Just drop it: The one-size-fits-all approach to blood sugar control, that is

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Aggressive blood sugar control does not improve survival in diabetic patients with kidney failure, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (*CJASN*). The results suggest that physicians should individualize blood sugar targets for these patients and not rely on recommendations based on studies in the general population.

Uncontrolled blood sugar levels can cause serious health problems for diabetic patients with kidney failure; however, studies provide conflicting results on the benefits and risks of aggressive blood sugar control in these individuals.

By studying 24,875 dialysis patients for a maximum of three years of follow-up, Mark Williams, MD (Joslin Diabetes Center) and his colleagues found that only sustained extremes—either high or low—in blood sugar levels increased patients' risk of dying prematurely. Type 2 diabetes patients with hemoglobin A1c levels (a measure of average blood sugar levels) greater 11.0% were particularly at risk, with a 21% increased likelihood of dying during the study. In the small (5.5%) subgroup of patients with type 1 diabetes, those with hemoglobin A1c levels greater than 9% had a 52% increased risk of dying during the study.

"In the absence of randomized, controlled trials, these results suggest that aggressive [blood sugar] control cannot be routinely recommended for all diabetic hemodialysis patients on the basis of reducing mortality

risk," the authors concluded. They encouraged physicians who treat diabetic patients with kidney failure to individualize blood sugar targets based on the potential risks and benefits for each patient.

Study co-authors include Eduardo Lacson Jr., MD, Weiling Wang, J. Michael Lazarus, MD, Raymond Hakim, MD, PhD (Fresenius Medical Care-North America).

In reviewing the results of this study in an accompanying editorial, Joachim Ix, MD (University of California, San Diego and Veterans Affairs San Diego Healthcare System) noted that "to date, there are no data available from randomized clinical trials targeting different hemoglobin A1c levels and powered for cardiovascular events or mortality in end-stage renal disease populations. In their absence, the marked statistical power and elegant analyses provided by these… investigators provide useful insights." He agreed that individualized hemoglobin A1c targets might be more appropriate than a one-size-fits-all target.

More information: The article, entitled "Glycemic Control and Extended Hemodialysis Survival in Patients with Diabetes Mellitus: Comparative Results of Traditional and Time-Dependent Cox Model Analyses" (doi 10.2215/CJN.09301209) and the accompanying editorial, "Hemoglobin A1c in Hemodialysis Patients: Should One Size Fit All?" (doi 10.2215/CJN.04410510) will appear online on July 29, 2010.

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