



U.S. Whey Protein Research Consortium

2101 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061 U.S.A.
U.S.A. 703-528-3049
U.S.A. 703-528-3705 fax

EMBARGOED FOR RELEASE UNTIL 9 AM PST ON MONDAY, APRIL 3, 2006

**For More Information:
Dr. Joseph O'Donnell
Chair, US Whey Protein
Consortium
Tel: 530-753-0681
odonnell@cdrf.org**

STUDY FINDS WHEY PROTEIN IMPROVES BODY COMPOSITION AND REDUCES WAIST CIRCUMFERENCE

San Francisco, April 3, 2006 – A new clinical trial abstract,¹ presented yesterday at the Experimental Biology meeting in San Francisco by researchers from the U.S. Department of Agriculture, found that individuals who consumed supplemental whey protein for six months weighed less and had less body fat compared to individuals who consumed a carbohydrate supplement. In addition, the whey protein group had a smaller waist circumference than both the soy and carbohydrate supplemented groups.

“The findings of this study add to our knowledge about the health benefits of whey protein,” commented David Baer, USDA researcher. “It’s noteworthy that people who consumed whey protein daily, without any additional exercise or caloric restriction,



U.S. Whey Protein Research Consortium

2101 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061 U.S.A.
U.S.A. 703-528-3049
U.S.A. 703-528-3705 fax

still had a smaller waist circumference at the end of the study compared to the other groups.”

The purpose of this study was to investigate the effects of whey protein, compared to both soy protein and carbohydrate, on body weight and composition. In the six month study, researchers provided whey protein, soy protein or carbohydrate supplements to 90 free-living, overweight and obese (BMI > 28 and < 38) but otherwise healthy individuals. The study participants were randomly assigned to one of three treatment groups: 1) 60 grams/day of whey protein, 2) 60 grams/day of soy protein or 3) a control group receiving 60 grams/day of carbohydrate, and were instructed to incorporate the supplement they received as part of their normal diet. Body composition and weight were measured weekly. After six months, the researchers found that individuals who consumed whey protein weighed less, had less body fat and lost more inches around the waist compared to the carbohydrate group. The difference in body weight observed was associated with a decrease in body fat without a significant loss in lean body mass. While the body weight was not different between the whey and soy groups, the whey group lost more inches around the waist than the group consuming soy protein.

“While research is still emerging on this topic, the results of this study support existing research^{2,3,4} suggesting that whey protein may improve body composition by



U.S. Whey Protein Research Consortium

2101 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061 U.S.A.
U.S.A. 703-528-3049
U.S.A. 703-528-3705 fax

preserving lean body mass and promoting fat loss," said Dr. Joseph O'Donnell, executive director of the California Dairy Research Foundation (CDRF) and chairman of the U.S. Whey Protein Research Consortium. The consortium provided funding for the study.

Whey protein is a high-quality dairy protein derived from milk that contains all nine essential amino acids, the building blocks of healthy muscles, skin, nails and other body tissues. Whey is also a rich source of branched chain amino acids that help regulate muscle protein synthesis. Whey protein is found naturally in milk and is also available in various powdered forms. Many other foods and beverages sometimes include whey as an ingredient, such as nutrition and energy bars, smoothies, ready-to-drink beverages, dairy-based beverages, beverage meals, meal replacements and cereal.

###

About the US Whey Protein Research Consortium

The mission of the U.S. Whey Protein Research Consortium is to create incremental global usage of whey proteins through development and documentation of whey protein's health and wellness benefits. Its focus is to fund clinical trials with whey proteins to obtain science-based benefits attributable to whey. The consortium is a group of 24 U.S. dairy coops, associations and processors, and multinational companies operating through a joint venture agreement. Additional information on the consortium can be obtained from Véronique Lagrange, U.S. Dairy Export Council, 2101 Wilson Blvd., Suite 400, Arlington, VA 22201. vlagrange@usdec.org



U.S. Whey Protein Research Consortium

2101 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061 U.S.A.
U.S.A. 703-528-3049
U.S.A. 703-528-3705 fax

Sources:

1. Baer DJ, et al. Whey protein decreases body weight and fat in supplemented overweight and obese adults. U.S. Department of Agriculture, Beltsville Human Nutrition Research Center, Beltsville, Maryland.
2. Tipton, K.D., T.A. Elliott et al. (2004). "Ingestion of casein and whey proteins result in muscle anabolism after resistance exercise." *Med Sci Sports Exerc* 36(12): 2073-81
3. Layman, D.K. (2003). "The role of leucine in weight loss diets and glucose homeostasis." *J Nutr* 133(1): 261S-267S
4. Layman, D.K., R.A. Boileau, et al. (2003). "A reduced ratio of dietary carbohydrate to protein improves body composition and blood lipid profiles during weight loss in adult women." *J Nutr* 133(2): 411-7
5. Abubakar, A, et al. 1998. Structural analysis of new antihypertensive peptides derived from cheese whey protein by proteinase K digestion. *J Dairy Sci.* 81: 3131-3138.
6. Bounous G, Kongshavn PA, Gold P. 1988. The immunoenhancing property of dietary whey protein concentrate. *Clin Invest Med* 11;4:271-278.



U.S. Whey Protein Research Consortium

2101 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061 U.S.A.
U.S.A. 703-528-3049
U.S.A. 703-528-3705 fax

Appendix: Abstract

- Title:** Whey protein decreases body weight and fat in supplemented overweight and obese adults.
- Presentation Start:** April 2, Sun., 4:15 PM
- Author Block:** D.J. Baer, K.S. Stote, B.A. Clevidence, G.K. Harris, D.R. Paul and W.V. Rumpler
- Abstract Body:** Available from: <http://www.eb2006-online.com> Abstract # 267.6

Whey protein decreases body weight and fat in supplemented overweight and obese adults

David J. Baer, Kim S. Stote, Beverly A. Clevidence, G. Keith Harris, David Paul, and William V. Rumpler. U.S. Department of Agriculture, Beltsville Human Nutrition Research Center, Beltsville, MD 20705

A double-blind, randomized clinical trial was conducted to determine the effects of supplemental whey protein, compared to soy protein and an isocaloric amount of carbohydrate, on body weight and composition in free-living, overweight and obese (BMI > 28 and < 38) but otherwise healthy individuals. Ninety individuals were randomized for 6 mo to one of three treatment groups: 1) 60 g/d of whey protein, 2) 60 g/d of soy protein or 3) a control group receiving 60 g/d of carbohydrate. Each week, subjects were weighed. Body composition was measured weekly by BIA, monthly by BodPod, and at the beginning and end of the intervention, by DEXA. After 6 mo, body weight of the group consuming the whey protein was 1.8 kg (2%) lower than the group consuming the carbohydrate treatment ($P < 0.006$). Body weight was not different between the groups consuming the soy protein and whey protein ($P > 0.10$) or between the groups consuming the soy protein and carbohydrate treatment ($P > 0.10$). After 6 mo, body fat (from BodPod) was 2.3 kg lower in the group consuming the whey protein compared to the group consuming the carbohydrate treatment ($P < 0.005$). Lean body mass was not different among groups. There was no significant effect of treatment on body composition measured by bioelectrical impedance or by DEXA. Waist circumference was lower ($P < 0.0001$) in the group consuming the whey protein than the two other groups. Compared to added calories from carbohydrate, added calories from whey protein can decrease body weight. The change in body weight is associated with a decrease in body fat without affecting lean body mass.