



Obesity is rapidly outpacing underweight.

# Dangerous trends in worldwide childhood obesity

There are more underweight than obese children in the world, but the balance could change in just five years.

**A**n unprecedented worldwide analysis has shown that obesity in children and teenagers has risen tenfold in the past 40 years, and obese children could be more prevalent than underweight children within five years.

Obesity is a leading risk factor for non-infectious diseases, also known

as non-communicable diseases (NCD), such as type II diabetes. The NCD Risk Factor Collaboration (NCD-RisC), led by scientists from Imperial College London, in collaboration with the World Health Organization (WHO) and a network of more than 1,000 worldwide NCD experts, undertook more than 2,400 population-based studies. Overall, they pooled

data from almost 130 million individuals over five years of age, including 31.5 million young people between five and 19, to create worldwide trend models based on weight-to-height squared ratio (or body mass index, BMI).

According to this analysis, the global number of underweight children peaked around the year 2000 and then stalled.





From 1975 to 2016, the worldwide prevalence of underweight girls declined from 9.2 percent to 8.4 percent, and of boys from 14.8 percent to 12.4 percent. In 2016, 75 million girls and 117 million boys, mainly living in south Asia and in particular in India, were moderately or severely underweight.

During the same timeframe, worldwide obesity rates soared from less than 1 percent to 5.6 percent in girls and 7.8 percent in boys. This translates to around 124 million obese kids around the globe. More than 30 percent of children and teenagers on Nauru, the Cook Islands and Palau, and more than one in five children in Polynesia, Micronesia, Egypt, Kuwait, Qatar, Saudi Arabia, Bermuda, Puerto Rico, and the United States are obese.

Childhood obesity has recently stabilized at alarmingly high levels in rich countries, and it is still growing for kids in developing and emerging economies. As a consequence, several countries in East Asia, Latin America and the Caribbean have experienced a rapid shift from underweight to obesity issues.

Problems at both ends of the scale are also present in Saudi Arabia. “The Jeeluna study, the Arabic term for ‘our generation’, showed that only 55 percent of adolescents have a healthy weight,

about one third are overweight or obese, and 15 percent underweight,” explains KAIMRC’s Fadia AlBuhairan, Jeeluna’s principal investigator and contributor to the NCD–RisC global study.

The researchers called for measures to shore up food security to ensure children had enough to eat, and for providing healthier nutrition and more physical activity to deal with obesity. Taxing unhealthy foods and drinks, as well as making whole grains, fruits and vegetables affordable for everybody could counteract the trend.

“This research will continue over the coming years. We want to monitor how effective interventions from WHO and national governments are,” explains James Bentham, joint first author of this study. “We study diabetes, blood pressure and cholesterol as well, and in the next few years we will look at how many people have dangerous levels of a combination of these variables.”

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NCD Risk Factor Collaboration (NCD–RisC). Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *The Lancet* **390** (2017).