University of Minnesota surgeons performed the world’s first pancreas transplant in 1966. The procedure proved that transplant surgery can allow a person with diabetes to live without insulin injections. Since that time, University of Minnesota Medical Center has led the world in pancreas transplantation, performing more than 2000 transplants through 2008. That is nearly 10 percent of all pancreas transplants that have been done in the world.

Together with University of Minnesota Physicians, we perform more than one pancreas transplant each week on average.

Tackling diabetes and preserving the kidneys

Our first pancreas transplant, in 1966, was done simultaneously with a kidney transplant. Shortly thereafter, we began to do pancreas transplants in diabetes patients before the disease did severe damage to their kidneys. Diabetes is one of the leading causes of kidney failure in the United States.

For people with diabetes whose kidneys are already damaged, our surgeons can perform a living donor kidney transplant. Ideally, this is done before dialysis becomes necessary. Our surgeons can also do a pancreas transplant at the same time as the kidney transplant if a donor pancreas is available. If not, the patient can have a pancreas transplant at a later date. The pancreas transplant both allows the patient to stop using insulin, and protects the new kidney from the damage of diabetes.

World leader in living donor pancreas transplant

University of Minnesota Medical Center is the home of the oldest, largest living donor pancreas transplant program. In 1979, David Sutherland, M.D., Ph.D., performed the world’s first partial pancreas transplant.
from a living related donor. To date, our surgeons have performed more living donor pancreas transplants than any other center in the world.

In 2000, Raja Kandaswamy, M.D. and his team performed the world’s first laparoscopic procedure for removing both a kidney and partial pancreas from a living donor. Laparoscopic removal of organs is now the Transplant Center’s standard technique. It promotes faster healing and causes less discomfort for donors. It also allows a living kidney donor to donate a portion of pancreas at the same time as a kidney, through the same mini incisions.

From routine to complex cases
The Transplant Center performs pancreas transplants alone primarily in patients who have trouble controlling their diabetes (such as frequent low blood glucose). We also do pancreas transplants in people who have complicated problems from diabetes other than kidney problems alone. Our physicians use innovative treatments and techniques to help make transplant an option for as many people as possible. These include patients who:

• need a second or third pancreas transplant
• have multiple medical issues such as blindness, neuropathy and treatable coronary artery disease.
• have a high risk of organ rejection because they are hard to match (We make every effort to find a donor that has tissue and blood types that will minimize the risk of rejection.)
• have blood types that are not the same as that of potential donors (we can remove antibodies to the mismatch by filtering the plasma)

Our physicians also do not routinely use steroids as part of the anti-rejection medicines they give to patients after transplant. This allows us to perform a pancreas transplant with fewer drug side effects, such as steroid-induced osteoporosis.

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