

# Timing twin delivery to optimize outcomes

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Results of a new Scottish study suggest that delivery after 37 weeks' gestation is optimal for uncomplicated twin pregnancies. Delivery before then may increase rates of perinatal mortality and special educational need (SEN) at school.

Published in *JAMA Pediatrics*, the [research](#) is the first nationwide analysis of long-term educational outcomes of twins across the range of gestational age categories.

## Methods

With the study, the authors aimed to identify the optimal gestation week for birth of twin infants by calculating the week of birth associated with the lowest risk of short-term and long-term adverse outcomes (perinatal mortality and SEN at school). Included in the population-based, data-linkage cohort were 43,133 twin infants born from 34 weeks onward, between January 1, 1980 and December 31, 2015, in Scotland.

The primary outcomes of the study were extended perinatal mortality and a record of one or more intellectual disabilities, dyslexia, physical or motor impairment, language or speech disorder, autistic spectrum disorder, and social, emotional, or behavioral difficulties at school. The latter were considered SEN. To infer the consequence of the gestational age at birth, clinical outcomes of twin infants born at each week of gestation from 34 weeks onward were compared with those of twin infants remaining in utero thereafter.

## **Findings**

A total of 9,519 sex-discordant twin children were linked to their educational data, of whom 1,069 (13.8%) had a record of SEN. Compared with twins remaining in utero, birth at any gestational age from 34 to 37 weeks was associated with increased odds of perinatal death (adjusted odds ratio [AOR] 1.99; 95% CI, 1.53-2.69 at 36 weeks) and increased risk of SEN at school (AOR 1.39; 95% CI, 1.11-1.74, for birth at 36 weeks compared with 37 weeks). In a competing risk analysis, risks of stillbirth and neonatal death were balanced at 37 weeks (risk difference 2.05; 95% CI, 0.8-3.3).

## **Conclusions**

The authors said of their data that, "this information should be considered by women expecting twins and their caregivers when making decisions regarding timing of birth," while noting that the results may apply only to dichorionic twins because the SEN analysis was limited by data linkage and only sex-discordant twins could be used.