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Study investigates link between nutrition and recovery in critically ill patients

Critically ill intensive care patients who are fed through a tube only receive up to 60% of the daily-recommended energy intake, often due to their injuries.

A major clinical trial of 4000 Australian and New Zealand ICU patients has investigated whether a lack of nutrition could be linked to weakness, weight-loss and poorer recovery, and whether an energy-enriched formula could lead to better outcomes.

The study, published today in the [New England Journal of Medicine](#), swapped current formulas for a super nutrition dense formula to determine if it can lead to better survival rates, health outcomes and faster recovery times for critically ill ICU patients.

Each year around 130,000 Australians are admitted to an Intensive Care Unit (ICU) costing the economy close to 3 billion dollars a year.

Patients unable to feed themselves are tube-fed through the mouth and into the stomach because it's the most cost effective method and has been linked to better recovery.

Experts have long argued that patients need better nutrition to support recovery, but this is the first major clinical trial to provide any confounding evidence.

Monash University, study co-investigator Dr Emma Ridley, said prior to the TARGET Trial, understanding if feeding patients an energy-enriched formula that met the daily-recommended energy intake could affect patient recovery was one of the most important unanswered questions in the field of critical care nutrition.

The aim of the TARGET Trial was to determine if increased energy delivery improved 90-day survival when compared to routine care in critically ill patients.

"The TARGET Trial found that increasing energy delivery above amounts provided in routine care did not increase survival at 90 days in critically ill adults," Dr Ridley said.

This finding is significant as much effort, resource and health care cost needs to apply to increase energy delivery above routine care during critical illness, impacting the care of hundreds of thousands of critically ill patients world-wide.

The study also challenges many previously held opinions about needing to increase energy delivery in critical illness by proving high quality robust evidence.

The study also investigated whether increased energy delivery improved functional outcomes for critically ill patients. The results will be published at a later date.

TARGET is a collaboration of the Australian and New Zealand Intensive Care Society Clinical Trials Group, the Australian and New Zealand Intensive Care Research Centre, Monash University, the Medical Research Institute of New Zealand and the NH&MRC Centre of Research Excellence for the Translation of Nutritional Science into Good Health.

The study was led by Professors Marianne Chapman and Sandra Peake, Department of Intensive Care Medicine, The Queen Elizabeth Hospital.

The trial was funded by the National Health and Medical Research Council and the New Zealand Health Research Council.