedy occur and, even in the midst of their struggles, thought of the Whites. They specified to the California Transplant Donor Network that their loved one's kidneys go to the White family.

As soon as JePahl was notified about being transplanted, his family came to San Francisco for surgery. "I felt that I could have run there," says JePahl. "I was packed up and out the door in less than 30 minutes!"

***“While I was thankful for dialysis, the opportunity that a kidney transplant brings is so joyous.”***

—JEPAHL WHITE

So when JePahl came back from fishing on June 15th and learned that there was a kidney for his sister, he was joyful. This joy compounded when, soon after, JePahl found out that there was also a kidney for him. "Getting that phone call was such a surreal feeling," says JePahl. "It was so perfect how it worked out; my gut feeling and faith told me it was God's plan."

Both JePahl and his sister were the recipients of a designated donation. With a designated donation (also called directed donation), an individual or one's family can specify that organs go to certain individuals in the event of one's death. Because JePahl's parents had been active in donor awareness events within Fresno's African American community, numerous families had learned of their

JePahl had been waiting eight years for this opportunity, undergoing open heart surgery and dialysis treatments during the course of his wait. For his sister, this was her second kidney transplant. In what felt like another miracle, she received her first kidney transplant at age 14—on the same day that her father was transplanted.

"While I was thankful for dialysis, the opportunity that a kidney transplant brings is so joyous," says JePahl. He recounts that his experience at California Pacific was like "being part of a well-oiled machine." Explains JePahl, "The technology is just fascinating. The nurses are smiling doing their job, the anesthesiologist is doing his part, and the surgeons were fantastic."



*JePahl White*

Immediately after his transplant, JePahl says he knew something was different. "I could tell instantly that my kidney was working and then wanted to make sure my sister was doing alright," he says.

Both JePahl and his sister feel that their transplant was a true blessing. They are thankful for the family that gave them the gift of life. As they explain, "During the horror that happened in this other family, it's amazing that they could have thought about us. For that, we will be forever grateful." 🍷

# Tests and Transplantation

Why and What Lab Tests Are Needed—Both Before and After Transplant

by Steven Katznelson, M.D.

**T**ransplantation and blood tests go hand-in-hand (unfortunately). Tests before transplant help provide the transplant team with information to help identify a compatible donor for each recipient. After transplant, blood tests provide important data about the kidney's function, medication side effects and overall patient health.

## Pre-Transplant Testing

When a patient is placed on the transplant waiting list or evaluated for a living donor transplant, a number of routine tests are performed. These include:

**ABO Blood Typing**—A patient's blood type is a critical piece of information for transplant. In general, all patients waiting for a deceased donor transplant will receive a kidney from a donor of the same blood type. Patients interested in a living donor transplant need to find a donor with a compatible blood type (*see table below*). New bylaws of the United Network for Organ Sharing (UNOS) demand that ABO blood types be drawn twice for transplant listing.

### Blood Type Compatibility

Recipient	Compatible Living Donor
A	O, A
B	O, B
AB	O, A, B, AB
O	O

**Tissue Typing**—This test looks for the six histocompatibility antigens that will define the amount of “matching”

between a recipient and donor. Although this test (and ABO Blood Typing) is necessary for placement on the transplant waiting list, its importance has diminished. This is because we now know that even transplants with poor matching (say, only one of six antigens) can have excellent outcomes, thanks to new advances in immunosuppressive medications.

**Serologies**—These tests look for a patient's past exposure to infections such as hepatitis, HIV, other viruses and syphilis.

**Panel Reactive Antibodies (PRAs)**—Panel reactive antibodies show a patient's level of sensitization to donor antigens. Patients with high PRA levels tend to have more rejection episodes. In addition, it is more difficult to identify a compatible kidney for patients with a high PRA level. PRA tests are performed when a patient is put on the waiting list and every one to three months while waiting. Because of the information this test provides, it can be used to counsel patients regarding how long they may wait for a transplant. It also helps the transplant team choose the appropriate anti-rejection medications.

**Cross-match**—The last test performed just before transplant is the cross-match. This test establishes compatibility between a particular donor-recipient pair. A “negative” cross-match suggests that a donor and recipient are compatible and the transplant can proceed. The opposite is true for a “positive” cross-match.



## Post-Transplant Testing

Routine blood work is a regular part of a transplant recipient's lifestyle, although the frequency of testing decreases as time passes after transplant. Transplant patients visit a nearby lab where the following post-transplant tests are completed:

**Chemistry Panel**—Assesses kidney and liver function, and the body's salt balance (potassium, sodium, etc.). The most important kidney function test is the creatinine value. A patient's baseline creatinine value is usually established in the first weeks after a transplant (usually in the 1s or 2s). If a patient's creatinine becomes elevated more than 20% over baseline on more than two consecutive tests, further investigation is needed.

*TESTS, continued on page 5*

# How to Prepare for Your Kidney Transplant

by Pamela Rock, MSW and Rick Piguet, R.N.

**A**lthough you may not anticipate getting your kidney transplant for another year or two, there are steps you can take now to ensure the experience goes smoothly. Also, remember that there are sometimes 'perfect match' transplants which can occur anytime you are 'active' on the waiting list. So don't delay...follow these steps to get organized now!

**1. Keep us updated and get prepared:** Once a kidney becomes available for you, we contact you immediately to come to the hospital. Therefore, it is crucial that we always have your current contact information. To get prepared for transplant, you need to:

- Call your transplant coordinator with any changes in your address, phone number(s), local doctor, dialysis unit and insurance—whenever they occur. Call (415) 600-1000 or your coordinator's direct extension.
- Pack a bag for the hospital with toiletries, slippers, a change of clothes and current medications. You may also be asked to bring CAPD supplies if you perform peritoneal dialysis.
- Identify a support person and arrange your transportation plan to the hospital. Request a map to the hospital from your transplant coordinator if needed.
- Obtain a pager or cell phone if you'd like so we can easily reach you when a kidney becomes available. Notify us of this number.
- Remind your support person(s) that he/she will need some money for gas, tolls, parking, food and lodging while in San Francisco. You should also plan how you will get home after your hospital stay.
- If you have a co-payment for prescription drugs, bring a check or credit card information to the hospital so you can purchase the necessary anti-rejection medications prior to discharge.

**2. Expecting the Transplant Call:** Unfortunately, we cannot predict when a kidney or pancreas will become available, but we need to reach you quickly with news. You can help us by:

- Making sure your pager or cell phone are always on if you're using these methods for notification.
- Have your transportation provider 'on call' so you will both be ready to get to the hospital.



**3. Arriving at the Hospital:** It is helpful for you to identify a family member or friend who can help with the transition of kidney transplantation. The Kidney Team can include this support person in education sessions about your transplant medications and what to expect post-transplant. This individual can also help as you prepare for surgery.

- When you get to the hospital, the transplant recipient should come to the main hospital lobby (2333 Buchanan Street between Sacramento and Washington) and check in at admitting on the lobby level. If you arrive after hours, check in at the Emergency Room, located on the A Level.
- Paid parking is available in the garage at 2405 Clay Street, between Fillmore and Webster.

**4. Your Preoperative Evaluation:** The Kidney Team will do a final medical exam prior to transplant to make sure you are healthy enough to undergo surgery.

- After admission, you will most likely go to 6th floor Transplant Unit. This is where the Kidney Team will perform your pre-operative medical evaluation.
- The evaluation takes a few hours and includes a review of your medical history, a physical, lab work, chest x-ray, EKG and, if needed, dialysis.
- Once the Kidney Team has reviewed the evaluation results, patients are typically taken to the operating room.
- Rarely, your surgery may be canceled if a problem is found with the donor kidney or if there is a positive

*PREPARE, continued on page 5*

final cross-match. Although terribly disappointing, a better kidney is worth waiting for to avoid any serious transplant complications. The Kidney Team does its very best to avoid these situations, but occasionally they may occur.

**5. Your Kidney Transplant Surgery:** Kidney transplant surgery usually takes three to four hours.

- Patients receive a general anesthetic in the operating room and then undergo transplant surgery.
- While the patient is in surgery, family or friends can stay in the waiting room on the hospital's 3rd floor, in the lobby waiting area, or cafeteria.
- Following surgery, patients are moved to the Intensive Care Unit (ICU) on the 3rd floor for close monitoring. The anesthesia will wear off about four hours after transplant.
- Waiting family members can visit the patient as soon as he/she is taken to the ICU. The surgeon will notify you once this occurs.

**6. Giving Back:** Usually, patients find that it takes about two to three months to adjust to a kidney transplant and new medications. Your energy level will start to build and you will notice the impact of having a healthy, functioning kidney. As you embark on the next stage of your life, the Kidney Team advises:

- Think about plans for the future, including work and personal goals.
- Learn all that you can about your medications, exercise, diet and any post-transplant precautions.
- Write a thank you note to your donor's family. 📧

## New Clinic Sites in Sacramento Region

by Laura Miyashita

For patients in the Sacramento and Sierra area, California Pacific has new clinic locations to better serve you. Our new clinic locations are:

- Roseville—151 N. Sunrise, Suite 1201
- Truckee—10956 Donner Pass Road, Suite 310

At the Roseville site, our Kidney Team offers pre-transplant evaluations and education, as well as regular post-transplant follow-up care. Our team visits the Roseville site monthly. The Truckee office—which we visit every two or three months—is used mainly for pre-transplant evaluations and education, although some recently transplanted patients can be seen as needed. Transplant Nurse Coordinator Sharon Deane oversees these clinics and is available to speak to any patient with end-stage renal disease in the region who may be interested in pursuing a kidney transplant evaluation. To contact Sharon, call (916) 768-2795. 📞

### TESTS, continued from page 3

**Complete Blood Count (CBC)—**

This test assesses red blood cell, white blood cell and platelet counts. Low red blood cell counts indicate anemia. Low white blood cell counts may suggest a medication side effect or viral infection.

**Urinalysis—**A urinalysis helps identify urinary tract infections or transplant dysfunction.

**Cyclosporine (Gengraf, Neoral), Prograf (FK, tacrolimus) and sirolimus (rapamycin) Levels—**

Patients take these immunosuppressive medications post-transplant, and

the Kidney Team monitors the level of medication in one's body. Drug levels that are too low may lead to rejection. High drug levels may lead to side effects.

The frequency of these tests varies depending on the patient. The table below shows rough guidelines.

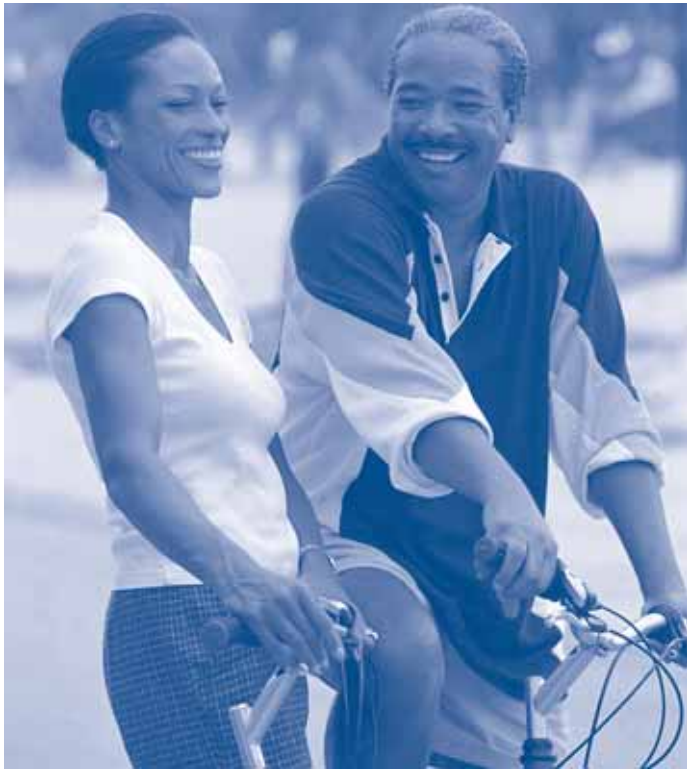
It is very important that each patient follows the specific lab test guidelines outlined by their transplant team. Based on one's overall health, some patients may need more frequent labs while others need less. 📧

Time After Transplant	Frequency of Lab Tests
0–6 weeks	2 times a week
6 weeks to 3–4 months	1 time a week
3–4 months to 6–8 months	Every other week
6–8 months to 1–2 years	1 time a month
after 1–2 years	Every 1–3 months

# Tips on Exercising After Transplant

Keeping Fit Improves Your Post-Transplant Health

by Steven Katznelson, M.D. and Laura Miyashita



**P**atients with chronic kidney disease who undergo transplantation usually experience vast improvements in their quality of life. Transplant recipients typically feel stronger and more energetic than when on dialysis. Many patients return to work, start traveling and/or begin having children after transplant recovery. Additionally, many patients whose activity had been limited before begin to exercise. Often, transplant recipients are squeamish to start “working out” for concerns that they may harm their kidneys. This article serves as a guide to getting back in shape after transplant.

## ***Walking is Critical After Transplant***

While in the hospital, our Kidney Team encourages transplant patients to get out of bed and walk as soon as their anesthesia wears off. “Walking is the best form of exercise after transplantation, as it helps reduce swelling and expedite the recovery process,” says Steven Katznelson, M.D., medical director of California Pacific’s Kidney Transplant Program. Around four to six weeks after surgery, other types of exercise can be added. It is best to start with low-impact exercises such as:

- riding an indoor exercise bicycle;
- taking a fast walk or slow jog on a treadmill.

## ***Most Sports Okay for Transplant Recipients***

After about six to eight weeks, assuming that the surgical wound has healed well, you can begin nearly any form of exercise. The general principle is to start slowly. If you used to jog five miles, start by jogging  $\frac{1}{2}$  mile first, then work your way up to your goal. If you used to lift 100 pounds at the gym, start with 20 pounds. Multiple repetitions of any exercise at a lower weight are better than trying to lift too much too soon.

Transplant recipients can engage in virtually any type of exercise or sport. Only those sports that regularly involve direct blows to the kidney are discouraged (for those of you interested in kick-boxing or rugby, we recommend you try biking or tennis!) Otherwise, almost anything goes. As you may know, Alonzo Mourning, a recently retired professional basketball star, received a kidney transplant and then went back to playing ball.

## ***Getting Motivated***

The most difficult part of exercising after transplant is getting started. Many patients are out of shape prior to transplant because of a number of factors:

1. Dialysis leaves you feeling weak;
2. Lack of muscle strength due to end-stage kidney disease;
3. Anemia;
4. Other concurrent health problems;
5. Difficulty in finding time to exercise because of time commitments at home, work and at dialysis.

California Pacific’s Kidney Team strongly encourages patients to exercise after transplant. Those who exercise tend to have a faster recovery and experience better weight control, sugar control (for diabetics), blood pressure and cholesterol control. All of these issues lead to better overall heart health and long-term transplant success.

Again, all types of exercise should be started slowly both with respect to time and level of exertion. Patients should push themselves to increase the amount of exercise they are getting. In the end, all patients should try to exercise at least 30 minutes per day, four days a week.

*EXERCISE, continued on page 7*

While a kidney transplant using an ECD kidney may help reduce one's waiting time, the drawback is that it may not last as long as one from an optimal, younger donor. For example, statistics from transplants performed in the 1990s suggest that the average duration of transplant kidney function from a younger donor is about 12 to 13 years, while that with an older, ECD kidney is about eight years.

At California Pacific, potential ECD recipients are defined as any patient over age 60 or patients over age 40 with a history of diabetes. These patient groups tend to benefit most from a shorter waiting time.

"Patients must weigh the decrease in success of an ECD kidney with the risk of remaining on dialysis while waiting for a perfect donor," says William Bry, M.D., surgical director of California Pacific's Kidney Transplant Program. Bry explains that, "Statistics strongly suggest that the risk of spending years on dialysis for an older patient is quite high, so the trade-off of receiving an ECD transplant earlier may be worth this risk." Another option for older patients is to consider a living donor kidney transplant if a relative or close friend is available and willing.

### ***ECD Transplants at California Pacific Show 95% Success Rate***

After transplanting 22 ECD kidneys, California Pacific has statistics to share with patients on the waiting list who are considering the ECD option. In Northern California in 2003, there were 60 deceased donor kidneys that met the ECD criteria. Of these, California Pacific Medical Center used 22 kidneys. Sixteen were used for a solitary kidney transplant and six for a dual kidney transplant (in which two kidneys from a marginal donor are used in one recipient.)

Based on one-year average follow up, 18 of 19 of the transplants are functioning and only one kidney has been lost. Overall, this reflects a 95% success rate for California Pacific's early experience with ECD kidney transplants.

According to Bry, "This success far exceeds our expectations, which were based on historical national data." He continues, "Although the numbers are small and the follow up is short, we expect these good results to continue because our program is very selective in the kidneys we accept to transplant."

All ECD kidneys are subject to biopsy to make sure there is minimal scarring based on the donor's age or medical problem. The kidney function in patients who receive an ECD kidney transplant has been very good, with an average creatinine level of 1.5. Patients have cut their waiting time approximately in half when they participate in this program.

### ***Pursuing an ECD Kidney Transplant***

Our Kidney Team encourages patients over age 60 who are being listed for kidney transplantation to strongly consider the ECD kidney option to shorten their transplant waiting time. Bry says, "I expect the shorter wait for an ECD kidney to continue because there are literally thousands of patients listed for a standard deceased donor kidney transplant in our region, while there are only a small handful of patients who are listed for ECD kidneys."

New patients who attend transplant evaluation at California Pacific will be asked if they want to be considered for an ECD kidney and can ask questions at that time. If interested, you must sign a consent form and your name will be added to the list of patients in our region who will accept an ECD kidney. Alternately, older patients already on the waiting list at California Pacific can participate in this program by completing our consent form found at [www.cpmc.org/kidney](http://www.cpmc.org/kidney) and submitting it to your transplant coordinator.

Because an ECD kidney may become available at any time, you will need to be prepared to come to the hospital at any time. This way, we can perform the transplant quickly, which helps further improve its success. ☺

If you are trying to exercise and find that you lack energy, have shortness of breath or chest or muscular pain, consult your health care team. There may be an underlying medical problem that is preventing you from reaching your exercise goals. Also, remember that exercising causes water loss through sweating and increased respirations. Therefore, drinking extra fluids is essential. As a rule of thumb, try to drink an extra half liter of fluid (500cc) for every 20-30 minutes of exercise you do.

If you are having difficulty getting motivated to exercise, talk to your transplant team or local health care providers for recommendations. Find an exercise partner. Join a gym or exercise class. Go for a walk. Ride a bike. You and your new kidney will enjoy the benefits! ☺

# New UNOS Policy On ABO Testing Before Transplant

Two Blood Type Determinations Mandatory for Listing

*by Steven Katznelson, M.D.*

The United Network for Organ Sharing (UNOS) recently mandated that every patient listed for transplantation after October 4, 2004 needs to have two separate blood samples drawn to determine their (ABO) blood type. California Pacific will ask that all patients coming to our program for an evaluation have one ABO typing drawn before their evaluation date and bring the results with them to our clinic. For patients who do not come to clinic with an ABO result, we can help arrange it. The other ABO typing will be drawn at evaluation time.



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