

Reducing risk of lung distress in preterm babies

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Currently, corticosteroids are recommended for women at high risk of preterm birth between 23 and 33 weeks of pregnancy, but not after. A new meta-analysis compiling evidence from six clinical trials confirms earlier work suggesting that at-risk babies may benefit from steroids after 34 weeks and suggests that babies born to mothers who had a scheduled cesarean section after 37 weeks may benefit as well. The study was published in *The BMJ* on October 12.

"Respiratory distress remains one of the most common and serious problems we see in the delivery room that can cause infant mortality," says Vincenzo Berghella, M.D., Director of Maternal Fetal Medicine at the Sidney Kimmel Medical College at Thomas Jefferson University.

Dr. Berghella and co-author Gabriele Saccone, M.D., at the University of Naples Federico II, compiled data from three previously completed double-blind clinical trials, including 3,200 women at between 34 to nearly 37 weeks of pregnancy and at imminent risk of preterm birth. Babies born in this window are less likely to have fully matured lungs (incidence of [respiratory distress syndrome](#) was 6.7 percent without steroids, and 2.7 percent with steroids).

The researchers also included data from three trials of 2,498 women who had a scheduled C-section at 37 weeks or older. Infants delivered by C-section are also more likely to have respiratory distress because the natural birthing process stimulates the final stages of lung development. It is thought that labor contractions and the pressure of going through the

birth canal cause a baby's lungs to expel amniotic fluid and begin producing the surfactants that lubricate the lungs and make it possible to start breathing air. The incidence of severe [respiratory distress](#) in this group was 2.3 percent without steroids and 1.4 percent with steroids.

The authors conclude that a single course of [steroids](#) (two shots over 24 hours) may be useful in reducing lung complications in women at [high risk](#) for [preterm birth](#) at 34-37 weeks, or for women undergoing a planned C-section at or after 37 weeks.

However, the meta-analysis also revealed a risk of corticosteroid administration in this group: there was a higher likelihood of hypoglycemia, or [low blood sugar](#), in infants whose mothers were treated. The clinical significance of neonatal hypoglycemia in these babies is not well known, as these babies did not seem to have any short-term consequences from the hypoglycemia, and there are not yet any data on their long-term outcome.

More information: Gabriele Saccone et al, Antenatal corticosteroids for maturity of term or near term fetuses: systematic review and meta-analysis of randomized controlled trials, *BMJ* (2016). [DOI: 10.1136/bmj.i5044](#)

Provided by Thomas Jefferson University

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