

# Benefits of combo lipid emulsion no greater than soy-based emulsion for pediatric patients

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Lipid emulsions are crucial for providing essential fatty acids and energy to infants and children who need intravenous feeding. There has been concern that soybean-based emulsions could compromise immune functions and promote liver damage due to its composition. Combination lipid emulsions based on triglyceride oil, fish oil, or olive oil have been developed to address this concern.

However, researchers at Rutgers and Tufts universities found that concern may be unwarranted, according to a review published today in the OnlineFirst version of the *Journal of Parenteral and Enteral Nutrition (JPEN)*, the research journal of the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.).

Soybean-based emulsions are composed of of long chain [fatty acids](#), phytosterols, high proportion of  $\omega$ -6 fatty acids, and low  $\alpha$ -tocopherol levels. The combination emulsions have been developed using medium chain oils, which provide adequate essential fatty acids, a smaller concentration of  $\omega$ -6 fatty acids, and lower levels of phytosterols.

The systematic review of previously published studies found "inadequate evidence" that combination lipid emulsions as compared with standard [soybean oil](#) lipid emulsion offer any greater benefit in bilirubin levels, [triglyceride levels](#), or infection incidence in pediatric patients receiving intravenous feeding.

While the review did not find any significant benefits for one type of emulsion over the other, it did find that combination lipid emulsions are a safe alternative to soybean-based [emulsions](#). It also recommends further and larger randomized controlled trials to truly determine if one type of emulsion is superior.

Provided by American Society for Parenteral and Enteral Nutrition

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