

Childhood obesity – one epidemic or two?

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New research has indicated that obesity in children has quite different causes at different ages. The research, led by the University of Exeter Medical School and part of the internationally respected [EarlyBird Study](#), could have far-reaching implications for attempts to reduce the global epidemic of childhood obesity, as it indicates that very different approaches may be needed at various stages of development.

In a study published today (Monday April 27) in the *International Journal of Obesity*, scientists compared data on contemporary children with those of the 1980's. They discovered that the rise in obesity among very young children has been largely restricted to the minority with obese parents. Toddlers as a whole have not changed. By contrast, obesity among adolescents has not been restricted to those with obese parents, but has occurred across the entire age group.

Professor Terence Wilkin, of the University of Exeter Medical School, who led the study, said: "Childhood obesity is one of the greatest health issues of our time. If we are to develop strategies to intervene effectively, we must first understand the cause. This study indicates for the first time that childhood obesity has different causes, depending on the age of the child. We now need further studies to explore this in more depth, as it could have significant implications for healthcare."

Before the early 80s, [childhood obesity](#) remained at around 5%, but by 2010 it had shot up to 16%. Initially, research and health focused largely on the later years, but recent studies have indicated the importance of infant nutrition. The EarlyBird study published today points to different and distinct causes between infants and adolescents. The team analysed the BMI trajectories of two comparable sets of data, separated by 25 years. They looked at the BMI data set collected in the 1980's that was used to set the British Growth Standards of 1990. They compared this with BMI measurements from from 307 children in the EarlyBird cohort, who were measured annually between 2000 and 2012.

The study found no difference between the birth weights of the two groups but, by the age of five years, a marked increase in the proportion of obese children in the EarlyBird group – 4 % of boys and 5% of girls, compared with just 2% in the earlier cohort. Both genders in the EarlyBird cohort continued to gain excess weight year-on-year so that, by the age of 16 years, 11% of EarlyBird boys and 16% of girls were obese. What the researchers found – quite unexpectedly – were different reasons for the weight gain in toddlers compared with adolescents.

The swell in numbers who were obese by five years came largely from the children of obese parents, and was not seen in the rest of the population. Outside the toddlers of obese parents, there was little change in BMI over a generation. In older [children](#), the team also found an increase in obesity, but this time it affected the whole age group,

regardless of parentage.

The data suggest that parenting is the fundamental influence on weight gain in the early years, whereas more general (peer-group) influences take over later on. Public health strategies may need to be tailored accordingly.

Provided by University of Exeter

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