

# Early ibuprofen not beneficial for preemies with patent ductus arteriosus

January 25 2024, by Elana Gotkine

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For extremely preterm infants, the risk for death or moderate or severe bronchopulmonary dysplasia is not significantly lower among those receiving early treatment for patent ductus arteriosus (PDA) with ibuprofen versus placebo, according to a study published in the Jan. 25

issue of the *New England Journal of Medicine*.

Samir Gupta, M.D., from Sidra Medicine in Doha, Qatar, and colleagues conducted a multicenter, randomized, double-blind, placebo-controlled trial assessing early [ibuprofen](#) treatment ( $\leq 72$  hours after birth) for a large PDA (diameter  $\geq 1.5$  mm with pulsatile flow) in extremely preterm infants. Overall, 326 and 327 infants were assigned to receive ibuprofen and placebo, respectively; 324 and 322 had data available for outcome analyses. A composite of [death](#) or moderate or severe bronchopulmonary dysplasia evaluated at 36 weeks of postmenstrual age was the primary outcome.

The researchers found that a primary outcome event occurred in 69.2 and 63.5% of infants in the ibuprofen and placebo groups, respectively (adjusted risk ratio, 1.09; 95% confidence interval [CI], 0.98 to 1.20;  $P = 0.10$ ); 13.6 and 10.3% of infants, respectively, died (adjusted risk ratio, 1.32; 95% confidence interval, 0.92 to 1.90). Moderate or severe bronchopulmonary dysplasia occurred in 64.2 and 59.3% of the ibuprofen and [placebo](#) groups, respectively, among the [infants](#) who survived to 36 weeks of postmenstrual age (adjusted risk ratio, 1.09; 95% confidence interval, 0.96 to 1.23).

"Our results are broadly consistent with those of other studies of early targeted treatment of PDA with ibuprofen that have not shown a convincing benefit with respect to clinical outcomes," the authors write.

**More information:** Samir Gupta et al, Trial of Selective Early Treatment of Patent Ductus Arteriosus with Ibuprofen, *New England Journal of Medicine* (2024). [DOI: 10.1056/NEJMoa2305582](https://doi.org/10.1056/NEJMoa2305582)

Jill L. Maron, Patent Ductus Arteriosus—To Close or Not to Close?, *New England Journal of Medicine* (2024). [DOI: 10.1056/NEJMe2313738](https://doi.org/10.1056/NEJMe2313738)

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