



NUTRITION NEWS ABOUT MUSHROOMS

March 2017

SUSTAINABLE EATING IS HEALTHY EATING

By: Katie Cavuto, MS, RD

A growing global population and increased environmental threats are two of the many reasons conversations around sustainable eating continue to trend. But what does sustainable eating mean? While the term sustainable can be broad, the concept of sustainable eating can be simplified to this phrase: Consume foods that are healthy for your body and the environment. In short, sustainable foods tend to be whole foods, without packaging or labels and sustainable food systems aim to minimize environmental impact all the while ensuring nourishing foods are available to everyone. While it may seem that much of the responsibility should fall on the shoulders of food production systems, there are several simple ways consumer habits can create a substantial and positive impact. Moreover, many of these habits are congruent with current healthy eating guidelines.

Practice Mindful Eating

Bringing awareness to our food choices from food shopping and cooking to mealtime is the first step in understanding and appreciating food sustainability. Pause to consider where your food comes from. Connect with the many people it takes to bring this food to your plate. Think about the processing a food may have gone through to get to your plate. Ask yourself, “Is this food nourishing? Does this food represent my values? Does the decision to eat this food support the wellbeing of the planet?” While perfection doesn’t exist, connecting to our food in a more meaningful way can shift the way we eat from the choices we make to the amount we consume. You can be mindful about your portion sizes as well. Tune in to your hunger cues and only eat what you need for satiety. Mindful eating practices are the foundation to understanding and implementing the remaining tips.

Buy Local

While it may seem like common practice to eat strawberries in the middle of winter, it’s actually a luxury that impacts the environment and your health. Pause to consider the distance that strawberry had to travel from the farm to your plate. Did you know that transportation is one of the largest producers of green house gas emissions?¹ Further more, locally sourced, seasonal foods are nutrient dense and delicious as they are picked at the peak of ripeness and easily delivered to your local market. They can often be less

expensive to boot. You could even consider supporting a local farm by joining community supported agriculture (CSA) or shopping at a farmer’s market to further embolden your appreciation for the local food movement.

Eat More Produce

Only 1 in 10 Americans eat enough fruits and vegetables². Making the simple shift to a more plant-centric plate not only boasts a plethora of health benefits, but also encourages farmers to grow more fruits and vegetables, thus diversifying the farming landscape. By increasing the servings of fruits and vegetables, like mushrooms, at every meal, less sustainable foods are naturally crowded out. Plus, a new study measuring the water, energy and carbon emissions required to grow and harvest fresh mushrooms in the United States shows that mushrooms are not only healthy on the plate, they’re also gentle on the planet. The study finds production of a pound of mushrooms requires only 1.8 gallons of water and 1.0 kilowatt hours of energy, and generates only .7 pounds of CO₂ equivalent emissions. In addition, the annual average yield of mushrooms is 7.1 pounds per square foot – meaning up to 1 million pounds of mushrooms can be produced on just one acre.³

Reduce Meat Consumption

The 2015-2020 Dietary Guidelines encourage healthy eating patterns that are low in saturated fat, which is found in animal proteins⁴. From meatless meals to plant-centric plates, there are many, delicious ways to gently decrease meat consumption. A simple blend of chopped mushrooms can be folded into ground meat, creating a mouthwatering flavor, as well as trimming fat, calories and money spent.

Create Less Trash

Food waste is a huge problem, with estimates that nearly 30 to 40 percent of the food produced in the United States is wasted each year.⁵ Arming clients with meal-planning tools and streamlined shopping lists can help to reduce food waste. As can recipes that utilize a whole food; beetroot can be roasted and the greens can be sautéed. Moreover, a diet rich in whole foods is more nutrient dense than most processed foods, which also create more trash in the form of packaging.



Katie Cavuto, RD is a Philadelphia-based culinary nutritionist and wellness advocate. She uses mindfulness practices, self-love and food gratitude as a grounding foundation to her wellness initiatives. She is founder of [Nourish.Breathe.Thrive.](#), the Nutrition Advisor for Unite For Her, an organization that supports newly diagnosed breast cancer patients and the nutritionist for the Philadelphia Phillies. She appears in regular nutrition and cooking segments on local and national TV. Her writing and recipes have been showcased nationally in *Eating Well Magazine*, *Shape Magazine*, *O, the Oprah Magazine*, *Parents Magazine* and more.

THE LATEST MUSHROOM RESEARCH

Mushroom Polysaccharides – a Review

Looking for a current resource on some of the health promoting functions of mushroom polysaccharides? Polysaccharides are complex carbohydrates composed of 10 or more linear or branched simple sugars. Mushroom polysaccharides include beta-glucans and chitin, the cell wall structure of fungi, rather than the cellulose found in plants. Mendel Friedman, Agricultural Research Service, U.S. Department of Agriculture, has compiled a comprehensive review on the composition and chemistry of various edible and medicinal mushrooms and their anti-oxidative, anti-inflammatory and immune enhancing functions. Published in *Foods* 2016, 5(4), 80; the review is available Open Access at <http://www.mdpi.com/2304-8158/5/4/80>.

A potential beneficial action of mushroom polysaccharides may be associated with changes in the gut microbiota. Prebiotics, fermentable non-digestible polysaccharides including beta-glucans and other fibers, can change the gastrointestinal microbiota and possibly affect energy regulation, which is out of balance in obesity.

Few clinical trials have investigated the anti-obesity properties of mushrooms associated with polysaccharides. The review cited a 4-day clinical trial⁶ with men and women with obesity or type-2 diabetes to determine the effect of replacing 20% of higher energy lean ground

beef in the diet with 20% of lower energy ground white button mushrooms (*Agaricus bisporus*). Substituting meat with mushroom-containing lunches with energy values of 783 and 339 kcal, respectively, reduced daily energy and fat intake while not negatively affecting palatability, appetite, and satiety.

A 1-year clinical trial⁷ with overweight men and women discovered that those consuming a mushroom diet matched in calories to a meat diet, lost weight, had lower blood pressure and plasma lipids (total and LDL cholesterol and triglycerides), fasting glucose levels, and reduced levels of the inflammation biomarker hs-CRP associated with obesity. Participants on the mushroom diet had lower BMI, lower calorie and fat intakes, reduced waist circumferences and high satiety without affecting palatability than those on the meat diet.

These studies were not specifically designed to determine whether mushroom polysaccharides were the bioactive compounds underlying these benefits. However, the results suggest that mushrooms' nutrients, bioactive compounds, and functional ability to replace higher energy foods in recipes support the overall health promoting benefits of mushroom consumption and warrant additional research on mushroom polysaccharides.

CLIENT EDUCATION RESOURCE

With Earth Day (April 22nd) around the corner, speak up about nutrition, health and sustainability to your clients, shoppers, the media or your readers. Empower the public with ways they can promote sustainability with their own forks. The attached handout provides five tips you can share with the public about how to eat more sustainably and shares detailed information on brand new research that shows mushrooms are not only healthy on the plate, they're gentle on the planet, too.

[Click here to view the Mushroom Sustainability Story handout.](#)



RD MUSHROOM LOVE IN THE MEDIA

How to Eat Less Beef and Still Get Plenty of Protein via [Men's Journal](#)

"Eat more morels. Or shiitakes, portobellos, enokis, you name it. Mushrooms offer a meaty texture and taste, making them a great way to add meatiness to vegetarian dishes and recipes light on meat, helping to reduce calories and saturated fat. Add finely chopped mushrooms to recipe staples, like burger patties and meatballs. Sauté mushrooms in pasta, stews, and stir-fries." – Michelle Dudash, RDN

Is Mushroom Coffee the Next Superfood Trend? via [Health.com](#)

"There is some research to show that the maitake mushroom may lower blood glucose in patients with type 2 [diabetes](#)," – Cynthia Sass, RD

Healthy Recipe: Mushroom, Kale & Lentil Hash via [Philly.com](#)

Lindsey Kane, MS, RD, shares a healthy lentil hash recipes, that features mushrooms and kale.

5 Nutrition Trends You Should Follow in 2017 via [U.S. News & World Report](#)

"Who doesn't love a good burger? Clearly, most Americans do because they eat an estimated 50 billion a year. That's a lot of beef, which just happens to have one of the largest environmental footprints of all animal-based foods people eat. To help, chefs are reinventing burgers to be healthier and more sustainable – without compromising taste. The James Beard Foundation's [Blended Burger Project](#), for example, calls for chefs across the country to [create burgers](#) that are at least 25 percent fresh chopped mushrooms." – Julie Upton, MS, RD

DID YOU KNOW?

March is [National Nutrition Month!](#)[®]

This year's theme is put your best fork forward, reminding us that each forkful and each small change made counts and adds up over time. This month, encourage your clients to dive deeper into the [leading health benefits behind four common mushroom varieties](#).

To celebrate NNM this year, we've got a revamped dietitian toolkit to share with you, complete with new handouts and a beautiful new design!

[Download your copy today.](#)

Calling all Retail Dietitians! Enter The Mushroom Council's Recipe Contest for a Chance to Win!

The Mushroom Council is excited to partner with Retail Dietitians Business Alliance (RDBA) for our [first recipe contest for supermarket dietitians](#). Running April 5th - May 1st, dietitians will create their own original Blend recipe mixing meat with mushrooms to create healthier, tastier recipes that can easily be demoed or sold in fresh departments at retail. The winner will receive \$1,000 towards a trip to FNCE and his/her recipe will be featured at RDBA's networking reception at FNCE in Chicago.



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1. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> 2. <https://webcache.googleusercontent.com/search?q=cache:KBF9RIFgAJsJ:https://consumer.healthday.com/public-health-information-30/centers-for-disease-control-news-120/only-1-in-10-americans-eats-enough-fruits-and-veggies-cdc-701213.html+&cd=12&hl=en&ct=clnk&gl=us> 3. The Mushroom Sustainability Story: Water, Energy, and Climate Environmental Metrics, 2016 Report. 4. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines/> 5. United States Department of Agriculture. Office of the Chief Economist. Frequently Asked Questions. How much food waste is there in the United States and why does it matter? <https://www.usda.gov/occe/foodwaste/faqs.htm> 6. Cheskin, L.J.; Davis, L.M.; Lipsky, L.M.; Mitola, A.H.; Lycan, T.; Mitchell, V.; Mickle, B.; Adkins, E. Lack of energy compensation over 4 days when white button mushrooms are substituted for beef. *Appetite* 2008, 51, 50–57. 7. Poddar, K.H.; Ames, M.; Hsin-Jen, C.; Feeney, M.J.; Wang, Y.; Cheskin, L.J. Positive effect of mushrooms substituted for meat on body weight, body composition, and health parameters. A 1-year randomized clinical trial. *Appetite* 2013, 71, 379–387.

IN THE KITCHEN WITH MUSHROOMS

Blended Asian Beef Bowl with Cucumber & Carrot Salad

Recipe created by Katie Cavuto, MS, RD



Yield: Serves 4

Ingredients:

- 2 cups cooked jasmine rice
- 2 tablespoons honey
- ¼ cup reduced sodium tamari or soy sauce
- 2 teaspoons sesame oil
- 1 tablespoon rice wine vinegar
- ½ teaspoon crushed red-pepper flakes (optional)
- ¼ teaspoon fresh grated ginger
- 2 tablespoons avocado oil, divided
- 8 ounces cremini mushrooms, finely chopped*
- 3 cloves garlic, minced or grated
- ½ cup diced yellow onion
- 1 pound ground beef
- ¼ cup chopped cilantro
- ¼ cup chopped cashews

Directions:

1. In a small bowl, whisk together honey, soy sauce, sesame oil, red pepper flakes and ginger.
2. Heat one tablespoon of avocado oil in a large skillet over medium high heat. Add the mushrooms and sauté for 2-3 minutes, to brown. Remove the mushrooms from the pan and set aside.
3. In the same pan, add the remaining oil along with the onion and garlic and cook until fragrant, about 2 minutes. Add ground beef and cook until browned, about 3-5 minutes, making sure to crumble the beef as it cooks; drain excess fat.
4. Add the mushrooms back to the pan and stir to combine.
5. Stir in the sauce and simmer until heated through, about 2 minutes.
6. Serve immediately, with the rice. Garnish with cilantro and cucumber and carrot salad (recipe below).

* Note: To chop the mushrooms, pulse in a food processor, stems and caps, until they form a ground-beef like texture.

Cucumber & Carrot Salad

Ingredients:

- 1 large English cucumber, spiralized or thinly sliced
- 2 large carrots, spiralized or thinly sliced
- 2 tablespoons rice wine vinegar
- 1 tablespoon lime juice
- ½ teaspoon lime zest
- 1 tablespoon honey
- 1 teaspoon sesame oil
- Salt and pepper to taste

Directions:

1. In a large bowl, whisk together the rice wine vinegar, lime juice, lime zest, honey and sesame oil. Season with salt and pepper.
2. Add the cucumber and carrot to the bowl and toss together.