Infants born at all gestational ages with low-risk delivery characteristics have a low risk for early-onset sepsis (EOS) and may not require initiation of empiric antibiotic therapy immediately following birth, according to a study published online Jan. 12 in *Pediatrics*.

Dustin D. Flannery, D.O., from the Children's Hospital of Philadelphia, and colleagues conducted a study involving term and preterm infants born Jan. 1, 2009, to Dec. 31, 2014, with blood culture and with or without cerebrospinal fluid culture, obtained ≥72 hours after birth and used delivery characteristics to identify those at lowest risk for EOS. The criteria for ascertaining low risk for EOS included cesarean delivery, without labor or membrane rupture before delivery, and no antepartum concern for intraamniotic infection or nonreassuring fetal status.

Overall, 7,549 infants were evaluated, and 41 of these had EOS. The researchers found that 14.8 percent of the evaluated infants had low-risk delivery characteristics, and none of these infants had EOS. Antibiotics were initiated in a lower proportion of these infants (80.4 versus 91.0 percent); however, there was no difference in the duration of antibiotics administered to infants born with and without low-risk characteristics (adjusted difference, 0.6 hours; 95 percent confidence interval, 73.8 to 5.1).

"Our study shows that it is safe to withhold antibiotics in infants, including those born preterm, with low-risk delivery characteristics," Flannery said in a statement. "Such infants are unlikely to be infected at birth, and can be spared the potential complications of systemic antibiotic exposure."

**More information:** [Abstract/Full Text](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7933891/)

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