



# HerbClip™

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**FILE: ■ White Kidney Bean (*Phaseolus vulgaris*)**

**■ Obesity**

**■ Weight Loss**

**■ Carbohydrates**

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**RE: White Kidney Bean's Potential Role in Weight Loss**

Meiss D. Reducing carbohydrate calories with bean extract. *Altern Complement Ther.* August 2004:217–219.

Nearly two-thirds of all U.S. adults are either obese or overweight, increasing their risk of diabetes, heart disease, cancer, degenerative joint disease, and other health complications.<sup>1</sup> Although there are many popular diets, such as the low-carbohydrate, high-protein, high-fat Atkins diet, or the conventional low-calorie, low-fat diet, long-term compliance and weight reduction are poor.<sup>2</sup> Researchers have diligently searched for dietary supplements to help people lose weight. Many of these supplements have come in the form of dietary stimulants such as ephedra (*Ephedra sinensis*), banned in the United States in 2004. The current article discusses the potential of an extract from the white kidney bean (*Phaseolus vulgaris*) to induce weight loss by decreasing carbohydrate digestion and absorption.

Nearly one-half of calories in the standard American diet are derived from starches, or complex carbohydrates, found primarily in potatoes, rice, bread, pasta, and other refined wheat products. Prior to absorption, these carbohydrates must first be digested and absorbed. The enzyme that digests carbohydrates is alpha-amylase. A naturally occurring alpha-amylase inhibitor was discovered in beans and wheat in the 1940s and isolated from the white kidney bean three decades later.

An independent laboratory study found that one gram of a proprietary white bean extract marketed by Pharmachem Laboratories (Kearney, New Jersey) neutralized 2,250 starch calories. This is equivalent to one pound of pasta or more than one loaf of bread. Two pilot studies conducted by Pharmachem Laboratories on 20 volunteers found that 1,500 mg of their white kidney bean extract, called Phase 2<sup>®</sup>, decreased starch absorption by 57-85%.

In one randomized, placebo-controlled trial<sup>3,4</sup> 40 overweight volunteers took 400 mg white bean extract three times a day before meals for 30 days. Volunteers lost an average 7.7

pounds, 85% of which was fat loss. In a second randomized, placebo-controlled trial<sup>4</sup>, 60 overweight volunteers took 445 mg white bean extract plus 50 mcg chromium once a day before food for 90 days to study the effects of white kidney bean extract on weight loss. Chromium is a nutrient commonly used to decrease insulin resistance, which helps enables the body to better utilize sugars for energy instead of storing them as fat. Volunteers in the treatment group lost an average 6.45 pounds compared to 0.76 pounds in the placebo group. This weight loss occurred as fat mass; lean body weight was not decreased. An 8-week study<sup>5</sup> randomized 27 volunteers to take either 1500 mg white bean extract or placebo twice a day with meals. Supplementation with white bean extract resulted in an average weight loss of 3.79 pounds, compared to 1.65 pounds in the placebo group. No adverse events were reported in the any of the studies.

The randomized, controlled trials provide encouraging data for people needing to lose weight. Diet and exercise are first-line therapies for people wanting to reach their ideal body weight. White bean extract may be a safe and effective addition to weight loss programs. People who take white bean extract and exercise may lose even more weight than those who just take white bean extract alone. Additional research is needed to determine the most effective dosage of white bean extract and to determine the additive effects of exercise and white bean extract together.

—John Neustadt, ND

## References

<sup>1</sup>Vastag B. Obesity Is Now on Everyone's Plate. *JAMA*. Mar 10 2004;291(10):1186-1188.

<sup>2</sup>Foster GD, Wyatt HR, Hill JO, et al. A Randomized Trial of a Low-Carbohydrate Diet for Obesity. *N Engl J Med*. May 22, 2003 2003;348(21):2082-2090.

<sup>3</sup>Thom E. A randomized, double-blind, placebo-controlled trial of a new weight-reducing agent of natural origin. *J Int Med Res*. Sep-Oct 2000;28(5):229-233.

<sup>4</sup>Meiss DE, Ballerini R. Effectiveness of Phase 2, a natural alpha-amylase inhibitor, for weight loss: a randomized, double-blind, placebo-controlled study. Paper presented at: Scripps Clinic Natural Supplements in Evidence-Based Practice Conference; January 16-18, 2004; La Jolla, CA.

<sup>5</sup>Udani J, Hardy M, Madsen DC. Blocking carbohydrate absorption and weight loss: a clinical trial using Phase 2 brand proprietary fractionated white bean extract. *Altern Med Rev*. Mar 2004;9(1):63-69.

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