



## BACK TO SCHOOL WITH THE BLEND BURGER

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It's that time of the year again – for backpacks, yellow school buses, composition notebooks, and... burgers.

This year, the Mushroom Council is going back to school with The Blend Burger, a meat and mushroom burger that research shows has enhanced flavor and improved nutrition compared to an all-beef burger.<sup>1</sup>

In fact, The Blend Burger has been one of the fastest moving items in school food service in recent years, which can be attributed to its wide acceptance by students, operators, administration, and even parents.

Why do schools love The Blend Burger so much?

- Tastes great
- Extends the portion size, while maintaining school nutrition maximums
- Puts vegetables at the center of the plate
- Adds more nutrients to the plate like vitamin D, B vitamins, antioxidants, and potassium (8% DV)
- Increases holding time due to its extra moisture
- Allows for increased menu and topping flexibility to improve student satisfaction
- Reduces calorie, fat, and sodium intake<sup>1</sup>

The Blend adoption in schools doesn't stop with the burger. School manufacturers are producing approximately 20 different Blend products, including tacos, meatballs, chili, meatloaf, and pasta sauce. The demand for The Blend in schools is gaining momentum too – the USDA commodity

program has ordered seven trucks of mushrooms for the 2015 school year and anticipate ordering eight more by the end of the year.<sup>2</sup>

If you're interested in learning more about getting The Blend in your school or school district, head on over to [www.mushroomsinschools.com](http://www.mushroomsinschools.com) for a wide variety of mushroom and Blend resources for both students and food service directors.



Over 100 school districts are currently menuing The Blend. Here's what a few of them had to say about it:

### **Cincinnati Public Schools**

The Blend Burger is the number two seller in the district. Kids reported, "*The burger is bigger, juicier, and has a better mouth feel than the beef burger.*" The Director reported, "*... they love it! We are also now serving the meatball Blend because the burger had such high acceptance with our students.*"

### **Montgomery County Public Schools**

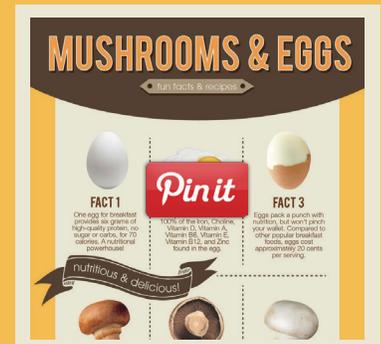
92% of students sampled liked or loved The Blend and preferred it to be added to their menu

### **Maplewood Richmond Heights School District**

90% of the students reported they did not like vegetables, but loved the Turkey Mushroom Blended Meatloaf

# SEPTEMBER IS NATIONAL MUSHROOM MONTH!

Follow the Mushroom Council on [Twitter](#) and [Facebook](#) (and now [Instagram!](#)) to join the mushroom celebrations all month long. Don't miss Chicago-based Chef Billy Parisi's videos on [Six Simple Ways to Cook Mushrooms: Raw, Sautéed, Grilled, Roasted, Loose Blend and Tight Blend](#). And for more mushroom month *eggcitement*, check out our [new infographic](#) which highlights why mushrooms and eggs are better together.



## Client Education Resources

Wish you had all of the nutrition benefits of mushrooms at your fingertips? We created this [Mushroom Nutrition 101 handout](#) to help you educate your clients about the diverse benefits of mushrooms.



## RD Mushroom Love in the Media

### *Health.com: 6 Foods That Can Make You Happier*

"Shrooms are rich in selenium and research has linked a deficiency of this mineral (which doubles as an antioxidant) to a higher risk of depression.<sup>5</sup> Mushrooms are also the only plant source of natural vitamin D, a key nutrient many of us aren't getting enough of. In a study of 44 people with seasonal affective disorder, which affects 11 million Americans, scientists found that those who upped their vitamin D intake experienced an enhanced mood.<sup>6</sup> To bolster your intake, incorporate mushrooms into omelets or quiche at breakfast, salads at lunch, and sauté, grill, or oven roast them at dinner." – *Cynthia Sass, MPH, RD*

### *FOX News: 5 Tips for a Healthier Burger*

"For a juicier, tastier burger, try mixing chopped vegetables into your ground meat patties. Mushrooms, onions, and zucchini are great choices that add delicious flavor and texture, while also providing a host of energy producing nutrients such as thiamin, vitamin B6, vitamin C, and vitamin K. Water-rich vegetables also provide added moisture to burgers, which helps prevent them from drying out on the grill." – *Tanya Zuckerbrot, MS, RD*

### *SELF.com: What People Who Live to 100 Eat Every Day*

"Okinawa, Japan, is a Blue Zone that's known for its year-round sunny weather and beaches, and, of course, having high rates of centenarians in the world. So what's their secret—other than plenty of time chilling out on the sand? They follow the practice of eating something from the land and something from the sea each day. This includes foods such as seaweed, bitter melons, tofu, garlic, brown rice, green tea, and shiitake mushrooms." – *Sarah-Jane Bedwell, RD*

### *Food Network Healthy Eats: How To Make a Healthier Burger*

"Although beef is traditionally used for the burger patty, you can also use chicken, turkey, bison, venison, vegetables, legumes, or mushrooms... Aim for a 4-ounce patty, which tends to shrink to 3 ounces after cooking. If you're using ground meat or poultry, bulk it up with fresh herbs like mint or parsley, or chopped fresh vegetables like peppers, mushrooms or olives." – *Toby Amidor, MS, RD*

# THE LATEST MUSHROOM RESEARCH

## Mushrooms Helping Consumers Increase Intake of Vitamin D

The Scientific Report of the 2015 Dietary Guidelines Advisory Committee (DGAC) identified vitamin D as an under-consumed nutrient of public health concern because low intake is related to poor health outcomes among all ages and genders. Considered essential for bone and skeletal health, the report also cited the growing body of evidence supporting vitamin D's role in cancer, cardiovascular disease, and other chronic diseases.<sup>2</sup>

With limited food sources of vitamin D available – fluid milk and some milk products (e.g., some yogurts), fortified juices, fatty fish, fortified breakfast cereals and some fortified grain products – it is important that consumers know that ultraviolet (UV)-exposed mushrooms can help them increase their intake of this essential nutrient.

All mushrooms contain the vitamin D precursor ergosterol, which converts to vitamin D<sub>2</sub> upon exposure to UV light. Most cultivated mushrooms are exposed to minimal UV light and thus do not contain a large amount of vitamin D. The USDA National Nutrient Database for Standard Reference Release 27 lists the vitamin D content of several cultivated and wild mushrooms available in retail markets. White mushrooms, raw, provide about **5 IU per 70g (1 cup) serving**.<sup>3</sup>

The mushroom industry has used results from controlled studies in commercial settings to identify time and intensity of UV exposure to reach targeted levels of vitamin D as declared on the label.

Researchers wanted to investigate whether consumers could increase vitamin D in mushrooms they purchased at retail not previously exposed commercially to UV light to a nutritionally significant level. They developed and tested a consumer-friendly method in a total of 16 experiments in six different locations during all four seasons under clear, cloudy or overcast days.<sup>4</sup>

According to the results, treatment for as little as 15 minutes on a clear or partly cloudy day consistently increased vitamin D<sub>2</sub> by at least 25% of the 2010 Dietary Reference Intake (150 IU) per 70g serving, and more than 100% of the Dietary Reference Intake (> 600 IU) in many cases. They noted that even with low UV exposure arising from factors such as non-optimal orientation of the mushrooms to sun and mostly cloudy and overcast conditions, the vitamin D content increased to be comparable to the level in other fortified foods, and was substantially greater after longer exposure times. The preliminary results also suggested the same effects are possible with other types of mushrooms, with potentially greater effects of UV exposure in oyster and enoki.<sup>4</sup>

Thus, the researchers suggest that an investment of as little as 15 minutes of exposing mushrooms to sun could provide a low-cost and convenient consumer-based strategy to increase dietary vitamin D.<sup>4</sup>

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*REFERENCES 1. Miller, A.M., Mills, K., Wong, T., Drescher, G., et al. Flavor-Enhancing Properties of Mushrooms in Meat-Based Dishes in Which Sodium Has Been Reduced and Meat Has Been Partially Substituted with Mushrooms. Journal of Food Science (2014). 2.SY 2016 7.1.15 Mushroom Planned Purchases. 3. Executive Summary lines 48-54. 4. United States Department of Agriculture Agricultural Research Service, National Nutrient Database for Standard Reference, Release 27. 5. Phillips KM, Rasor AS (2013) A Nutritionally Meaningful Increase in Vitamin D in Retail Mushrooms is Attainable by Exposure to Sunlight Prior to Consumption. J Nutr Food Sci 3: 236. doi: 10.4172/2155-9600.1000236. This is an Open Access article. 6. Pasco, JA., Jacka, FN., Williams, LJ., Evans-Cleverdon, M., et al. Dietary selenium and major depression: a nested case-control study. Complementary Therapies in Medicine. 2012. (Discussion; pages 121-122; 1st and last paragraph). 7. Lansdowne, AT., Provost SC. Vitamin D3 enhances mood in healthy subjects during winter. Psychopharmacology (1998).*



## Turkey with Avocado Mushroom Burgers

*These juicy turkey burgers are extra satisfying when blended with 50% mushrooms and topped with fresh, creamy avocados and Swiss cheese.*

**Yield:** 6 (1/3lb.) patties

### Ingredients:

½ lb. mushrooms, finely chopped  
1 lb. lean ground turkey  
1 tsp Mexican seasoning  
½ small onion, finely diced  
1 clove garlic, minced  
½ cup breadcrumbs  
1 egg  
1 medium ripe avocado, peeled and sliced  
1 cup baby spinach  
1 medium tomato, sliced  
1 small red onion, sliced  
6 hamburger buns  
Toppings: Swiss cheese, mayonnaise,  
ketchup, mustard, pickles

### Directions:

1. Place the mushrooms in a food processor fitted with a metal blade. Pulse until finely chopped.
2. In a large bowl, combine mushrooms, turkey, seasoning, onion, garlic, breadcrumbs and egg; mix all ingredients until incorporated. Form into 6 patties (1/3lb.) and cook either on the grill or on the stove-top until internal temperature reaches 160°F.
3. Place patty on warmed bun and top with sliced avocado, spinach, tomato and red onion.

*Nutritional Information: Calories: 370, Total Fat: 16g, Saturated Fat: 4g, Cholesterol: 90mg, Sodium: 380mg, Total Carbohydrate: 37g, Dietary Fiber: 4g, Sugars: 6g, Protein: 22g*

Visit [www.mushroominfo.com](http://www.mushroominfo.com) for the latest news, recipes and blog posts from the Mushroom Council.

