

# Is the tide turning for kid's fitness?

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Credit: University of South Australia

A new study led by the University of South Australia's Dr. Grant Tomkinson has found that although children's cardiorespiratory (CRF) fitness levels declined in the 80s and 90s, they have stabilised since the year 2000.

"Our recent research shows that children's [cardiorespiratory fitness](#) – their ability to perform prolonged and vigorous exercise – declined in wealthy countries across the world throughout the 1980s and 90s, although amazingly, that [trend](#) appears to have slowed and stabilised since then in many countries, including Australia," he says.

"We found that the decline in fitness was larger for boys than for girls. That could be due to the recent promotion of girls' participation in sport and other physical activity initiatives such as the Australian

Government's Girls Make our Move program."

Dr. Tomkinson says his data derives mainly from higher-income countries that know the importance of physical activity and have programs in place to encourage kids to be active.

"We found that countries with a widening gap between rich and poor residents had the worst declines in [fitness levels](#)," he says.

"That widening gap between the rich and the poor residents suggests a trend towards a larger sub-population of poor individuals within a country.

"Poverty is linked to poor social and health outcomes, including lower [physical activity](#) and CRF levels, increased obesity, lower life expectancy, higher death rates and increased risk of heart and other diseases, mental illness and drug use."

Dr. Tomkinson says that CRF fitness is an important marker of good health and the fourth leading risk factor for heart disease and the research suggests that, poorer children are at the greatest health risk.

"They probably also lack the opportunities, the time, and resources to participate in physical activities that improve or maintain CRF," he says.

Dr. Tomkinson's study looked at fitness trends in one million children between the ages of nine and 17 years from 19 countries using the beep test (a progressive exercise test involving continuous running between two lines in time to recorded beeps which increase in speed).

With future trends impossible to predict, Dr. Tomkinson says he hopes the tide is turning.

"I'm convinced that fitness is still declining in poor countries and will continue to decline for a generation or so," he says.

"However, I hope that our key finding, that fitness has plateaued in rich countries, is the start of some good news in this space and a turning of the tide for the health of the next generation."

The research paper "Temporal trends in the cardiorespiratory [fitness](#) of children and adolescents representing 19 high-income and upper middle-income countries between 1981 and 2014" has been published in the *British Journal of Sports Medicine* examining whether today's children are fitter than [children](#) from the past.

**More information:** Grant R Tomkinson et al. Temporal trends in the cardiorespiratory fitness of children and adolescents representing 19 high-income and upper middle-income countries between 1981 and 2014, *British Journal of Sports Medicine* (2017). [DOI: 10.1136/bjsports-2017-097982](#)

Provided by University of South Australia

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