

Recent antibiotic use linked to thicker arteries in early childhood

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Recent antibiotic use in young children may be linked to increased cardiovascular risk, according to a joint study between Utrecht Academic Medical Centre in The Netherlands and Murdoch Children's Research Institute (MCRI) in Melbourne.

The researchers found that children who received [antibiotics](#) in the six months prior to having vascular measurements taken had thicker arteries than those who had not received recent antibiotics. The increase in artery thickness was greatest in those who had antibiotics most recently.

The study, to be presented at the ANZ Developmental Origins of Health and Disease society conference in Sydney today, looked at 775 Dutch children followed from birth.

Researchers analysed parent and GP-reported infections and antibiotic use and related these to ultrasound measurements of the child's [carotid artery](#) in the neck at age five. These measures included the thickness of the [artery wall](#), which predicts cardiovascular disease in adults.

MCRI's Professor David Burgner, who is a lead author on the study, said that while infections were common in preschool children, gaining a handle on the overall burden of infection from parents and GPs was difficult. He said [antibiotic prescriptions](#) could be a reliable way of identifying children with more severe infections.

"We don't know whether the link with thicker arteries is from the infections themselves – as has been shown before, or indirectly from the antibiotics – for example by their effects on the gut microbiome," Prof Burgner said.

He said it was also not known whether thicker arteries at age five was predictive of [cardiovascular risk](#) in adulthood.

"These are all key questions we are addressing in our studies," Prof Burgner said. "It is important to remember that antibiotics can be life-saving and should be taken as prescribed."

Provided by Murdoch Children's Research Institute

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