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Early puberty in girls troubling

The trend raises the risk of breast cancer, emotional problems.

By Dorsey Griffith - Bee Medical Writer Published 12:00 am PDT Saturday, September 15, 2007

American girls are entering puberty at earlier ages, putting them at far greater risk for breast cancer later in life and for all sorts of social and emotional problems well before they reach adulthood.

Girls as young as 8 increasingly are starting to menstruate, develop breasts and grow pubic and underarm hair -- biological milestones that only decades ago typically occurred at 13 or older. African American girls are especially prone to early puberty.

Theories abound as to what is driving the trend, but the exact cause, or causes, is not known. A new report, commissioned by the San Francisco-based Breast Cancer Fund, has gathered heretofore disparate pieces of evidence to help explain the phenomenon -- and spur efforts to help prevent it.

"This is a review of what we know -- it's absolutely superb," said Dr. Marion Kavanaugh-Lynch, an oncologist and director of the California Breast Cancer Research Program in Oakland, which directs tobacco tax proceeds to research projects. "Having something like this document put together that discusses all the factors that influence puberty will advance the science and allow us to think creatively about new areas of study."

The stakes are high: "The data indicates that if you get your first period before age 12, your risk of breast cancer is 50 percent higher than if you get it at age 16," said the report's author, biologist Sandra Steingraber, herself a cancer survivor. "For every year we could delay a girl's first menstrual period, we could prevent thousands of breast cancers."

Kavanaugh-Lynch said most breast cancer cells thrive on estrogen, and girls who menstruate early are exposed to more estrogen than normally maturing girls.

Steingraber's paper, "The Falling Age of Puberty in U.S. Girls: What We Know, What We Need to Know," examines everything from obesity and inactivity to family stress, sexual imagery in media sources and accidental exposures of girls to chemicals that can change the timing of sexual maturation.

Steingraber concludes that early puberty could best be understood as an "ecological disorder," resulting from a variety of environmental hits.

"The evidence suggests that children's hormonal systems are being altered by various stimuli, and that early puberty is the coincidental, non-adaptive outcome," she writes.

Steingraber's report is being released amid growing national interest in how the environment contributes to disease, particularly cancer.

California is at the forefront of the research movement. Among the ongoing efforts:

• The California Environmental Contaminant Biomonitoring Program, a five-year, state-funded project, will measure chemical exposures in blood and urine samples from more than 2,000 Californians.

• The Bay Area Breast Cancer and the Environment Research Center, a federally funded project run by scientists at Kaiser Permanente and the University of California, San Francisco, is studying predictors of early puberty through monitoring of environmental exposures in more than 400 Bay Area girls over several years.

For years, parents, doctors and teachers have recognized the trend in early puberty among girls, with little information to explain it.

Dr. Charles Wibbelsman, a pediatrician with Kaiser Permanente in San Francisco and a member of the American Academy of Pediatrics committee on adolescents, said he now routinely sees girls as young as 8 with breast development and girls as young as 9 who have started their periods. He said the phenomenon is most striking in African American girls.

"We don't think of third-graders as using tampons or wearing bras," he said. In fact, he said, pediatricians are having to adjust the way they do regular check-ups because the older approaches don't jibe with reality.

Steingraber acknowledges that some of the shift in girls' puberty is evolutionary, a reflection of better infectious disease control and improved nutrition, conditions that allow mammals to reproduce.

But since the mid-20th century, she said, other factors seem to have "hijacked the system" that dictates the onset of puberty.

Rising childhood obesity rates clearly play a role, she said, noting that chubbier girls tend to reach puberty earlier than thinner girls. Levels of leptin, a hormone produced by body fat, is one trigger for puberty, and leptin levels are higher in blacks than in other groups.

But obesity cannot alone be blamed for the shifts, she said. Steingraber's paper explored many other factors that likely play a role, including exposure to common household chemicals. And she cited findings that link early puberty with premature birth and low birth weight, formula feeding of infants and excessive television viewing and media use.

"My job was to put together a huge jigsaw puzzle," she said.

Steingraber also reported associations of early puberty with emotional and social problems. "The world is not a good place for early maturing girls," she said. "They are at higher risk of depression, early alcohol abuse, substance abuse, early first sexual encounter and unintended pregnancies."

The reasons for this may be related to the way these children are treated or because of the way puberty affects a child's judgment, she said.

"It's possible that developing an adult-style brain at age 10 instead of 14 makes you make decisions about your life that are not really in your best interest," she said.

Priya Batra, a women's health psychologist at Kaiser Permanente in Sacramento, said she's seen

the effects on girls who "look like sexual beings before they are ready to be sexual beings," and counseled mothers worried about their daughters entering puberty too early.

"It's a stressful culture, and we have a lot of demands on children," she said. "It's hard when we add this other layer of early puberty."

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