

# Early maturation linked to BMI in young girls

By ACSH Staff — November 5, 2013



[1]It is not news that young girls are maturing at earlier and

earlier ages than has been true in the past. For example, a [Danish study](#) [2] published in 2009 found that girls examined in 2005 matured earlier than girls assessed in 1991. The difference in ages was statistically significant.

A [new report](#) [3] just published in the journal *Pediatrics* not only confirms that earlier maturation is occurring in young American girls, it links this change to BMI and describes differences occurring in girls of different ethnic groups.

Dr. Frank M. Biro of the Cincinnati Children's Hospital and colleagues followed over 1200 girls from three different geographic areas: the San Francisco Bay area, Greater Cincinnati, and New York City. The girls were between 6 and 8 years old at the beginning of the study in 2004 and were followed until 2011. For each girl, the onset of breast development (thelarche, one of the first indications of puberty) was determined, and the relation of that age to BMI and race/ethnicity was evaluated.

The researchers found that the median age for breast development onset was 8.8, 9.3, 9.7 and 9.7 years for African-American, Hispanic, white non-Hispanic and Asian girls respectively. In addition to these racial/ethnic differences, they also uncovered a significant association with BMI, with greater BMIs being associated with an earlier onset of puberty. In fact, BMI was the strongest predictor of earlier age of breast development.

In their discussion, they note: "The obesity epidemic appears to be a prime driver in the decrease in age at onset of breast development in contemporary girls. In particular, they found that white, non-Hispanic girls in particular are maturing at earlier ages than previously reported."

They also cited other studies that girls with earlier maturation are at risk for lower self-esteem and depression, as well as for the initiation of norm-breaking behaviors such as sexual behavior and substance use at younger ages. Medically, such early maturing girls may have a greater risk of breast, ovarian, and endometrial cancers.

ACSH's Dr. Ruth Kava observed: "While these data are not terribly surprising, they serve to support earlier correlations of obesity in young girls with early maturation. In addition to the psycho-social

risks coincident with early development, it is important to remember that childhood obesity often leads to adult obesity with its increased likelihood of diabetes and heart disease.

ACSH's Dr. Gilbert Ross had this perspective on this news: It has indeed been well-known for many years that obesity is a significant factor in determining age of puberty in girls. Since another well-publicized fact concerns the rising rate of obesity in that same population at least until recently all the baseless chatter about chemicals in the environment causing earlier puberty is again shown to be malarkey, emanating from an anti-chemical agenda rather than sound science. What else is new?

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[1] <http://acsh.org/wp-content/uploads/2013/10/Screen-Shot-2013-10-11-at-1.11.44-PM.png>

[2] <http://pediatrics.aappublications.org/content/123/5/e932.abstract?sid=9ee8eb78-be52-448f-818c-b999f0f2e385>

[3] <http://pediatrics.aappublications.org/content/early/2013/10/30/peds.2012-3773>