



## Walnuts for Weight Control

*Satiety-boosting mechanism found in walnuts*



Fiber, protein, brain boosting omega-3 fatty acids, what's not to love about walnuts? Past research has linked eating nuts with a variety of benefits including reduced risk of breast and colon cancer, improved stress management, heart health, and now new research has revealed how the brain responds to their satiating qualities.

Researchers at Beth Israel Deaconess Medical Center (BIDMC) in Boston, MA designed a double-blind, placebo controlled study to zone in on how walnut consumption helps squash food cravings. Participants reported feeling full while including walnuts in the diet, and brain imaging results may have revealed the mechanism responsible.

As published in *Diabetes Obesity and Metabolism*, ten participants with obesity were recruited to live in a controlled environment for two-five day sessions, allowing researchers to observe food and beverage intake accurately, avoiding a major drawback of many observational studies. During one session, participants received a daily smoothie with 48g (or 1 serving according to the American Diabetes Association) of ground walnuts. They received a similar smoothie during their other five day stay, minus the walnuts. Both tasted exactly the same and neither researchers nor participants knew the contents of the smoothie at any time.

At the end of each five day period, participants completed a Visual Analog Scale (VAS) which measured their feelings of hunger, appetite and fullness. They were also shown a variety of images from inedible items to low calorie foods to highly calorific and desirable foods like hamburgers and desserts while brain imaging was in progress.

Walnut eaters reported feeling less hungry via VAS, plus they had increased activity in the right insula of the brain while viewing desirable foods. Placebo drinkers did not record this activity. The insula is thought to be involved in functions like self-

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awareness, perception and cognitive control, making these findings especially interesting for researchers as it indicates that participants were paying more attention to food choices, while reporting less hunger though visually stimulated. In other words, walnuts could help minimize compulsions to eat calorific foods. This is exciting because it provides a measureable framework for future studies regarding weight control and satiety.

Imagine having a nut or two to help you make better food choices? If you're interested in adding walnuts to your meals to tamp down your appetite, try our [Baby Lettuces with Green Apple, Walnuts and Dried Cranberries](#) salad.

## Pumpkin Seeds for your Pumper

*Zinc levels affect heart's ability to handle oxidative stress*



Zinc – it helps you feel good, it helps you look good, and it may help your heart function at its best too. Zinc is a mineral found in oysters, lentils, clams, cashews and, you guessed it, pumpkin seeds! It's an important nutrient, supporting immunity, healthy skin, cell structure, reproduction and new research suggests zinc levels may help the heart handle damage from free radicals.

Recent research out of the Technical University of Munich explored the relationship between total zinc levels in the body and oxidative stress. The study, published in the *Journal of Nutrition* observed heart concentrations of antioxidants glutathione and vitamin E in animals, and how they changed when nutritional zinc was omitted from the diet for several days. As zinc levels decreased, so did antioxidant levels, creating an environment where it would be difficult to neutralize free radicals, leaving the heart susceptible to cell damage. Researchers also noted that genes responsible for cell death were activated as a result of the declining zinc levels. Eventually the heart tried to compensate for the low levels, by moving zinc from other organs like the liver and kidneys. While true zinc deficiency is rare but well studied, very little is known about the effects of short term zinc deficit and more research is needed in this area.

If this holds true for humans, zinc levels play an important role in cardiac health, potentially mitigating effects of oxidative stress, which can increase risk for heart disease. Men and women should aim for 11 and 8mg/day respectively.

As autumn rolls in and the weather cools down, we suggest [Tuscan Herb White Bean Soup](#) and [Mexican Chicken Salad with Pumpkin Seed Pesto](#) to help keep your zinc levels steady.

Also, try incorporating these other sources:

			Men(% DV)	Women(%DV)
Baked Beans	1c	5.79mg	53%	72%
Lentils	1c	2.51mg	23%	31%
White Beans	1c	2.47mg	22%	31%
Pumpkin Seeds	1oz	2.17mg	19%	26%
Oat Bran, cooked	1c	1.16mg	11%	15%

Here's an idea, after you've carved your seasonal pumpkin, reserve and rinse the seeds in cold running water. Once dry, spread onto parchment lined baking sheet. Spray with vegetable oil, season lightly with salt and pepper and roast at 300F for about 15 minutes or until golden. Once cool, enjoy as an addictive snack, or topping for yogurt and salads.

# Good Ol' Fashioned Home Cooking

*An inexpensive way to balance your plate*



Healthy eating doesn't have to clean out your wallet—though many people associate healthy foods with hefty grocery bills. A study published in the *American Journal of Preventive Medicine* reaffirmed that meals prepared and enjoyed at home are associated with diets lower in calories, fat and sodium. It also found that those who consumed home cooked meals more frequently instead of dining out, not only had higher quality diets, but also enjoyed them at NO additional cost!

Researchers reviewed data for a total of 437 household shoppers between 21-55 years old. This included food frequency questionnaires and self-reported data like food attitudes and expenses. Diet quality was measured using Healthy Eating Index (HEI) scores, which measures compliance with the USDA Dietary Guidelines for Americans.

It's not a surprise that married respondents, unemployed respondents and those in larger households congregated for home cooked meals more frequently than unmarried or single-person household respondents and those without children. Interestingly, age, gender, race, education and income did not play a role in these findings.

The takeaway from this study is that cooking dinner is not only an effective way to comply with dietary recommendations, but also a way to have better health outcomes, and it may be more affordable than you think! If you find yourself dining out more frequently, here are a few steps you can take to increase the amount of meals you prepare at home while keeping more of that green in your wallet:

1. Explore your cabinets.  
You don't need a ton of equipment or recipes in your repertoire to get started, but you will need a few basic staples like a frying pan, sheet pan, sauce pot and baking dish.
2. Find a few one pot recipes.  
Try chili, vegetable lasagna or stir fry and make them frequently.
3. Write it down.  
Take time to make a shopping list or if you're starved for time, try home shopping from your local grocer. They do all the work for you and you don't fall victim to impulse buys!
4. Batch meals turn into homemade frozen dinners!  
Save time by preparing extra food and storing leftovers in individual containers for a quick weeknight meal.
5. Simplicity is key.  
Food that tastes good and is good for you doesn't have to be fancy.

Try some of these Dole favorites this week: [Mushroom, Spinach & Kale Gnocchi](#), [Spinach-Eggplant Enchiladas](#), [Great Caesar's Pumpkin "Pie"](#).

## Vegetarian Bonus

*Vegetarian diets increase weight loss and metabolism over low-calorie diets*



The case for plant based diets has been gaining steam in recent years. From The Meatless Monday Campaign to the “Year of the Pulse”, it shouldn’t be a surprise that food manufacturers are coming to the table with items like BBQ jackfruit, chickpea pasta and spiralized vegetables making it easier to reap the benefits of a vegetarian diet such as reduced risk of obesity, cardiovascular disease and cancer. A new study published in the *Journal of the American College of Nutrition* finds that vegetarian diets promote fat loss and increase metabolism more effectively than standard weight loss diets - just one more reason to go green!

Researchers evaluated the effectiveness of the diets by having 74 participants with Type 2 Diabetes follow either a vegetarian or conventional weight loss diet. The vegetarian diet included 60% carbohydrates, 15% protein, 25% fat. The Conventional diet had 50% carbohydrates, 20% protein and 30% fat. Both diets were designed to reduce energy intake by 500 calories based on indirect calorimetry and all meals for the study were provided over the six month study period. Exercise was part of the regimen as well.

Researchers evaluated participants at three and six months. Interestingly the vegetarian diet was responsible for 13.6lb weight loss, compared to 7lbs on the standard diet, almost twice as much! Fat storage was measured inside and around the muscle via MRI, revealing that intramuscular fat was reduced more as a result of the vegetarian diet and fat on the surface of the muscles was only reduced in response to the vegetarian diet. These findings illustrate great benefits, specifically for individuals with diabetes as subfacial, or fat on the surface of muscle, has been linked with insulin resistance.

What does a vegetarian diet and eliminating pesky muscle fat mean for you? If you have diabetes, glucose metabolism may improve by helping your muscles work more effectively. It’s great news for the elderly because it could help improve strength and mobility too. Everyone can benefit from increased metabolism when muscle fat is reduced, making us lean, green, calorie-burning machines.

Here’s some vegetarian inspiration for you:

- Start the day right with [Banana Bran Breakfast Muffins](#)
- Lunch with our [Panzanella Mediterranean Salad](#)
- Feed a group with this veggie packed [Lasagna](#)
- End the night on a sweet note with this [Simply Good Cobbler](#)



## Tricks of the Trade

### *Private label reformulation as way to decrease overall calorie intake*



Most of us are loyal to certain brands of whole grain cereal, bread and other staple grocery items. But once that item makes it to your pantry shopping list, just how often do you re-visit the nutrition facts panel to make sure nothing has changed? New research published in the *International Journal of Behavioral Nutrition and Physical Activity* shows that “silent” product reformulation may be an overlooked way to decrease calorie consumption by consumers.

Researchers analyzed sales data before and after reformulation of eight private label products for a Danish retailer. Modifications focused on maintaining original taste and appearance while removing calories from fat and sugar. The retailer was able to reduce calories in their private label yogurt and mayonnaise by up to 17% and in baked goods by 5-10%. The nutrition fact labels were updated to reflect changes, but the changes were not formally announced to consumers.

Researchers found that the number of calories sold dropped up to 7.5% after lower calorie products hit the shelves. Some customers did opt for higher calorie cereals and buns, but these swaps were outweighed by the overall beneficial effects of the reformulation.

These reformulations are a great example of the food industry and retailer efforts to reduce overweight and obesity across the globe. The decision not to announce the changes can come with consequences; the food industry risks losing the competitive advantage of appealing to the health-oriented consumer when they make healthy changes without announcing them, while on the other hand, should they announce the changes, customers may perceive a change in quality of the product and opt for another brand. It's important to note that reformulations can work both ways and companies can increase sodium, fat and sugar without officially announcing it. So savvy consumers beware, turn those packages to the side and ensure that those go-to pantry items continue to meet your personal dietary and nutrient preferences.

## The Fat Flip

### *Mystery behind fat storage mechanism revealed*



Today we're talking about two types of fat cells: brown fat and white fat. White fat cells store energy and contribute to weight gain, while brown fat expends energy and promotes weight loss. Understanding what triggers white fat to go brown and back again could provide great insights into how to treat obesity, a major risk factor for heart disease, diabetes and cancer. Experimental research published in *Cell Metabolism* investigated how the process of energy expenditure and storage works in both obese and normal weight mice.

Researchers focused on the brain, specifically a hypothalamic protein and insulin receptor called TCPTP, observing the effects of limiting or reducing TCPTP during meals. At its most basic level, after meals concentrations of both insulin and glucose increase in the blood, signaling

the browning of fat increasing energy expenditure, while when insulin concentration in the blood is low, white fat is signaled for energy storage. Lead researcher, Professor Tony Tiganis, explains that in the context of obesity, the switch stays on all the time and doesn't turn off after feeding repressing the conversion of white fat to brown, leading to energy conservation.

As a result of this study, there is a better understanding of the key role TCPTP plays in this process. Investigators were able to see that removing TCPTP in obese subjects turned on browning of fat after feeding to promote weight loss. They even saw that when TCPTP was completely withheld, obesity was avoided, even with overfeeding. There is excitement around these results because for the first time the mechanism behind the switch from brown fat to white fat and brown again has been revealed.

While we continue to understand how this "switch" works in humans, there's no quick fix to shed pounds. The best recommendation to achieve a healthy weight is to stay active and eat a balanced diet rich in fruit and vegetables, which may reduce your risk for obesity and chronic disease.

## FEATURED RECIPE

### Great Caesar's Pumpkin "Pie"

#### *Ingredients:*

- 1 medium butternut squash
- Nonstick olive oil spray
- 2 tablespoons olive oil
- 1 cup sliced onion
- 12 oz whole-wheat pizza dough
- ¼ cup grated Asiago cheese
- 1 pkg. DOLE® Ultimate Caesar Salad Kit
- Salt and pepper, to taste
- 2 (6-inch) jack-o'-lantern tortillas (see recipe below)



**Makes:** 8 Servings

**Total Time:** 50 Minutes

#### *Directions:*

1. **PREHEAT** oven to 450°F
2. **PEEL** skin off butternut squash. Cut in half, scoop out seeds, and thinly slice. Arrange on baking pan. Spray with nonstick olive oil spray and season with salt and pepper. Roast squash 20 minutes or until soft.
3. **HEAT** olive oil in skillet and cook onion 8 minutes on medium heat or until lightly brown. Set aside.
3. **ROLL** pizza dough into 14-inch round. Spread onions and cheese over the dough and arrange squash on top. Bake 20 minutes or until crust is crisp.
4. **TOSS** together DOLE Ultimate Caesar Salad Kit. Arrange salad over the top of the pizza. Decorate top with jack-o'-lantern tortilla.

**Jack-o'-lantern tortilla:** Cut a pumpkin stem and rounded edge of a 6-inch corn or flour tortilla. Spray with nonstick olive oil spray and season with salt. Broil 2 to 3 minutes or until lightly browned. Remove and set aside.

**Tip:** You can turn the jack-o'-lantern tortilla into a ghoulish quesadilla by sandwiching shredded cheese between a cut tortilla and an uncut tortilla. Heat until the cheese melts. Serve with salsa!

# EDITORIAL TEAM

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