

# New study shows link between maternal age and emergency delivery

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An increased risk of emergency operative delivery is linked with increasing maternal age, suggests a new study published today in *BJOG: An International Journal of Obstetrics and Gynaecology*.

The study used a sample of 169,583 low risk, first-time mothers in Norway, to examine the association between [maternal age](#) and emergency operative delivery, which include emergency caesarean section and operative vaginal delivery (forceps or ventouse).

The paper also examined other [risk factors](#) for emergency c-section and operative vaginal delivery. These included; in-labour indications (fetal distress and dystocia), [birth weight](#) of over 4000g, gestational age of 42 or more weeks, induction of labour and epidural use.

Results show that [women](#) over 40 years old had a 22.4% emergency caesarean section rate and 23.7% operative [vaginal delivery](#) rate, compared with 6.7% and 13% respectively in women aged between 20 – 24 and 8.4% and 16.2% respectively in women aged between 25 – 29.

Dystocia and [fetal distress](#) were the main indication for emergency operative delivery among women in the cohort, with the risk increasing with increased maternal age.

Epidural use was associated with a significant increase in emergency operative delivery and this was greater in older mothers. In women aged 20-24 years, the difference in rate of emergency caesarean section

between women who had an epidural and those who did not was 5.9%, this figure rose to 12.9% in women over 40 years old.

High birth weight, [gestational age](#) of 42 weeks or more and induction of labour were also each associated with a greater risk of emergency operative delivery and all of these factors increased with rising maternal age.

The authors of the study conclude that the absolute increase in risk, taking into account all contributing factors, was greater in older than younger women for emergency operative delivery. They also emphasise the importance of careful attention needed when managing older mothers who may need interventions during labour.

Lina Herstad, from the Norwegian Resource Centre for Women's Health and co-author of the study said:

"Previous research around advanced maternal age has mainly focused on high risk pregnancies. However, most women of advanced maternal age are healthy, of higher socioeconomically status and are low-risk.

"Our results show that the proportion of operative deliveries increased substantially with maternal age in a low-risk, first time mother cohort. These findings are particularly helpful for both healthcare professionals and women of advanced maternal age in decisions regarding the optimal mode of delivery.

"Further research is needed to look at interventions and operative deliveries across all age groups, taking into account other factors which may have an impact, such as rising obesity rates."

Mike Marsh, BJOG Deputy Editor-in-chief said:

"There is existing evidence of an increase in obstetrical interventions in labour in advanced maternal age, for example induction of labour, use of oxytocin and use of epidural. These interventions may be partly responsible for the increase in emergency operative delivery seen in advanced maternal age.

"This study is interesting as it focuses on low-risk pregnancies only so it is able to examine the role of other contributing factors in the risk of emergency operative delivery across the maternal age range."

**More information:** [dx.doi.org/10.1111/1471-0528.12962](https://doi.org/10.1111/1471-0528.12962)

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