



**NEWS RELEASE  
UNDER EMBARGO UNTIL AUGUST 20, 2018, 12:01 AM ET**

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**Consuming milk at breakfast lowers blood glucose throughout the day**

***Effects of protein composition and concentration detailed in a new study from the  
Journal of Dairy Science®***

**Philadelphia, August 20, 2018** – A change in breakfast routine may provide benefits for the management of type 2 diabetes, according to a new [study](#) published in the [Journal of Dairy Science](#). H. Douglas Goff, PhD, and the team of scientists from the Human Nutraceutical Research Unit at the University of Guelph, in collaboration with the University of Toronto, examined the effects of consuming high-protein milk at breakfast on blood glucose levels and satiety after breakfast and after a second meal. Milk consumed with breakfast cereal reduced postprandial blood glucose concentration compared with water, and high dairy protein concentration reduced postprandial blood glucose concentration compared with normal dairy protein concentration. The high-protein treatment also reduced appetite after the second meal compared with the low-protein equivalent.

“Metabolic diseases are on the rise globally, with type 2 diabetes and obesity as leading concerns in human health,” Dr. Goff and team said. “Thus, there is impetus to develop dietary strategies for the risk reduction and management of obesity and diabetes to empower consumers to improve their personal health.”

In this randomized, controlled, double-blinded study, the team examined the effects of increasing protein concentration and increasing the proportion of whey protein in milk consumed with a high-carbohydrate breakfast cereal on blood glucose, feelings of satiety, and food consumption later in the day. Digestion of the whey and casein proteins naturally present in milk releases gastric hormones that slow digestion, increasing feelings of fullness. Digestion of whey proteins achieves this effect more quickly, whereas casein proteins provide a longer lasting effect.

Although the team only found a modest difference in food consumption at the lunch meal when increasing whey protein at breakfast, they did find that milk consumed with a high-carbohydrate breakfast reduced blood glucose even after lunch, and high-protein milk had a greater effect. Milk with an increased proportion of whey protein had a modest effect on pre-lunch blood glucose, achieving a greater decrease than that provided by regular milk.

According to Dr. Goff and colleagues, “This study confirms the importance of milk at breakfast time to aid in the slower digestion of carbohydrate and to help maintain lower blood sugar levels. Nutritionists have always stressed the importance of a healthy breakfast, and this study should encourage consumers to include milk.”

The study is available online at <https://doi.org/10.3168/jds.2018-14419>.

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### **Notes for Editors**

The article is “Effect of milk protein intake and casein-to-whey ratio in breakfast meals on postprandial glucose, satiety ratings, and subsequent meal intake,” by B. Kung, G.H. Anderson, S. Paré, A.J. Tucker, S. Vien, A.J. Wright, and H.D. Goff (<https://doi.org/10.3168/jds.2018-14419>). It will appear in the *Journal of Dairy Science*, volume 101, issue 10 (October 2018) published by FASS Inc. and Elsevier.

Full text of this article is available to credentialed journalists upon request. Contact Eileen Leahy at +1 732 238 3628 or [jdsmedia@elsevier.com](mailto:jdsmedia@elsevier.com) to obtain copies. Journalists wishing to interview the authors should contact H.D. Goff, PhD, University of Guelph, at [dgoff@uoguelph.ca](mailto:dgoff@uoguelph.ca).

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