There is strong evidence that oxidant molecules from various sources contaminate solutions of parenteral nutrition following interactions between the mixture of nutrients and some of the environmental conditions encountered in clinical practice" Lavoie and Chessex (2019).

Abstract:

There is strong evidence that oxidant molecules from various sources contaminate solutions of parenteral nutrition following interactions between the mixture of nutrients and some of the environmental conditions encountered in clinical practice. The continuous infusion of these organic and nonorganic peroxides provided us with a unique opportunity to study in cells, in vascular and animal models, the mechanisms involved in the deleterious reactions of oxidation in premature infants. Potential clinical impacts of peroxides infused with TPN include: a redox imbalance, vasoactive responses, thrombosis of intravenous catheters, TPN-related hepatobiliary complications, bronchopulmonary dysplasia and mortality. This is a narrative review of published data.

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Lavoie, J.C. and Chessex, P. (2019) Parenteral nutrition and oxidant stress in the newborn: A narrative review. Free Radical Biology & Medicine. February 23rd. .

doi: 10.1016/j.freeradbiomed.2019.02.020.