

UCLA launches first West Coast human hand transplantation program

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The UCLA Health System has launched the new UCLA Hand Transplantation Program, the first of its kind on the West Coast and only the fourth such center in the United States.

The program will help those who have suffered the traumatic loss of a hand or forearm and allow them to regain function and improve their quality of life. Qualified candidates are now being sought for a clinical study of the procedure.

"Over the past decade, the exciting field of hand transplantation has resulted in excellent outcomes for patients, and we are excited to bring this program to UCLA," said Dr. Kodi Azari, surgical director of the hand transplantation program and an associate professor in the UCLA Department of Orthopaedic Surgery and the UCLA Division of Plastic and Reconstructive Surgery.

The first hand transplant was performed in 1998 in France, with the United States following suit the next year. To date, nine patients have received hand transplants in the United States; two of these surgeries were double hand transplants.

Azari was one of the lead surgeons on five of these successful hand transplants, including the first double hand transplant and the first arm transplant.

"Many patients who have lost one or both hands find that prosthetic

devices are not enough to help them get back the life they had enjoyed previously," said Azari, who came to UCLA in November 2008 from the University of Pittsburgh. "In these cases, hand transplantation can offer a unique opportunity to regain dynamic function and the feel of a real human hand."

The new program is a partnership between UCLA's transplantation services and its hand surgery, plastic and reconstructive surgery, orthopaedic surgery, psychiatry, pathology, anesthesia, internal medicine, radiology, neurology, ethics and rehabilitation services.

Estimates from the 1996 National Health Interview Survey indicate that one in 400 civilian Americans is missing an upper limb. This does not take into account the number of U.S. military personnel missing hands or forearms due to wartime injuries.

In addition to helping civilian patients who have suffered the loss of a hand, the UCLA Hand Transplantation Program can also serve military personnel who have been injured in Iraq and Afghanistan. The new program complements UCLA's Operation Mend program, which offers facial reconstructive surgery to America's wounded warriors.

"The new hand transplantation program will build a bridge between [reconstructive surgery](#) and our vast experience in transplantation medicine," said Dr. Sue McDiarmid, a professor of pediatrics and surgery and medical director of the pediatric liver transplantation and hand transplantation programs at the David Geffen School of Medicine at UCLA. "Both will benefit the other in this new endeavor in unique ways."

Dr. Ronald W. Busuttil, UCLA's executive chair of surgery and chief of the division of liver and pancreas transplantation division, and the administration of Ronald Reagan UCLA Medical Center immediately recognized the value of this new program for patients who might benefit

from the clinical trial.

"We are at the beginning of a new frontier," Busuttil said. "Solid organ transplants are now routinely performed to save patients' lives. Now we'll be performing composite tissue transplants to enhance their quality of life."

According to Azari, the purpose of the clinical trial is to confirm that the surgical techniques already established in hand transplantation are successful, to study the return of function in transplanted hands, and to study the effectiveness and safety of the anti-rejection drugs that will be necessary to ensure that the grafts are accepted by the recipient's body.

Eligibility criteria for the hand transplantation study include:

- The patient must be between 18 and 60 years of age.
- The amputation must have been at the wrist or at the forearm level.
- The patient must have no serious infections, including hepatitis B or C, or HIV.
- The amputation was not due to a birth defect or cancer.
- The patient is otherwise in good general health.
- The patient will commit to extensive rehabilitation, will adhere to an immunosuppressant medication regimen, and will participate in follow-ups with the transplant center.

Patients interested in participating will first have to undergo a careful

evaluation to determine if they meet the conditions for participation in the program. The evaluation includes taking a detailed medical history, a physical examination and lab tests, X-ray tests, and a psychological examination.

After successfully completing a screening and medical evaluation, the patient will be placed on a waiting list until a carefully matched hand from a deceased donor is found. After the transplant surgery, the patient will take immunosuppressive medicines for an indefinite amount of time to prevent rejection. Patients will also undergo an intensive rehabilitation regimen to restore function to the transplanted hands.

OneLegacy, an organ, eye and tissue recovery organization serving the seven-county greater Los Angeles area, will also play a critical role in the process.

"We are pleased to join UCLA in making such an enormous difference in the lives of those who have suffered the devastating loss of their hands," said Tom Mone, OneLegacy's CEO and executive vice president. "We are working closely with UCLA and our colleagues with hand transplant experience to incorporate hand donation into OneLegacy's organ and tissue programs that benefit 100,000 recipients and thousands of donor families each year."

Provided by University of California - Los Angeles

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