Study finds link between hypoglycemia and mortality rates in critically ill

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In a study published in the March issue of *Mayo Clinic Proceedings*, researchers report that they have found a link between mild to moderate hypoglycemia (low blood sugar) and mortality in critically ill patients.

The multicenter study involved six medical centers from Australia, New Zealand and Japan. The purpose of the study was to understand the epidemiology, severity, duration, recovery and outcome associations of hypoglycemia in critically ill patients. Of the 4,946 patients in the study, 1,109 experienced hypoglycemia and the remaining 3,837 did not (serving as the nonhypoglycemia control group). "Even after adjustment for insulin therapy or timing of hypoglycemic episode, the more severe the hypoglycemia, the greater the risk of death," says Rinaldo Bellomo, M.D., a co-investigator from the Department of Intensive Care, Austin Health, Heidelberg, Victoria, Australia.

Mild to moderate degrees of hypoglycemia were previously considered clinically unimportant. However, the study found that patients with hypoglycemia had nearly twice the rate of mortality (36.6 percent versus 19.7 percent) compared with those who did not have the condition. "This risk of death persisted after correction for other risk factors, suggesting that hypoglycemia may independently contribute to this increased risk," says Dr. Bellomo.

"Our results suggest that any tolerance of mild to moderate hypoglycemia by intensive care clinicians may be undesirable. In this regard, newer technologies such as continuous glucose monitoring in the

ICU setting might help avoid hypoglycemia or identify it earlier," says Dr. Bellomo.

Provided by Mayo Clinic

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