

# Amino acid supplementation beneficial after fracture fixation

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For adults undergoing fracture fixation, conditionally essential amino

acid (CEAA) supplementation is associated with a reduction in postoperative complications, according to a study published online March 14 in the *Journal of Bone & Joint Surgery*.

Nathan R. Hendrickson, M.D., from the University of Iowa in Iowa City, and colleagues conducted a prospective, randomized controlled trial (RCT) to examine the impact of CEAA supplementation on complications and [skeletal muscle mass](#) among adults after operative fixation of acute fractures. Four hundred adults were enrolled and randomly assigned to either standard nutrition or CEAA (200 participants to each).

The researchers found that overall complications were significantly lower for the CEAA group versus the control group (30.5 versus 43.8 percent; adjusted relative risk, 0.71). At six weeks, fat-free mass (FFM) decreased significantly in control subjects (−0.9 kg) and was maintained in CEAA subjects (−0.33 kg). At subsequent time points, this difference in FFM was not observed.

"Our results suggest that this inexpensive, low-risk intervention has considerable potential to improve outcomes after fracture fixation," the authors write. "This study will serve as the foundation for multicenter RCTs that are designed to assess the impact of CEAA nutrition supplementation in reducing complications and loss of functional muscle mass in high-risk populations."

**More information:** Nathan R. Hendrickson et al, Conditionally Essential Amino Acid Supplementation Reduces Postoperative Complications and Muscle Wasting After Fracture Fixation, *Journal of Bone and Joint Surgery* (2022). [DOI: 10.2106/JBJS.21.01014](https://doi.org/10.2106/JBJS.21.01014)

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