

Additional Factors Play Part in Kidney Transplant Success

The process of receiving a kidney transplant is rooted in finding a compatible donor, whether living or deceased. Compatibility is determined by both blood type and the matching of Human Leukocyte Antigens (HLA). HLA's are what stimulate the production of antibodies, which are produced by the immune system in response to a foreign body. HLA make-up is inherited from your parents, which typically makes immediate family members the best match for donation. However, it is possible for individuals to develop sensitivities to HLA antigens because of pregnancies, blood transfusions or viral/bacterial infections. These sensitivities are also tested to determine overall compatibility of the donation.

What other factors can determine transplant success? A recent study suggests donor weight and gender also should match the recipient to increase the chance of success. Researchers reviewed data from more than 115,000 people in the United States who received a kidney from a deceased donor from 2000-2014. Each individual received follow up about 4 years after transplant. During that time, more than 21,000 patients had transplants that failed.

After accounting for other medical causes of rejection, the researchers concluded that weight was a factor in transplant failure. If a kidney transplant recipient was more than 66 pounds heavier than the donor, there was a 28% higher risk of transplant rejection. Not only did they examine weight, but researchers also noticed a difference if the donors and recipient's genders were mismatched. The risk of rejection was 35% higher for a male receiving a female donor kidney whereas a woman receiving a man's kidney had a 50% higher risk of failure.

"This study is extremely important because we have shown that when all else is considered, something as simple as the combination of a kidney donor's weight and sex is associated with a marked increase in kidney transplant failure," study co-leader Dr. Amanda Miller said in a journal news release. Miller is from Dalhousie University and the Nova Scotia Health Authority, Canada.

While more research is needed before making these factors part of the matching process, these findings suggest the need for expanded factors to increase the rate of success for kidney transplants.

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