

MILK *and* HORMONES

Fact
Sheet

NATURAL COW HORMONES



Bovine somatotropin (bST) is a naturally occurring protein hormone produced by a cow's pituitary gland. Present in all cows, bST regulates metabolic activities, helping young cattle grow and adult cows produce milk. It is not a steroid, but rather a protein hormone.¹ A small amount of this hormone is naturally present in all milk, including organic products. In fact, hormones are naturally present in all foods of plant and animal origin. When milk is consumed, the small amount of bST present is broken down completely by the body's digestive system, just like any other protein.

THE USE OF RECOMBINANT BOVINE SOMATOTROPIN



Dairy farmers may choose to use supplemental recombinant bovine somatotropin (rbST) to allow cows to produce more milk.² Dairy farmers who use rbST say it boosts their herds' milk production, helping to ensure a plentiful supply of milk. It is estimated that about 30 percent of U.S. dairy farmers choose to use rbST with their herds, accounting for 20 to 25 percent of cows.³ Recombinant bovine somatotropin is not added to the milk itself, but rather is administered to some cows in some herds. This use of recombinant bovine somatotropin was approved by the Food and Drug Administration (FDA) in 1993 after extensive review, the safety of milk from rbST-supplemented cows has been reaffirmed since its release.⁴

"Bovine somatotropin is species-specific, which means that, because it is only produced in cows, it is not biologically active in humans."⁵



SAFETY OF MILK



Milk from rbST-supplemented cows is safe for human consumption. Scientific studies have concluded that there is no difference between milk from cows given rbST and milk from cows that are not. Regulatory agencies in 50 countries, including Canada and the European Union, have also affirmed the safety of milk and meat from cows supplemented with rbST. These agencies affirm that the use of rbST does not change milk's composition. Separate reviews of the data, with the same safety conclusions, have been conducted by the National Institutes of Health (NIH), the World Health Organization and the Office of the Inspector General of the Department of Health and Human Services. Such findings have appeared in the *Journal of the American Medical Association*, *Pediatrics* and the *Journal of the American Dietetic Association*.

There are several reasons why bovine somatotropin, which is naturally present in cow's milk, does not have any physiological effect on humans consuming the milk.

1. Bovine somatotropin is species-specific, which means that, because it is only produced in cows, it is not biologically active in humans.⁵
2. Any trace amounts of bovine somatotropin that remain after pasteurization of milk are broken down in the gut into inactive protein fragments (i.e., amino acids) by enzymes in the human gastrointestinal tract, just like any other dietary protein.⁶

Content courtesy of Midwest Dairy Association.

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ORGANIC VERSUS REGULAR MILK



In 2008, the *Journal of the American Dietetic Association* published findings from research that tested whole milk samples obtained from retail stores across the U.S. with three label claims related to farm practices: 1) conventional, 2) from cows not treated with rbST, and 3) USDA-certified organic. The research concluded that all three types of milk are virtually identical in terms of quality, safety and nutritional composition. None of the samples had detectable levels of antibiotics. Concentrations of bST in milk were the same regardless of milk label.⁷

CHOOSING THE RIGHT MILK



It's important to understand that carton to carton, bottle to bottle, all milk is wholesome, safe and nutritious. Dairy products are among the most tested and regulated foods in this country, and American dairy products are among the safest in the world. All milk contains the same combination of all nine essential nutrients that make dairy products an important part of a healthy diet, regardless of on-farm production methods or milk label claims.



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www.WesternDairyAssociation.org

12000 Washington St, Suite 175, Thornton, CO 80241 • 303.451.7711

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