



# About Mannatech's OsoLean® Product



## Insight From Mannatech's R&D Department

### What Is OsoLean Powder?

Mannatech's OsoLean powder is an all-natural, dairy-derived dietary supplement intended for use in conjunction with a 500-calorie reduced diet (such as the OsoLean Plan) and proper exercise by individuals who want to manage their weight and improve body composition.\* The OsoLean powder consists of a concentrated whey mineral complex and partially hydrolyzed whey protein isolate, which together provide consumers with 22% of the Daily Value of calcium and 20% of the Daily Reference Value of protein† per serving.

### How Does OsoLean Powder Work?

There are a number of possible mechanisms for the role of whey proteins in weight management (1). Partially hydrolyzed whey protein isolate is rich in protein and small bioactive peptides that contain the branched-chain amino acids leucine, isoleucine and valine. In the body, these amino acids are used to make protein and generate energy in muscle cells, helping to maintain muscle mass while dieting or exercising. Increasing daily protein intake can also enhance the feeling of fullness, which may lead to better appetite control, an important factor when trying to reduce caloric intake. In addition, both calcium and whey peptides are thought to be involved in the breakdown of stored fat and fat cell metabolism. Together, these mechanisms may reduce appetite, help promote fat loss, and maintain lean muscle mass in conjunction with a low calorie diet such as the OsoLean Plan and proper exercise.\*

### What Studies Have Been Published on OsoLean Powder?

When used in conjunction with a 500-calorie reduced diet and proper exercise, OsoLean powder has been clinically shown to help promote fat loss while sparing lean muscle. While both control subjects and subjects consuming the whey protein supplement lost similar amounts of weight, the control group's weight loss consisted of 50% fat and 50% muscle while the supplement group's weight loss consisted of over 70% fat and less than 30% muscle (2).\*

A preliminary, open-label clinical study also demonstrated effects of OsoLean powder on weight, waist circumference and appetite. After 8 weeks of consuming OsoLean powder in conjunction with the OsoLean Plan and proper exercise, participants reported significant decreases in weight, Body Mass Index (BMI) and centimeters around their waists (Figures 1 and 2).<sup>Δ</sup> They also reported significant improvements in appetite control and energy levels (3).\*

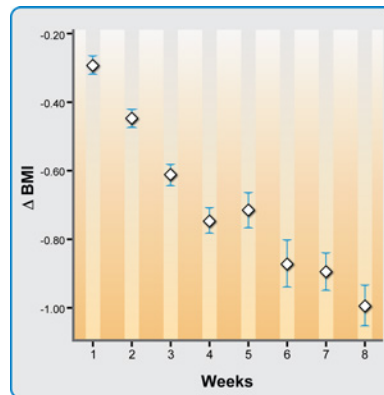


Figure 1. Decrease in average BMI during 8 weeks of specialized whey protein supplementation. ( $p < 0.0001$ )

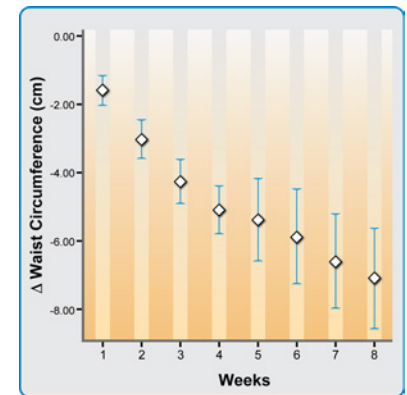


Figure 2. Reduction in waist circumference (cm) during 8 weeks of specialized whey protein supplementation. ( $p < 0.0001$ )

### What Safety Information Is Available for OsoLean Powder?

Our OsoLean powder is comprised of protein and minerals derived from whey, a natural component of milk, and is therefore safe to consume in a similar manner. The OsoLean powder also contains lecithin from non-genetically modified (non-GMO) soy. The supplement has been tested and confirmed gluten-free. However, people who are allergic or sensitive to soy and/or dairy ingredients, such as lactose or casein, may experience adverse reactions while consuming this product and are advised to consult a healthcare professional before use. Children, pregnant or nursing women, and individuals who have undergone weight-reduction surgery are also advised to consult a healthcare professional before using OsoLean powder.

<sup>†</sup>Based on 2,000 calories a day for adults

<sup>Δ</sup>Individual results may vary. Mannatech's OsoLean powder should be used in conjunction a reduced calorie diet and proper exercise.

#### REFERENCES

- Gerdes SK. U.S. Whey Ingredients and Weight Management. Kenny A, editor. <http://www.usdec.org/files/PDFs/2008Monographs/WeighWeightManagement%5FEnglish.pdf>. 2003. U.S. Dairy Export Council.
- Frestedt JL, Zenk JL, Kuskowski MA, Ward LS, Bastian ED. A whey-protein supplement increases fat loss and spares lean muscle in obese subjects: a randomized human clinical study. *Nutr Metab (Lond)* 2008; 5:8.
- Sinnott RA, Maddala RL, Nelson ED, Bae S, Singh KP, Anderson JA. The modifying effects of a calcium-rich whey protein supplement (OsoLean™ Powder) on weight loss and waist circumference in overweight subjects: a preliminary study. *Open Nutraceuticals J* 2009; 2:36-41.

\* These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.