SHROOMS TO KNOH FIVE THE BULLON REST

# GOING BEYOND THE BUTTON

Specialty mushrooms are any mushroom other than Agaricus bisporus commonly known as button, crimini, and portobello. Everyone knows about "magic" mushrooms but there are so many other specialty mushrooms that are legal and just as magical! Specialty mushrooms are known for their diverse flavors, textures, and benefits to the body. The most common cultivated specialty mushrooms are shiitake, oyster, lion's mane, chestnut, and maitake. These mushrooms are exceptional when cooked properly. Mushrooms are an amazing source of protein for anyone on a vegan or vegetarian diet. When exposed to the sun mushrooms are also a great source of vitamin D2. This booklet will explore these common specialty mushrooms. Towards the back are some great recipes for the mushrooms as well as what mushroom supplements are. Drop your fear of the fungal kingdom and become a Fungi Ally!

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### GENERAL TIPS

Always store mushrooms in paper bags. Many mushroom poisonings that happen are actually from the improper storage of mushrooms rather than improper identification. The paper bag allows the mushrooms to breath and slowly dry out eliminating the possibility for bacteria to grow on them.

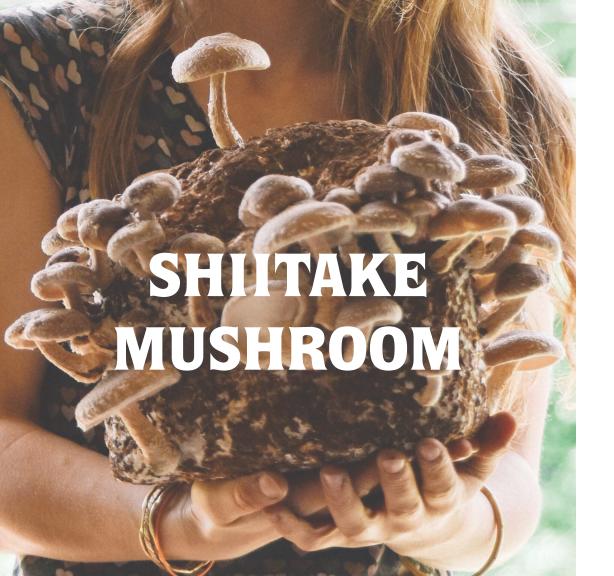
Mushrooms are at their best when the cap margin is slightly curled under, like the curl on your ear. If you can, always get the mushrooms with a nice curl instead of the ones that have a flat cap. These mushrooms are meatier and have a better shelf life.

Most mushrooms are good for about 1 week in a paper bag in your fridge. When stored in a paper bag the mushrooms will dry up and just need to be rehydrated before you use them. Use warm water and soak them for 10 minutes in a bowl, then use like you would fresh mushrooms. Save the water as a broth to use in soups.

If you want to start foraging for mushrooms you must first learn the anatomy of mushrooms. Most people know that plants have leaves, stems, and bark, but basic mushroom anatomical features like stem, cap, polypore, gills, and teeth are less known. Once you learn some of these basics foraging becomes much easier and safer.

Mushrooms convert a compound called ergosterol into Vitamin D2, a useful compound to keep us happy and healthy in the winter. Mushrooms at any stage, fresh or dried can be exposed to the sun to allow this conversion to happen. Four hours in the sun and like magic you have a supercharged Vitamin D2 mushroom.

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- Shiitake is a Japanese word: "take" meaning mushroom and "shii" being a kind of evergreen tree that grows in Japan and Korea.
- Shiitakes are the gateway mushroom into the field of specialty mushrooms.
- Shiitakes have a strong umami flavor and stand out in culinary dishes. The stems of shiitakes are typically discarded or made into stock and the caps are cooked.
- Shiitakes have a high protein content around 18%(dry weight), and a complete profile of amino acids. In a scientific study regular consumption of 10 grams of shiitake "resulted in improved immunity, as seen by improved cell proliferation and activation."
- Shiitakes are great in stir fries, miso soup, or roasted on their own!



- Oysters can be an extremely beautiful mushroom coming in grey, blue, yellow, and pink. They also have a GREAT taste.
- This mushroom is sweeter and has a more subtle flavor than shiitake.
- The caps are the most desirable part. The stems can be chopped finely and cooked.
- If you are interested in growing mushrooms, oysters are a great one to start with, as they grow on a wide range of materials and grow very quickly.
- One interesting in vitro study about oyster mushrooms is titled "Pleurotus ostreatus (oyster) inhibits proliferation of human breast and colon cancer cells."
- Oyster mushrooms are amazing with fried eggs, omelettes, or in pasta dishes.



- Lion's mane is a delicious mushroom with cascading spines. It can bruise easily so be sure to get it when it has been handled minimally and travelled a short distance.
- Lion's mane starts out pink without any of the spines that are seen at maturity. As it grows the spines lengthen and point straight out and then start to cascade down.
- With a lobster like taste this mushroom is fantastic sautéed with some butter and lemon juice or used for faux crabcakes. Lion's mane is very sponge like and soaks up the flavors it is cooked with.
- Several in vitro studies suggest lion's mane has neurotrophic properties, meaning it supports the growth, survival, and differentiation of both developing and mature neurons.



- Chestnuts are a nutty mushroom that grows in clusters, the caps can be dry to slightly slimy.
- Chestnuts have a beautiful chestnut brown coloring and can have slightly ornamented caps and stems. The baby mushrooms have spikes that stick out from the cap of the mushroom.
- The entire cap and stem can be used, with the stem being diced into smaller pieces.
- The strong flavor of this mushroom lend it well to being used in rice dishes and stir fries, giving the meal a stronger umami flavor and texture.
- If you dislike the slimy texture mushrooms sometimes get simply turn the heat up a little and keep cooking them. This can give them a crunchier taste.
- Chestnut mushrooms along with most specialty mushrooms have no fats in them but a complete profile of amino acids.



- Maitake or Hen of the Woods is an amazing treat between August and November in MA.
- The mushroom fruits at the base of oak trees in clusters of 3-20 pounds. It comes out of one central stalk and has many leaflets or caps from this stalk. It is a greyish color.
- Maitake has an amazing flavor and the entire mushroom, caps and stems can be used. This mushroom is different than the others discussed here because it is a polypore. Instead of gills on the underside maitake has little pores.
- Dried maitake are a great source of vitamin D2 and can go into soups or stir fries.
- Many studies both in vitro and in vivo have shown consumption of maitake glucans increase the immune system response and overall health.



#### **GRILLED HONEY OYSTER MUSHROOMS**

#### Ingredients:

1 LB oyster mushrooms left in clusters, ¼ CUP soy sauce, 3 TBSP honey, 2 cloves garlic chopped, 1 TSP grated ginger, Pepper to taste.

- 1 Turn on grill/heat grill pan.
- Combine, soy sauce, honey, garlic ginger and pepper.

  Marinate mushrooms for 15 minutes.
- Grill mushrooms on both sides until slightly charred; serve immediately.



#### **CHAGA HOT CHOCOLATE**

#### Ingredients:

10 oz warm chaga tea, 2 TBSP cocoa powder, ½ TSP vanilla extract, 1 pinch sea salt, 1/8 TSP Cayenne pepper, ¼ TSP Cinnamon, Milk and maple syrup to taste (optional)

- Brew chaga tea. Combine one chaga chunk or 1/8 cup ground chaga and 1/2 gal water in crockpot. Leave on low overnight. (simmer on low for 4-8 hours if you do not have a crockpot).
- 2 Combine chaga tea, cocoa powder, vanilla, salt, pepper, and cinnamon.
- 3 Blend or shake for 1 minute
- A Refrigerate any leftover chaga tea for up to 10 days.

  Chaga chunks can be frozen and reused to brew tea 3-4 times.



## SHIITAKE MUSHROOM CHIPS WITH HERBED GOAT CHEESE

**For Chips:** 1 LB shiitake mushrooms stems removed, 3 TBSP extra-virgin olive oil, 2 TSP sea salt

**For Goat Cheese Spread:** 5 OZ goat cheese room temperature, Zest of 1 lemon, 2 TBSP chopped parsley, 2 TBSP chopped tarragon, Salt and pepper to taste.

- 1 Preheat oven to 400 F; toss mushrooms with olive oil and salt. Cook 20-25 minutes until crisp, flipping every 5 minutes.
- While mushrooms are cooking, combine goat cheese, lemon zest, parsley, and tarragon. Season with salt and pepper and refrigerate until ready to use.
- 3 While mushrooms are still slightly warm, top with a dollop of herbed goat cheese and serve.



#### **MIXED MUSHROOM RAGU**

#### **Ingredients:**

4 TBSP extra-virgin olive oil, ½ LB oyster mushrooms chopped, ½ LB shiitake mushrooms destemmed and chopped, 1 medium onion chopped, 3 cloves chopped garlic, 1 25-OZ jar tomato puree, 2 sprigs fresh oregano, 2 Sprigs Fresh thyme, 1 bunch basil chopped, ¼ CUP heavy cream (optional), Salt, pepper, and crushed red pepper flake to taste.

- Heat oil medium-high in a heavy bottom, medium sized saucepot; sear mushrooms until lightly browned.
- 2 Add onions and garlic; sweat until translucent.
- 3 Add tomato puree and, oregano, and thyme; simmer for 20 to 25 minutes.
- Add cream (optional). Remove from heat and add basil; season with salt, pepper, and crushed red pepper flake to taste.
- 5 Serve over pasta or eggplant parmesan.



Not all mushroom supplements are created equally. To understand this we need to understand the fungal life cycle. The mushroom is the fruiting body of the fungus, which only comes out occasionally. The mushroom fruits from what is called mycelium a network of cells that are always present and usually out of sight. The mycelium is how fungi gather food, grow and communicate with the surrounding environment. If compared to an apple tree the mushroom is the apple and the mycelium is the roots, bark, branches, and leaves. This is how mushrooms magically appear after heavy rain, the mycelium is always there but when the environment is just right mushrooms pop out of the mycelial networks. Confusingly some mushroom supplements don't use any mushrooms, they only use mycelium. When you look at the back of these supplements they will say at the bottom other ingredients: freeze-dried myceliated brown rice. These products are mostly not mushrooms, the fruiting body but the mycelium grown out on grain. The issue here is that the mycelium and grain cannot be separated so both are extracted and placed into the capsule. It is unclear what percentage of the grain has been transformed into mycelium, so who knows how much of the product is actually fungal biomass and how much is simply undigested rice. Only in the last 10 years has this become a wide spread product, at no other time in history have people used the mycelium as the primary source for a supplement or healing aid. With this industry expected to continue to "mushroom" it is important you get a high quality product. With products that exclusively use mushroom fruiting bodies you know 100% of that is fungal biomass and you are using the anatomical part of the fungus that has typically been used. A lot more research is needed to see if these products are equal in their efficacy. More research is also needed to know exactly what impacts mushrooms have on the human body. Most studies in the west have not been conducted on humans. In conclusion be aware that marketing and advertising is being heavily used in the mushroom supplement industry currently, be sure your products are actually mushrooms and do your own research as to what possible benefits are.



