

Obesity speeds up the start of puberty in boys, study finds

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Girls are not the only ones who go through puberty early if they have obesity. Boys with obesity enter puberty at an earlier age than average, according to a study that will be presented Sunday at ENDO 2019, the Endocrine Society's annual meeting in New Orleans, La.

In 527 Chilean boys ages 4 to 7 years, both total body [obesity](#) and central obesity, or excess belly fat, were associated with greater odds of starting [puberty](#) before age 9, researchers from the University of Chile in Santiago, Chile reported.

"With the increase in [childhood obesity](#) worldwide, there has been an advance in the age at which puberty begins in girls," said the lead investigator, Maria Veronica Mericq, M.D., a professor at the university. "However, in boys the evidence has been controversial."

Some U.S. studies have found that obesity delayed puberty, whereas another study showed that only overweight but not obesity induced earlier puberty in boys. In contrast, study results from Europe showed earlier puberty in boys with overweight and obesity. Early puberty—called precocious puberty—is linked to possible problems including stunted growth and emotional-social problems, according to the Hormone Health Network.

The boys were part of Chile's Growth and Obesity Cohort Study. Puberty was considered precocious using a standard measure for boys: testicle growth (larger than 3 cubic centimeters, or about 0.19 cubic

inches) before age 9. To determine central obesity, study personnel measured each boy's waistline. For total obesity, they used weight and height to calculate the body mass index (BMI) standard deviation score (SDS). A BMI greater than 1 SDS is equal to BMI above the 85th percentile for age, the scale the United States uses to indicate overweight in children. Obesity is a BMI greater than 2 SDS or above the 95th percentile.

Mericq's team found that the prevalence of total obesity increased with age, from 22 percent of boys ages 6 to 7 years to 28.6 percent at 11.4 years, the average age at onset of puberty for this group. Central obesity also increased in that timeframe, from 11.8 percent to 17.4 percent.

Precocious puberty reportedly occurred in 45 boys, or 9 percent. Total obesity and central obesity from ages 4 to 7 raised the odds of early puberty compared with having a healthy weight. For instance, among boys age 5 or 6, those with obesity had nearly 2.7 times the odds of starting puberty early, and those with central obesity had almost 6.4 higher odds of puberty before age 9, Mericq reported. She explained that central obesity more closely relates to fat mass, because a higher BMI may reflect increased muscle, especially in athletes.

"Early puberty might increase the risk of behavior problems and in boys could be related to a higher incidence of testicular cancer in adulthood," Mericq said. "Our results suggest that controlling the obesity epidemic in children could be useful in decreasing these risks."

Provided by The Endocrine Society

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