

The Truth Behind Early Puberty

[Christopher Wanjek](#) | September 04, 2007 05:33am ET

Kids grow up fast these days, but many parents are worried it's too fast when little Sally needs a training bra at age six and Timmy sports a moustache at ten.

The phenomenon is called precocious puberty. Some doctors think it is happening with greater frequency since the 1990s, especially among girls. Many factors have been implicated: hormones in food, hormone-mimicking pollutants in the waterways, and even social issues, such as sex in the mass media and single motherhood.

Yet not all scientists are convinced of an actual rise in precocious puberty; reports have been anecdotal, and studies have been small or inconclusive.

And while all of these possible causes to this possible problem are plausible, doctors say the likely cause, if any, is childhood obesity: That is, it's not what's in the food but food itself, and lots of it, in all it's fatty-sugary glory, coupled with inactivity.

10-year-old women

Precocious puberty is as old as puberty itself. Some kids—for reasons usually genetic but sometimes as a result of a brain tumor or pituitary gland disorder—mature sexually faster than others. I distinctly remember a boy in my Catholic grade school who seemed to have grown a moustache overnight, at age 10. He was

quite proud of it until the sisters at the school cold-shaved the sinful thing off.

Precocious puberty is defined as the onset of puberty before age 7 or 8 in girls or age 9 in boys. There is a range, and this has been part of the problem of establishing the "normal" age of puberty. Girls might enter full-blown puberty anytime between ages 9 and 15; boys between 11 and 17.

Complicating matters further are racial differences. On average, African American girls show signs of puberty, with breast development and chemical changes in their bodies, almost two years sooner than white girls, at age 8.8. This is according to the largest study on precocious puberty, involving over 17,000 girls, by Marcia Hermann-Giddens of the University of North Carolina, published in 1997 in the journal *Pediatrics*. By age 8, nearly 50 percent of the black girls but only 15 percent of the white girls had begun pubertal development.

Also, historically, the age of first menstruation, called [menarche](#), declined about 0.3 years per decade from the mid-1800s until the 1960s, attributed to better nutrition. Today the average age of menarche is 12.2 for African Americans and 12.7 for Caucasians.

In the milk?

Precocious puberty is more serious than the expense of needing to buy razors and tampons.

The early growth spurt can retard fuller growth in adolescence, as the brain tells the bones that growing time is over. Girls under age 10 aren't mentally prepared for monthly periods. And earlier [sexual desires](#) — with a mature body and immature mind — can lead to earlier sexual encounters.

When precocious puberty entered the radar screen in the early

1990s, the first suspects were [hormones in milk](#) and meats, particularly the artificial bovine growth hormone, rBGH. But this is a protein hormone, destroyed in human digestion, not a steroid hormone like estrogen.

Pollutants are a serious problem. Plastics and insecticides can break down into chemicals similar to estrogen. This is thought cause hermaphroditic fish. Ivelisse Colón of the University of Puerto Rico identified a compelling connection between exposure to chemicals called phthalates and a large increase in breast development among Puerto Rican girls younger than 7.

Kids too fat

Few scientists are ruling out the impact of pollutants. But the more logical cause of precocious puberty seems to be [childhood obesity](#). Here we have a working theory plus numbers to back it up.

Puberty requires the body to have a certain weight and fat distribution, hence the delay for female gymnasts and ballerinas. So 8-year-old girls weighing as much as a normal 12-year-old are at risk for precocious puberty.

But also, across the board, fat children have high levels of the protein leptin. This chemical, through a complicated chain involving the hypothalamus and pituitary gland, can stimulate the release of the three main hormones in puberty: hypothalamic gonadotropin-releasing hormone, luteinizing hormone and follicle-stimulating hormone.

A study by Kirsten Krahnstoever Davison of Penn State, published in 2003 in *Pediatrics*, was one of several studies documenting that over 50 percent of overweight girls enter puberty early. Similarly, studies on young girls adopted from poor countries, suddenly introduced to high-fat diets and entering early puberty, reveal the

fat cell connection.

While a cleaner Earth is a fine idea, the best prevention for precocious puberty seems to be to keep kids healthy and running wild like kids.

*Christopher Wanjek is the author of the books “[Bad Medicine](#)” and “[Food At Work](#).” Got a question about *Bad Medicine*? Email Wanjek. If it’s really bad, he just might answer it in a future column. *Bad Medicine* appears each Tuesday on LiveScience.*