A randomised controlled trial of fish oil given intravenously to patients in intensive care has found that it improves gas exchange, reduces inflammatory chemicals and results in a shorter length of hospital stay. Researchers writing in BioMed Central's open access journal *Critical Care* investigated the effects of including fish oil in the normal nutrient solution for patients with sepsis, finding a significant series of benefits.

Philip Calder, from the University of Southampton, UK, worked with a team of researchers to carry out the study in 23 patients with systemic inflammatory response syndrome or sepsis in the Hospital Padre Américo, Portugal. He said, "Recently there has been increased interest in the fat and oil component of vein-delivered nutrition, with the realization that it not only supplies energy and essential building blocks, but may also provide bioactive fatty acids.

Traditional solutions use soybean oil, which does not contain the omega-3 fatty acids contained in fish oil that act to reduce inflammatory responses. In fact, soybean oil is rich in omega-6 acids that may actually promote inflammation in an excessive or unbalanced supply".

Calder and his colleagues found that the 13 patients in the fish oil group had lower levels of inflammatory agents in their blood, were able to achieve better lung function and left hospital earlier than the 10 patients who received traditional nutrition. According to Calder, "This is the first study of this particular fish oil solution in septic patients in the ICU. The positive results are important since they indicate that the use of such an emulsion in this group of patients will improve clinical outcomes, in
comparison with the standard mix".

**More information:** Effects of a fish oil containing lipid emulsion on plasma phospholipid fatty acids, inflammatory markers, and clinical outcomes in septic patients: a randomized, controlled clinical trial, Vera M Barbosa, Elizabeth A Miles, Conceicao Calhau, Estevao Lafuente and Philip C Calder, *Critical Care* (in press), [ccforum.com/](https://ccforum.com/)

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