Realizing benefits of probiotics in neonatal intensive care unit requires high-quality products, say pediatricians

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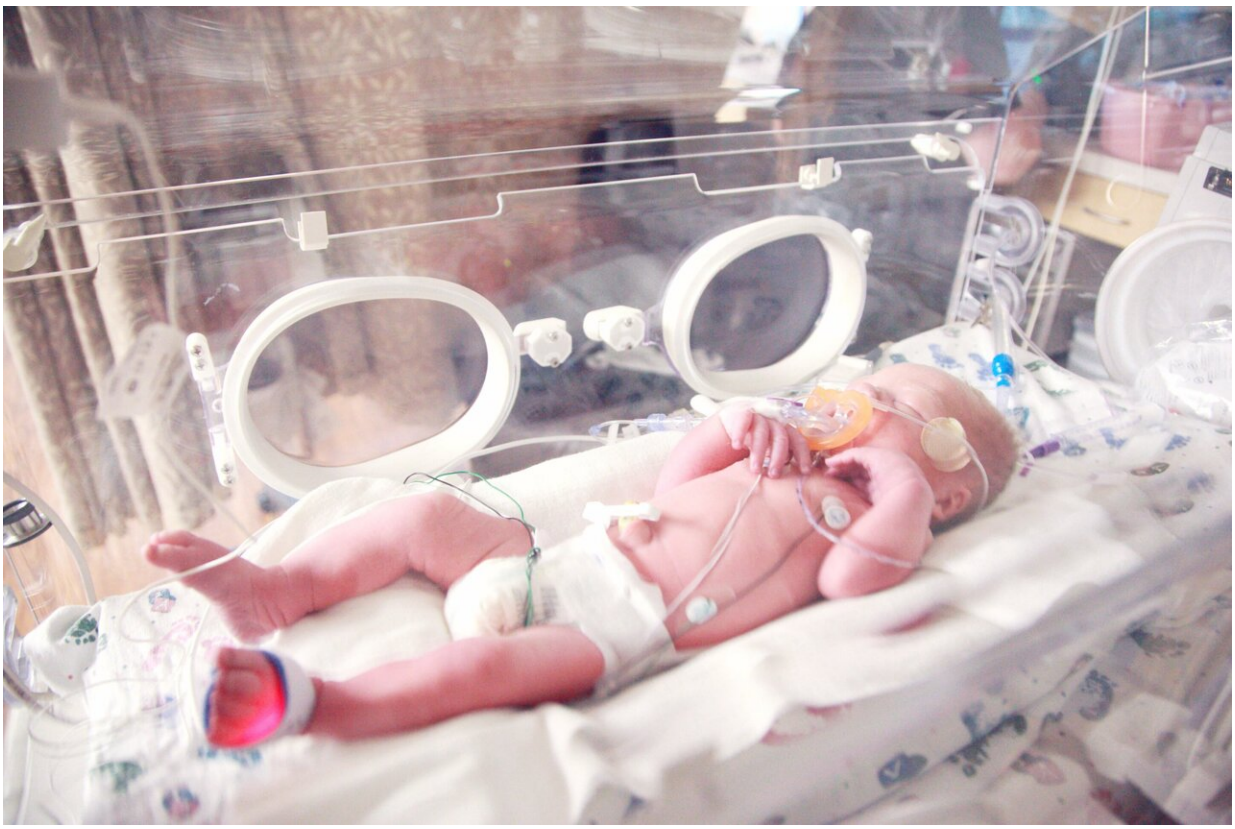

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"Do no harm" is a guiding principle for medical interventions—and especially for vulnerable populations such as preterm infants in the

neonatal intensive care unit (NICU). So while compelling data suggest that certain probiotics reduce the risk of necrotizing enterocolitis (NEC) and mortality for preterm infants, some medical professionals are hesitant to recommend this intervention because they do not completely trust the safety of probiotic products.

Most probiotics are manufactured as dietary supplements and as such, are designed for the general population. Such standards may be inadequate for certain patient populations.

In a new publication in *JAMA Pediatrics,* two pediatricians address the issue of probiotic safety in preterm infants and provide suggestions on how to move toward realizing probiotic benefits despite the lack of pharmaceutical grade products.

The authors outline five action areas to help formularies select probiotic products that are safer than those meant for use in a general, healthy population. They propose collaboration between clinicians, pharmacies, and probiotic manufacturers and distributors that could optimize the safety of probiotic products fit for the neonatal population.

Lead author Andi L. Shane, MD, MPH, MSc, Emory University School of Medicine and Children's Healthcare of Atlanta, sees the goal as utilizing available interventions that are safe and effective for this population of infants at risk of serious complications and occasionally death resulting from NEC.

Co-author Geoffrey Preidis, MD, Ph.D., Baylor College of Medicine and Texas Children's Hospital, says, "Concerns about product quality and purity have led some medical societies to recommend against routine administration of probiotics for preterm infants even though there is data to support the use of specific probiotics in this population. We have proposed a strategy to overcome this impasse and give more infants

access to an effective intervention."

The authors say it is possible to obtain probiotic products that have undergone more stringent microbiology testing than products manufactured for healthy populations, which would reduce concerns about contamination or other potential risks to the health of preterm infants. This is critically important because a recent network meta-analysis of 63 studies involving 15,712 preterm infants supports the efficacy of certain probiotics to reduce the risk of NEC and all-cause mortality.

The idea for this paper grew from a discussion group held at the annual meeting of the International Scientific Association for Probiotics and Prebiotic (ISAPP) meeting in June, 2022. ISAPP's Executive Science Officer Mary Ellen Sanders, Ph.D., says, "Collaboration between probiotic manufacturers and healthcare providers emerged as a novel approach to address concerns about product safety. This paper importantly delineates how such collaboration can be undertaken."

More information: Andi L. Shane et al, Probiotics in the Neonatal Intensive Care Unit—A Framework for Optimizing Product Standards, *JAMA Pediatrics* (2023). DOI: 10.1001/jamapediatrics.2023.2165

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