

Phthalates in the NICU: Is it safe?

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Abstract

Aims: As growing concerns exist regarding phthalate exposure, which could be teratogenic, carcinogenic or induce reproductive toxicity, we aimed to review the evidence of the risks due to the use of medical devices containing di(2-ethylhexyl)phthalate in hospitalized neonates.

Methods: We reviewed the literature, searching through medical literature databases (Pubmed, MEDLINE, EBM reviews, Cochrane database, Embase and Google Scholar) using the following keywords: phthalate, di(2-ethylhexyl)phthalate, newborn and neonate.

Results: We identified several associations with short and long term health dangers, mainly subfertility, broncho-pulmonary dysplasia, necrotising enterocolitis, parenteral nutrition associated cholestasis and neuro-developmental disorders. These data are based mainly on animal or observational human studies.

Conclusion: Clinicians must be aware of the potential risks due to phthalate exposure in the NICU. Di(2-ethylhexyl)phthalate containing materials should be identified and alternative devices should be considered. There is a need to improve knowledge in this area.

Keywords: environmental exposure, neonatal intensive care unit (NICU), phthalates, di(2-ethylhexyl)phthalate (DEHP), plasticiser, newborn, subfertility.

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