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[Synthetic Hormones from Milk, Not Linked to Girls' Early Sexual Development](#)

They have no effect on humans

Organic food producers and advocacy groups have supported the idea that milk from hormone-treated cows leads to the onset of early puberty as well as cancer risk. U.S. sales of organic dairy products rose from \$133 million in 1996 to \$1.3 billion in 2001, even if their cost is double than that of conventional products. "Growth in the dairy category, particularly organic milk, was largely driven by the continued use of hormones, such as rBGH [recombinant bovine growth hormone], and antibiotics in conventional dairy products. It's really just recently that people have started talking about [the health impact of rBGH]," said Jaeme Jaczkowski, a spokesperson for Horizon Organic, the nation's top producer of organic milk. The theory that hormones that make cows give more milk lead to early puberty sounds plausible enough for uninitiated ones, but government and pediatric health experts say there's no scientific data to back up this link. First, rBGH does not pass of pasteurization and even if it did, it has absolutely no effect on human growth. "Not only is there no evidence but it's not even scientifically possible that rBGH affects human growth", said Paul Kaplowitz, the new chief of endocrinology at Children's National Medical Center and a specialist in the issue of early puberty. "There is also no evidence that milk from hormone-treated cows contains harmful amounts of antibiotic residue or promotes cancer," said Stephen F. Sundlof, director of the Center for Veterinary Medicine at the Food and Drug Administration. "The thing has been studied up and down and sideways; there are no safety issues to consumers," said Susan Ruland, vice president for communications of the IDFA. Indeed the girls' bodies mature earlier today than they did 50 years ago, when the age of the first menstruation was set on average to 12 years. The age when secondary sexual characteristics (breasts and pubic hair) started to develop was regarded as 11, based on a UK research from the '60s. But an 1997 analysis of 17,000 U.S. girls led by University of North Carolina professor Marcia Herman-Giddens found that many American girls started to develop secondary sexual traits between ages 9 and 10 and 50 % of the black girls and 15 % of the white girls began development as early as age 8. Indeed, early breast development, beyond embarrassment for a girl whose body is maturing faster than her emotions, triggers health concerns as it has been linked to breast cancer and adult obesity. The girls' maturing earlier has been blamed on many issues: better nourishment, higher bodyweight nowadays, exposure to more chemicals. Herman-Giddens shows that rBGH cannot be included amongst these factors as her study data was gathered in 1992 and 1993, before rBGH was available for dairy herds in the US. Moreover, children today drink much less milk than they did a generation or two ago: milk intake among girls ages 6 to 11 fell by about 33 % from the late 1970s to the late 1990s. "Just because no good evidence exists that artificial growth hormones in milk harm human health doesn't mean the matter doesn't deserve further study. I don't think there's been adequate research", Herman-Giddens said. In fact, there is no "hormone-free" milk. All milk presents a naturally-occurring bovine growth hormone, which inflicts lactation in a pregnant cow in order to feed her calf. The synthetic form, rBGH, also named recombinant bovine somatotropin (rBST), was approved in 1993. Injected into cows every two weeks, rBGH rises milk production up to 15 % and roughly 22 % of dairy cows in the US get it. As it was not linked to any human health problems, dairies employing rBGH need no note on their labels that they use it. "The primary concern with rBGH is two things: the increased antibiotic residues and the increased levels of a cancer tumor promoter called IGF-1", said Ronnie Cummins of the Organic Consumers Association, which has been in the forefront of

efforts to set standards for organic foods and fight genetically engineered products. The argument is: the more cows that get rBGH, the more milk delivered and the possibility that cows will develop udder infections (mastitis) rose. Mastitis is treated with antibiotics and the more antibiotics used, the higher the likelihood some residue will enter the milk. But the states and industry check all bulk milk tankers for antibiotics before processing; any milk that tests positive is thrown away. Inspectors look at all tankers for beta-lactam antibiotics (like penicillin and cephalosporin) and also perform random tests for other antibiotics, like tetracyclines. There are limits for each specific antibiotics (for example, 5 parts per billion for penicillin G, 300 for tetracycline) that assess when milk is to be discarded, but data show that less than one in every 1,000 bulk milk tankers contain antibiotic residue in excess of those limits. The insulin-like growth factor (IGF-1) worries many: it's a natural substance unaffected by pasteurization. Higher blood levels of IGF-1 have been linked to a greater risk of breast cancer in premenopausal women and prostate cancer in men. Some researches found that milk from rBGH-treated cows presented higher levels of IGF-1 than those found in organic milk, so many linked that milk to cancers. "There is a huge, huge fallacy in that reasoning. The problem: IGF-1 is a protein that will get broken down with the digestive enzymes", answered Arlan Rosenblum, a professor of pediatrics at the University of Florida. Some underlined the fact that there is a milk protein that slows down the breakdown of IGF-1, but government researches detected no cause for concern. Even if the IGF-1 were absorbed, this quantity would be less than the that synthesized naturally in the human gastrointestinal tract. Pediatricians said avoiding milk and dairy products is wrong. "Childhood and adolescence and their early twenties is when [children] accrue most of their bone mass," said Janet Silverstein, a Florida pediatrician who is chairwoman of the American Academy of Pediatrics section on endocrinology, and "and milk is a major source of calcium." In the US, 30 % of children under age 5 don't get enough calcium. By adolescence, 88 % of girls aged 12 - 19 and 68 % of boys the same age fail to get enough calcium!