Living Donors with Pre-diabetes

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ISSUE

What are the requirements and concerns for a potential kidney donor with pre-diabetes?

DATA

Kidney disease caused by diabetes mellitus (DM), particularly type 2 DM, is now the most common cause of end stage kidney disease in the US. The risk of diabetes is also higher for individuals who are overweight. Laboratory findings of pre-diabetes include elevated fasting glucose, elevated hemoglobin A1c and elevated glucose on an oral glucose tolerance test. Pre-diabetes may progress in severity over years to become classified as diabetes. Intervention at the pre-diabetes stage with diet and lifestyle changes can stall or even reverse this progression and prevent diabetes.

A small study of kidney donors with pre-diabetes who went on to donation noted higher rates of progression to diabetes (15.6%) compared to donors with normal glucose levels (2.2%) for those with pre-diabetes but no difference in remaining kidney function over the first 10 years following donation.

A diabetes risk calculator is available to provide more accurate, personalized estimates of an individual’s risk for diabetes using information on age, waist circumference, history of gestational diabetes, height, race/ethnicity, hypertension, family history, and exercise.

RECOMMENDATION
1. The risk of diabetes mellitus in donors with pre-diabetes is higher than for a healthy donor with normal glucose metabolism. Pre-diabetes increases the future risk for diabetes-associated kidney disease for the donor.

2. UNOS requires that potential donors with diabetes mellitus be excluded from donation. Potential donors with pre-diabetes need to make lifestyle changes including diet change, increased exercise and weight loss to normalize their glucose metabolism and reduce their risk for future diabetes. These changes will need to be continued over the long term.

References


Note: The recommendations in these chapters are the opinions of the Living Donor Community of Practice of AST. They are not meant to be prescriptive and opinions by other groups or institutions may be equally valid.