

Fathers-to-be: smoking could harm your baby

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Fathers-to-be who smoke may increase the risk of congenital heart defects in their offspring, according to a study published today in the *European Journal of Preventive Cardiology*, a journal of the European Society of Cardiology (ESC). For mothers-to-be, both smoking and exposure to secondhand smoke were detrimental.

"Fathers-to-be should quit [smoking](#)," said study author Dr. Jiabi Qin, of Xiangya School of Public Health, Central South University, Changsha, China. "Fathers are a large source of [secondhand smoke](#) for [pregnant women](#), which appears to be even more harmful to unborn children than [women](#) smoking themselves."

Congenital [heart](#) defects are the leading cause of stillbirth and affect 8 in 1,000 babies born worldwide. Prognosis and quality of life continues to improve with innovative surgeries, but the effects are still lifelong.

"Smoking is teratogenic, meaning it can cause developmental malformations. The association between prospective parents smoking and the risk

of congenital heart defects has attracted more and more attention with the increasing number of smokers of childbearing age." said Dr. Qin.

This was the first meta-analysis to examine the relationships between paternal smoking and maternal passive smoking and risk of congenital heart defects in offspring. Previous analyses have focused on women smokers. Yet, as Dr. Qin points out: "In fact, smoking in fathers-to-be and exposure to passive smoking in pregnant women are more common than smoking in pregnant women."

The researchers compiled the best available evidence up to June 2018. This amounted to 125 studies involving 137,574 babies with congenital heart defects and 8.8 million prospective parents.

All types of parental smoking were associated with the risk of congenital heart defects, with an increase of 74% for men smoking, 124% for passive smoking in women, and 25% for women smoking, compared to no smoking exposure.

This was also the first review to examine smoking at different stages of pregnancy and risk of congenital heart defects. Women's exposure to secondhand smoke was risky for their offspring during all stages of pregnancy and even prior to becoming pregnant. Women who smoked during pregnancy had a raised likelihood of bearing a child with a [congenital heart defect](#), but smoking before pregnancy did not affect risk.

"Women should stop smoking before trying to become pregnant to ensure they are smokefree when they conceive," said Dr. Qin. "Staying away from people who are smoking is also important. Employers can help by ensuring that workplaces are smokefree."

"Doctors and primary healthcare professionals need to do more to publicise and educate prospective parents about the potential hazards of

smoking for their [unborn child](#)." added Dr. Qin.

Regarding specific types of congenital heart defects, the analysis showed that maternal smoking was significantly associated with a 27% greater risk of atrial septal defect and a 43% greater risk of right ventricular outflow tract obstruction compared to no smoking. The overall risk of congenital heart defects with all types of parental smoking was greater when the analysis was restricted to Asian populations.

More information: Lijuan Zhao et al, Parental smoking and the risk of congenital heart defects in offspring: An updated meta-analysis of observational studies, *European Journal of Preventive Cardiology* (2019). DOI: [10.1177/2047487319831367](https://doi.org/10.1177/2047487319831367)

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