

New evidence on risks of advanced maternal age

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Many of the risk factors associated with pregnancy are more harmful when the expectant mother is over 35. According to an extensive, register-based study carried out at the University of Eastern Finland, the risks associated with overweight, smoking, gestational diabetes and pre-eclampsia are higher in advanced maternal age than in younger expectant mothers.

Advanced maternal age refers to women giving [birth](#) at the age of over 35. In the western world, [advanced maternal age](#) has been a clearly growing trend over the past decades. In Finland, one in five women giving birth in 2013 were over 35 years old. The risks and harms of pregnancy and childbirth are considered to increase after the age of 35.

Expectant mothers were studied in four different risk groups with the help of extensive registers

In her doctoral dissertation, Reeta Lamminpää, MHS, analysed nearly 700,000 expectant mothers and their new-born children by combining the data of 1997-2008 available from three national-level registers: the Finnish Medical Birth Register, the Finnish Hospital Discharge Register and the Finnish Register of Congenital Malformations.

The association between age and an additional risk factor on complications during pregnancy and the outcome of childbirth were studied in four risk groups: expectant mothers diagnosed with pre-eclampsia, expectant mothers who smoked, expectant mothers who were overweight and obese, and expectant mothers diagnosed with [gestational diabetes](#). The outcome of childbirth in advanced maternal age was compared to the outcome of younger mothers, i.e. those under 35.

Early recognition of risk groups is vital

In all of the four risk groups, the risks associated with pregnancy and childbirth were higher in advanced maternal age than in younger expectant

mothers. The age of over 35 as such was not a significant [independent risk factor](#), but the risks increased when advanced maternal age was combined with an additional risk factor.

In expectant mothers over 35 and diagnosed with pre-eclampsia, pre-term birth and small-for-gestational-age infant were a particular risk.

In expectant mothers over 35 and who smoked, low birth weight, pre-term birth, foetal death and small-for-gestational-age infant were more likely than in younger expectant mothers.

Furthermore, in expectant mothers over 35 who were overweight or obese and diagnosed with gestational diabetes, pre-term birth, foetal death, large-for-gestational-age infant and pre-eclampsia in particular were more likely. Moreover, overweight was associated with increased risk of caesarean section in advanced maternal age.

The study showed that the above-mentioned four advanced maternal age groups clearly constitute a risk group that should be provided with enhanced guidance within maternity care. Early recognition of the risk groups would make it possible to guide mothers to further treatment at an earlier stage and, consequently, could help reduce the risks of the mother and the foetus alike.

For the majority of expectant mothers over 35, there are no complications in the pregnancy and childbirth; however, earlier research has shown that they are at a higher risk than younger expectant mothers. Advanced maternal age is also associated with more chronic diseases, which also plays a role in the increased risk levels. The association between maternal age and risks and birth outcomes is a topic on which plenty of research has been carried out; however, advanced [maternal age](#) in different risk groups has remained a scarcely studied topic.

The findings were originally published in *BMC Pregnancy and Childbirth*, *BMC Public Health*, and *Journal of Maternal-Fetal and Neonatal Medicine*.

More information: The doctoral dissertation is available at: [epublications.uef.fi/pub/urn_i...78-952-61-1710-2.pdf](https://publications.uef.fi/pub/urn_i...78-952-61-1710-2.pdf)

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