

# For dialysis patients, skinny is dangerous

November 2 2009

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Dialysis patients with low body fat are at increased risk of death—even compared to patients at the highest level of body fat percentage, according to research being presented at the American Society of Nephrology's 42nd Annual Meeting and Scientific Exposition in San Diego.

"Our study indicates that [body fat](#) may be protective in dialysis patients," comments Kamyar Kalantar-Zadeh, PhD (LABioMed at Harbor-UCLA). "The results add to the increasing number of reports about the 'obesity paradox' or 'reverse epidemiology' in patients with [chronic kidney disease](#) and other chronic diseases." The research will be presented by Youngmee Kim, RN.

Nephrologists have puzzled over the "[obesity](#) paradox" in dialysis patients, Kalantar-Zadeh explains. "Counter-intuitively, higher body mass index is associated with greater survival in hemodialysis patients. We hypothesized that very low body fat—less than ten percent—would be a strong predictor of mortality."

Using near-infrared interactance technology, the researchers measured body fat percentage in 671 hemodialysis patients from eight California dialysis centers. They then compared five-year [mortality rates](#) for patients at different levels of body fat percentage.

The mortality rate was highest for dialysis patients with less than 10 percent body fat—2.5 to 3 times higher than for those with body fat of 20 to 30 percent. The increased risk of death for patients with very low

body fat remained after adjustment for age, sex, race, other illnesses, and key laboratory results.

Further analyses using continuous values of body fat (rather than categories) confirmed a direct, linear relationship between body fat and mortality risk: "The higher the body fat, the greater the survival," said Kalantar-Zadeh. Although more research is needed, the results suggest that the obesity paradox may be explained by an increased risk of death for patients with very low body fat, compared to those with average—or even very high—body fat percentage.

The observational study had the same limitations as other epidemiological studies, Kalantar-Zadeh points out. "In addition, we estimated body fat by measuring the subcutaneous fat of the upper arm, which may be different from the intra-abdominal fat."

Source: American Society of Nephrology ([news](#) : [web](#))

Citation: For dialysis patients, skinny is dangerous (2009, November 2) retrieved 19 April 2024 from <https://medicalxpress.com/news/2009-11-dialysis-patients-skinny-dangerous.html>

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