

Diabetes risk factors in young Sri Lankans much higher than previously thought

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Scientists at King's College London and the National Diabetes Centre (Sri Lanka) have found evidence of a high number of risk factors for type 2 diabetes among the young urban population in Sri Lanka. The study is the first large-scale investigation into diabetes risk among children and young people in South Asia, and provides further evidence that the region is rapidly becoming a hotspot in the growing international diabetes epidemic.

The study, published in the journal [PLoS One](#), is part of a research programme aiming to develop methods to prevent [diabetes](#) in young people in Sri Lanka, as the disease is now having a major public health impact. The scientists suggest that urgent action is now required to raise awareness of diabetes and obesity in developing countries and encourage young people to make lifestyle changes to reduce their risk.

According to the [World Health Organization](#) (WHO), 346 million people worldwide have diabetes, with 80 percent of diabetes deaths occurring in low- and middle-income countries. Recent research has shown that urban populations in South Asia are increasingly at risk from developing [type 2 diabetes](#), which develops largely as a result of [excess body weight](#) and [physical inactivity](#). In Sri Lanka, studies have shown that one in five adults has either diabetes or pre-diabetes, but until now no research has been carried out into risk-factors among young people.

The DIABRISK-SL project is an [international collaboration](#) between scientists in Sri Lanka, led by Dr Mahen Wijesuriya and the UK, led by Dr Janaka Karalliedde from the Cardiovascular Division at King's College London. The team surveyed 22,507 people aged between 10 and 40 from cities in Sri Lanka to check for various early risk factors for type 2 diabetes - such as high body mass index (BMI), raised waist circumference and high levels of physical inactivity. They also

checked for family history of the disease.

The survey revealed that 5,163 people (23 percent) had two or more risk factors for diabetes, with two or more risk factors found in 24 percent of children aged 10-14. Raised BMI was found in nearly 20 percent of children aged 10-14, and 15 percent of children aged 15-19. Most worryingly, the prevalence of physical inactivity and central obesity was nearly 40% in females aged under 16. The results also showed that physical inactivity was a lot higher among females in all age groups, with overall inactivity rising in both sexes with age.

'What we have found in this report really confirms that South Asia is becoming the centre of a worldwide diabetes epidemic,' said Dr Karalliedde. 'We were expecting the levels of risk factors to be high, but we were still surprised at just how high they were. The fact that we found such a high prevalence in children has not been shown Sri Lanka before, or anywhere else in South Asia, and is of great concern.'

'This dramatic rise is clearly linked to a decline in physical activity and mirrors global trends of rising childhood obesity. Being overweight in childhood means people are much more likely to become obese as adults and will have a greater risk of developing type 2 diabetes and cardiovascular disease. Now that we know how widespread the problem is, we can take steps towards identifying high risk groups to evolving preventive strategies.'

Dr Mahen Wijesuriya, of the National Diabetes Centre, said: 'These data highlight the need for early intervention in younger people in Sri Lanka. A primary prevention intervention trial is now underway to evaluate the effects of intensive lifestyle intervention on improving diet and exercise. We will have the results of this in the next two years.'

Dr Wijesuriya emphasized the importance of public

health education and awareness and stressed that these results have already contributed to the development of a National Non-Communicable Disease Strategy to combat type 2 diabetes in Sri Lanka.

Professor Jean Claude Mbanya, President of the International Diabetes Federation, said: 'These figures reflect the disturbing rise in [risk factors](#) for type 2 diabetes among [young people](#) being seen worldwide. This is an example of good-quality scientific research that will bring solutions to the global epidemic of diabetes and other chronic non-communicable disease.

'We hope that the DIABRISK-SL project in Sri Lanka will lead to effective and cost-effective interventions that work in the real world. This is a golden opportunity to make a very deep and very positive long-term impact on individuals, families and entire communities in Sri Lanka.'--ends--

More information: Wijesuriya M, Gulliford M, Charlton J, Vasantharaja L, Viberti G, et al. (2012) High Prevalence of Cardio-Metabolic Risk Factors in a Young Urban Sri-Lankan Population PLoS ONE 7(2): e31309.
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