This article provides a thorough review of clinically relevant publications regarding the three common types of supplements to preterm infant formula: long-chain polyunsaturated fatty acids (LCPUFAs), probiotics and prebiotics. The focus is on whether these supplements can reduce the risk of complications, e.g. necrotizing enterocolitis (NEC), and improve key outcomes in preterm infants.

A positive relationship has been established between LCPUFA administration and development in preterm infants. New evidence suggests that disturbances in gut flora during early life may have both short- and long-term consequences, extending into adulthood. However, the use of probiotics/prebiotics in infant formula is not clear-cut.

A dietary source of LCPUFA, particularly docosahexaenoic acid (DHA), is important to support neurodevelopment. Certain bacteria appear better than others in reducing the incidence of NEC.

...higher DHA doses than currently found in infant formulas or the breast milk of women with Westernized diets may be needed for preterm infants

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Is Early Nutrition Related to Short-Term Health and Long-Term Outcome? by Hania Szajewska and Maria Makrides

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