

Smoking mothers more likely to have babies with dental abnormalities

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Credit: Vera Kratochvil/public domain

Women who smoke more than 10 cigarettes a day during pregnancy are much more likely to give birth to babies who will fail to grow all their teeth, new University of Otago research has found.

The condition, known as hypodontia, commonly involves children failing to develop up to six permanent teeth, which are usually lateral incisors

and premolars.

The Otago study, published in the *Journal of Dental Research*, investigated 83 children with the condition and compared them with 253 children without hypodontia.

Their mothers were asked to report active and passive smoking exposure, as well as alcohol and [caffeine consumption](#) during pregnancy.

Study lead author Professor Mauro Farella of the School of Dentistry says that the research team controlled for other factors such as the mother's age when the child was born, its sex, whether there was a full-term delivery or not, and socio-economic status.

"We found no significant associations between drinking alcohol or caffeinated drinks and hypodontia, but there was a suggestion of a 'biological gradient' effect with tobacco - the more cigarettes a mother reported smoking during pregnancy, the greater the likelihood was of her child having hypodontia."

"Though more research is needed to confirm the association we found between [maternal smoking](#) and the condition, a plausible explanation is that smoking causes direct damage to [neural crest cells](#) in developing embryos," Professor Farella says.

Professor Farella says a large body of evidence exists regarding the many damaging effects that smoking has during pregnancy. These include other dentofacial defects, such as cleft lip and [cleft palate](#).

"This latest research further reinforces the importance of women seeking support to quit smoking when they are pregnant."

Provided by University of Otago

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