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KIDNEY TRANSPLANT RECIPIENTS: GET MOVING TO SAVE YOUR LIFE

Patients who engage in little physical activity face increased risks of dying prematurely

Washington, DC (February 25, 2011) — Low physical activity increases kidney transplant patients' likelihood of dying early, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The results suggest that patients need to exercise to fend off an early death.

Inactive people in general face increased risks of developing cardiovascular disease and of dying prematurely. Individuals with chronic kidney disease—particularly those on dialysis—tend to get little exercise, but most increase their activity levels modestly after receiving a kidney transplant. Until now, no one has examined whether low physical activity levels in kidney transplant recipients is associated with an increased risk of dying prematurely from heart-related or other causes. Maintaining heart health is particularly important for these individuals, as kidney transplant recipients have a 4- to 6-fold increased risk of dying from cardiovascular causes than individuals in the general population.

Dorien Zelle (University Medical Center Groningen, in the Netherlands) and her colleagues studied the health of 540 kidney transplant recipients between 2001 and 2003, assessing physical activity through questionnaires and recording deaths until August 2007. With regard to the guidelines for minimum requirements of physical activity, 260 (48%) patients did not meet the criteria and 79 (14.6%) were completely inactive.

During the study period, 81 patients died, with 37 heart-related deaths; the lower the level of physical activity, the higher the rate of deaths. Specifically, cardiovascular deaths occurred in 11.7%, 7.2%, and 1.7% of patients considered inactive, moderately active, and active, respectively. Deaths from any cause occurred at rates of 24.4%, 15.0%, and 5.6% in these respective groups.

The investigators acknowledged that in general, sicker people are less likely to exercise and more likely to die; however, they found that the link between low physical activity and premature death was not substantially affected by adjustments for factors such as patients' heart health, kidney function, muscle mass, and their diabetes and smoking status.

Dr. Zelle noted that to determine whether increased physical activity levels may improve the health and prolong the lives of transplant recipients, the University Medical Center Groningen, in collaboration with the University Medical Center Maastricht, will start a randomized controlled lifestyle intervention study. Kidney transplant recipients will undergo a supervised exercise program and receive individual counseling to promote physical activity and a healthy diet.

Study co-authors include Eva Corpeleijn, PhD, Ronald Stolk, MD, Mathieu de Greef, PhD, Reinold Gans, MD, Gerjan Navis, MD, and Stephan Bakker MD, PhD (University Medical Center Groningen, in the Netherlands).

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The article, entitled “Low Physical Activity Is Associated with Increased Risk for Cardiovascular and All-Cause Mortality in Renal Transplant Recipients,” will appear online at <http://cjasn.asnjournals.org/> on March 3, 2011, doi 10.2215/CJN.03340410.

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