

Most Weight-Loss Supplements are Ineffective

A recent review of the body of evidence around weight-loss supplements performed at Oregon State University and published in the *International Journal of Sport Nutrition and Exercise Metabolism* suggests, again, that a magic pill does not exist for weight loss. Supplements are a \$2.4 billion dollar business in the United States, but the data collected on hundreds of weight-loss supplements showed that, for the most part, the results they produce are disappointing. The primary researcher, Dr. Manore, a professor of nutrition and exercise sciences at OSU, suggests “no research evidence exists that any single product results in significant weight loss – and many have detrimental health benefits.” Among those evaluated, a few products, including green tea, fiber and low-fat dairy supplements, demonstrated a modest weight-loss benefit of three to four pounds (two kilograms), but an important caveat is these supplements were tested as part of a reduced-calorie diet. Consistent with the belief of most experts, Manore said that “for most people, unless you alter your diet and get daily exercise, no over-the-counter supplement is going to have a big impact.”

The research categorized the supplements into four functional groups: products such as chitosan that block absorption of fat or carbohydrates; stimulants such as caffeine or ephedra that increase metabolism; products such as conjugated linoleic acid that claim to change the body composition by decreasing fat; and appetite suppressants such as soluble fibers. Most of the products showed less than a kilogram difference in weight loss when compared to the placebo groups. The investigation found that many of the products evaluated had not been examined for effectiveness via randomized clinical trials.

Commonly, the supplements were used in conjunction with a low-calorie diet, and most of the research studies did not include exercise. Ultimately, the idea of a pill to reduce body weight does not look promising. “I don't know how you eliminate exercise from the equation,” Manore said. “The data is very strong that exercise is crucial to not only losing weight and preserving muscle mass, but keeping the weight off.”

The main issue is a factor of energy law. Energy cannot be created or destroyed. Therefore, if energy is in the body, the only way to remove it is to use it, suggesting that daily caloric expenditure must be lower than calories consumed in order for weight loss to occur. Taking a pill cannot make energy disappear, so it can only work in one of two ways: it can either block energy in or increase energy output, but it still has to work within the confines of human metabolism and natural law. “What people want is to lose weight and maintain or increase lean tissue mass,” Manore said. “There is no evidence that any one supplement does this.” According to the research, many supplements, like medicines, have the potential for side effects ranging from physiological discomforts to strokes and heart problems.

These findings support the continued recommendation that the key to weight loss is to eat controlled quantities of natural foods and avoid processed foods. This means consuming more whole grains, fruits, vegetables and lean proteins while reducing the intake of high-fat and processed carbohydrate foods. Most importantly, a healthy diet should be combined with high levels of physical activity. Depending on the individual, it may be helpful to increase the amount of protein relative to activity. “Adding fiber, calcium, protein and drinking

green tea can help," Manore said. "But none of these will have much effect unless you exercise and eat fruits and vegetables."

Manore's general guidelines for a healthy lifestyle include:

- Do not leave the house in the morning without having a plan for dinner. Spontaneous eating often results in poor food choices.
- If you do eat out, start your meal with a large salad with low-calorie dressing or a broth-based soup. You will feel much fuller and are less likely to eat your entire entrée. Better yet, split your entrée with a dining companion, or just order an appetizer in addition to your soup or salad.
- Find ways to keep moving, especially if you have a sedentary job. Manore said she tries to put calls on speakerphone so she can walk around while talking. During long meetings, ask if you can stand or pace for periods so you don't remain seated the entire time.
- Incorporate vegetables into as many meals as possible. Shred vegetables into your pasta sauce, add them into meat, or buy bags of cut-up, pre-washed fruits and vegetables to make on-the-go eating easy and convenient.
- Increase your fiber. Most Americans don't get nearly enough fiber. When possible, eat

"wet" sources of fiber rather than dry – cooked oatmeal makes you feel fuller than a fiber cracker.

- Make sure to eat whole fruits and vegetables instead of drinking your calories. Eat an apple rather than drink apple juice. Look at items that seem similar and eat the one that physically takes up more space. For example, eating 100 calories of grapes rather than 100 calories of raisins will make you feel fuller.
- Eliminate processed foods. Manore said research increasingly shows that foods that are harder to digest (such as high-fiber foods) have a greater "thermic effect" – more simply, they boost your metabolism.

It is the combined effort of energy control, physical activity, and exercise that makes weight loss attainable and sustainable. Acute efforts such as significant caloric restriction can cause loss of lean mass and is not a viable long-term strategy. Likewise, energy isolation and extreme adjustments fail to provide long-term efficacy. The best strategy is to start the process conservatively and be consistent; all research points to behavior change as the underlying mechanism for weight loss.