

- Children—nutrition

## HEALTHY KIDS STAY HEALTHY

### Early risk factors will haunt you

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HAVING an unhealthy childhood raises a person's chance of suffering a heart attack or stroke in the following decades far more than previously feared, leading research has found.

A 50-year study tracking the causes of cardiovascular disease has found adults who had several risk factors in their childhood face between two and nine times the risk of cardiovascular disease.

The Murdoch Children's Research Institute-led international study found body mass index, blood pressure, cholesterol, triglycerides (a type of fat found in blood) and youth smoking were overwhelmingly linked to heart attacks and strokes, from as early as 40.

While the five lifestyle risk factors have long been associated with disease when present in adults, lead researcher Professor Terence Dwyer said the full extent of damage already caused in childhood was only now being revealed.

"This is the first direct evidence that's linking these risk factors in children to the occurrence of heart attacks and strokes in middle age – and the link that we find is strong," Prof Dwyer said.

"The fact that a child could actually have a ninefold greater risk of cardiovascular disease is a very important finding. The occurrence of the disease, despite all we know, is still very high and it's still the highest single cause of death in Australia."

In one of the world's largest studies into cardiovascular disease, the International Childhood Cardiovascular Consortium followed 38,589 participants from Australia, Finland and the US from ages 3-19, for 35 to 50 years.

Results published in the New England Journal of Medicine found that 60 per cent of the participants who had risk factors when they were children went on to have greatly increased chances of suffering cardiovascular problems when examined in middle age.

While participants who had only one, or less severe, childhood factors typically had a doubling in their disease risk as adults, those with multiple and more extreme effects were up to 900 per cent more likely to be ill before their 50s.

Despite major medical, surgical and health education advances during the decades of the study, Prof Dwyer said measures focusing on adults had been limited by the fact that the seeds for disease had already been sown during childhood.

"The fact is this data has been measured in the real world – a world that is post 1970s-80s, where adults have had messages of 'keep your weight down and exercise' from doctors," he said.

"Despite all that, the net result is these risk levels we see. It means is that what we're doing as an adult at the moment certainly isn't removing all the risk that starts in childhood."

As well as calling for the health system to focus more on childhood, the researchers are planning to dig deeper into the data – including skinfold, diet, physical activity and abdominal girth records – to determine if lifestyle improvements in adulthood can reverse childhood damage.

"This doesn't change the message that if you don't want to have cardiovascular disease and you are an adult, do something now," Prof Dwyer said.

"This (study) says that is more important than you might have thought."