

# Mothers with higher BMI have increased risk of stillbirth, infant death

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Higher maternal body mass index (BMI) before or in early pregnancy is associated with an increased risk of fetal death, stillbirth, and infant death, with women who are severely obese having the greatest risk of these outcomes from their pregnancy, according to a study in the April 16 issue of *JAMA*.

Worldwide, approximately 2.7 million stillbirths occurred in 2008. In addition, an estimated 3.6 million [neonatal deaths](#) (death following live birth of an infant but before age 28 days) occur each year. Several studies have suggested that greater maternal [body mass index](#) (BMI) before or during early pregnancy is associated with an increased risk of fetal death, stillbirth, perinatal death (stillbirth and early neonatal death), neonatal death, and infant death, although not all studies have found a significant association. The optimal prepregnancy BMI to prevent fetal and infant death has not been established, according to background information in the article.

Dagfinn Aune, M.S., of Imperial College London, and colleagues conducted a review and meta-analysis to examine the association between maternal BMI (before or in [early pregnancy](#)) and risk of fetal death, stillbirth, and infant death. After a search of the medical literature, the researchers identified 38 studies that met criteria for inclusion in the meta-analysis, which included more than 10,147 [fetal deaths](#), more than 16,274 stillbirths, more than 4,311 perinatal deaths, 11,294 neonatal deaths, and 4,983 [infant deaths](#).

The researchers found that even modest increases in maternal BMI were associated with increased risk of fetal death, stillbirth, neonatal death, perinatal death, and infant death. The greatest risk was observed in the category of severely obese women; women with a BMI of 40 had an approximate 2- to 3-fold increase in risk of these outcomes vs. women with a BMI of 20.

The authors suggest that several biological mechanisms could explain the association found in this study, including that being overweight or obese has been associated with increased risk of preeclampsia, gestational diabetes, type 2 diabetes, gestational hypertension, and congenital anomalies, conditions that have been strongly associated with risk of fetal and infant [death](#). "... further studies are needed to investigate the mechanisms involved."

"Weight management guidelines for women who plan pregnancies should take these findings into consideration to reduce the burden of fetal deaths, stillbirths, and infant deaths."

**More information:** Paper: [DOI: 10.1001/jama.2014.2269](https://doi.org/10.1001/jama.2014.2269)

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