

# Overweight mothers who smoke while pregnant can damage baby's heart

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Mums-to-be who are both overweight and smoke during their pregnancy risk damaging their baby's developing heart, finds research published online in *Heart*.

Congenital heart abnormalities are some of the most common defects found at birth, with around eight in every 1000 babies affected. A likely cause is only found in 15% of cases.

The authors base their findings on an analysis of almost 800 babies and foetuses who were born with congenital heart abnormalities, but no other defects, between 1997 and 2008.

These babies were compared with 322 children and [foetuses](#) who were born with chromosomal abnormalities, but without any heart defects.

The analysis pointed to an enhanced damaging effect for a combination of overweight and smoking as opposed to one of these factors alone, after taking account of influential factors, such as the mother's [alcohol consumption](#) and [educational attainment](#).

Mums to be who both smoked and were overweight, with a BMI of 25 or more, were more than 2.5 times as likely to have a child with a [congenital heart defect](#) as women who either smoked or were overweight, but not both.

The risk of outflow tract obstructive abnormalities, whereby blood flow

from the ventricles of the heart to the pulmonary artery or aorta is reduced/blocked, more than tripled in babies born to overweight mums who smoked while pregnant.

"These results indicate that maternal smoking and overweight may both be involved in the same pathway that causes congenital heart defects," write the authors.

While the exact mode of action is not clear, they point to disturbances in [plasma cholesterol](#), which is independently associated with obesity and smoking, and which results in lower levels of "good" cholesterol and higher levels of "bad" cholesterol.

The findings add to the growing body of evidence for the links between smoking and overweight during pregnancy with, variously, miscarriage/stillbirth, stunted growth, and premature birth, say the authors.

Provided by British Medical Journal

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