

First signs of heart disease seen in newborns of overweight, obese mums

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The walls of the body's major artery—the aorta—are already thickened in babies born to mums who are overweight or obese, finds a small study published online in the *Fetal and Neonatal Edition of Archives of Disease of Childhood*.

Importantly, this arterial thickening, which is a sign of heart disease, is independent of the child's weight at birth - a known risk factor for later heart disease and stroke.

And it may explain how overweight/obese mums could boost their children's subsequent [risk of cardiovascular disease](#), suggest the authors, who point out that more than half of women of childbearing age in developed countries are overweight or obese.

Twenty three women, whose average age was 35, were included in the study when they were 16 weeks pregnant.

A [body mass index](#) (BMI) of more than 25 kg/m² was defined as overweight or obese, and this ranged from 17 to 42 kg/m² among the women.

Ten of the babies born were boys, and birthweights ranged from 1850g to 4310g.

The [abdominal aorta](#), which is the section of the artery extending down to the belly, was scanned in each newborn within seven days of birth to

find out the thickness of the two innermost walls - the intima and media.

Intima-media thickness ranged from 0.65mm to 0.97mm, and was associated with the mother's weight. The higher a mum's weight, the greater was the baby's intima-media thickness, irrespective of how much the baby weighed at birth.

The difference in intima-media thickness between babies of overweight and normal weight mums was 0.06mm.

"The earliest physical signs of atherosclerosis are present in the abdominal aorta, and aortic intima-media thickness is considered the best non-invasive measure of [structural health](#) of the [vasculature](#) in children," write the authors.

And this may explain how a mum being overweight might affect her child's subsequent risk of heart disease and stroke in later life, they conclude.

More information: Maternal adiposity and newborn vascular health, Online First, [doi 10.1136/archdischild-2012-303566](https://doi.org/10.1136/archdischild-2012-303566)

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