

# LEARN HOW TO FERMENT WITH SIX SIMPLE RECIPES

FROM THE NUTRITIONAL THERAPY ASSOCIATION



# WHY FERMENT?

**By Caroline Barringer, NTP, CHFS, FES**

Preparing fermented foods and beverages dates back to a time before humankind developed modern preservation methods such as pasteurization and refrigeration.

Ancient societies had no way of knowing about the microscopic life responsible for fermenting their foods. Yet, they praised them for their amazing health benefits. The Turkish prized kefir as a health enhancing, anti-aging tonic. It is well documented that the Bulgarians consumed copious amounts of yogurt to increase immunity and longevity (hence the name of the beneficial microbial species *Lactobacillus bulgaricus*). Even Weston A. Price, the nutritional pioneer who studied and observed isolated cultures around the world discovered that fermented foods were an integral part of most, if not all, native diets. His findings revealed that traditional peoples fermented everything from grains, seafood, and flesh meats, to dairy products, fruits and vegetables.

Today we know that the regular consumption of fermented super foods introduces beneficial microbes to aid in digestion and detoxification, provide enzymes, vitamins and minerals, balance our internal bio-systems, and boost immunity. As an added bonus, the sour flavor of fermented foods will even help to curb cravings for sweets and other processed, devitalized foods, which we all know are grossly over-consumed by most modern Americans.

Fermenting is truly an art and a science. It does take some time to perfect. It also is a bio-individual process, so if you wish to use a culture starter or not, and if you choose to add sea salt or not, simply experiment to see what works for you as an individual. Once you practice with a few batches, you will have a system in place that will yield consistent results. Each batch will vary slightly in time, taste, texture and tartness, so use your trusty buds to determine when you feel each batch has fermented to your liking!





## FERMENTED BEETS WITH APPLE AND CABBAGE

### INGREDIENTS

3 fresh beets, scrubbed, tops removed

1 small head green cabbage, four of the outer leaves pulled off and set aside

1-2 medium apples (any kind)

1/4 C sea salt

2 capsules probiotics or 1 teaspoon starter culture

2 to 3 mason jars (24 ounce), sterilized by dipping in boiling water.

### DIRECTIONS

Using a food processor (or by hand), finely chop beets, cabbage and apple.

In large mixing bowl, use your hands to squeeze and mix the chopped beet, cabbage and apple, sprinkling in the salt while mixing. Liquid should be forming as a result of this salting and mixing. You can taste the liquid to monitor the salt level – the brine should be quite salty but not overwhelmingly so.

Sprinkle in opened probiotic capsule or starter culture. Pack mixture into the glass jars, using your fist or a wooden dowel to pack tightly. Leave 1-2 inches of room at top for expansion.

Fold a few of the outer cabbage leaves into very tight rolls, place them on top of the mixture to fill the 2 inch space.

Tightly close jars and leave on counter/in pantry for 10-14 days, then move jars to the refrigerator.



## FERMENTED MILLET CAKES

### INGREDIENTS

- 2 cups millet, whole
- 1 Tbsp sea salt
- 6 cups purified water
- 2 Tbsp olive oil
- Pinch sea salt
- 1 tsp crushed chili flakes
- 1 Tbsp coconut oil

### DIRECTIONS

Soak 2 cups millet in water with 1 tablespoon sea salt for 2-3 days, or until the water becomes foamy and begins emitting a mildly sweet smell.

Drain the water and simmer millet in a 1:2 grain to water ratio until it becomes a sticky porridge.

Stir in a healthy splash of olive oil, a pinch of sea salt, crushed chili flakes and 1/4 cup nutritional yeast.

Immediately pour into a bread pan and chill in fridge. Once chilled, slice cakes like bread and heat in coconut oil until crispy.





## COCONUT MILK YOGURT

### INGREDIENTS

2 cups coconut milk\*  
(homemade or canned)

Contents of 4 probiotic capsules

1/2 Tbsp raw honey

1-16 oz mason jar, sterilized by  
dipping into boiling water  
(homemade or canned)

1 square of waxed paper

If using homemade coconut milk:  
1 tsp arrowroot powder to thicken

### DIRECTIONS

Pour coconut milk into mason jar. Open the probiotic capsules and add. If using, add thickener and honey. Lay the square of wax paper over the mouth of the jar and close with lid. The wax paper prevents the yogurt from touching the metal, which is not desired. Shake to mix.

Leave in a shady spot on your counter for 3 or 4 days, shaking the jar in the morning and evening each day. Transfer to the refrigerator to allow the yogurt to complete thickening.

\*If using canned, purchase an unsweetened organic variety in a BPA-free can with no additives. Boxed coconut milk drinks will not work. Canned will provide the richest and creamiest results.



## RUBY RED SAUERKRAUT

### INGREDIENTS

1 red cabbage  
1 Tbsp + 1 tsp cumin seeds  
2 tsp caraway seeds  
1 Tbsp sea salt  
3 or 4-24 ounce mason jar, sterilized by dipping in boiling water.

### DIRECTIONS

Using a food processor or knife, shred or finely chop the cabbage. Place in a deep bowl and add cumin, caraway, and salt. Pound with meat tenderizer, or squeeze firmly with your hands for about 10 minutes or until the salt draws liquid out of the cabbage, creating a brine.

Place the cabbage mixture and brine into quart jars, leaving at least an inch of space at the top. If you don't have enough brine to cover all the cabbage, add filtered water to the jar until it's covered.

Place the lid on the jar and leave it on the counter to ferment, covered with a towel (or place it in a dark cabinet). Every few days, "burp" the jar by loosening then re-tightening the lid to allow gases to escape. After 2 weeks, transfer to the refrigerator and enjoy.



## SESAME GINGER SAUERKRAUT

### INGREDIENTS

1 medium head green cabbage, removing and setting aside 4 outer leaves

1 cup water

4 inches ginger root

1 tablespoon unpasteurized miso paste

2 tablespoons sesame seeds

Sprinkle of starter culture or 1 probiotic capsule if desired

4-24 ounce mason jar, sterilized by dipping in boiling water.

### DIRECTIONS

Using a food processor (or a knife), finely shred the cabbage. Transfer to large mixing bowl. Add the water, ginger and miso to a blender and blend until smooth.

Pour the liquid mixture over the cabbage and add sesame seeds. Using your hands, mix the cabbage and liquid, squeezing the cabbage while mixing to encourage more liquid. Sprinkle in starter culture or probiotic if using.

Pack mixture into sterilized Mason jars, using your fist or a wooden dowel. Pour the liquid over the cabbage.

Fold a few of the outer cabbage leaves into very tight rolls, place them on top of the mixture to fill the 2 inch space.





## PICKLES WITH DILL AND ONION

### INGREDIENTS

3 medium cucumbers (or

5 Persian cucumbers)

1 small onion

¼ cup fresh dill, chopped

3 tablespoons sea salt

2 cabbage leaves

Starter culture or  
probiotic capsule if  
desired

1-24 ounce mason jar,  
sterilized by dipping in  
boiling water.

### DIRECTIONS

Using a food processor (or a knife), thinly slice cucumber and onion. Transfer to large mixing bowl and add chopped dill. Stir in salt. If desired, sprinkle in ¼ teaspoon starter culture or the contents of 1 capsule probiotic and continue mixing. Mix and squeeze the vegetables until an ample amount of liquid has come out of the mixture.

Pack mixture into the glass jars, using your fist or a wooden dowel to pack tightly. Leave 1-2 inches of room at top for expansion.

Fold the cabbage leaves into very tight rolls, place them on top of the mixture to fill the 2 inch space.

Close the jar and leave on the counter for 7-10 days, then move to the refrigerator. Eat within a few weeks of opening. Unopened, the jar will keep for several months.



# FAQs

**Answered by Caroline Barringer, NTP, CHFS, FES**

## **What about mold, fungus and yeast?**

The key to keeping mold, fungus and yeast from growing on the surface of your fermented foods is to keep what you are culturing UNDER the brine or away from oxygen at all times. Beneficial microbes flourish in an anaerobic environment. Be sure to fill jars near to the top - leaving just about an inch or less of open space – to allow for expansion during fermenting. Hand-tighten each jar. Do not over tighten. Too much space at the top of a jar or vessel will allow too much oxygen to remain inside the jar providing the perfect conditions for mold, fungus and wild yeast to grow on the surface of liquids or on parts of the food that may peek out of the brine.

There is nothing wrong with the food or liquid under the brine. Scraping away any scum at the top will usually render the ferment successful and edible. Your nose and your taste buds will let you know if the fermenting food has been contaminated. If so, throw it away and start over. Many people are overly germ-phobic these days.

The minute they see a speck of mold or fungus appear they throw away the entire batch, which is completely unnecessary in most cases.

You don't have to be overly concerned about sterilizing jars and utensils. A thorough washing with chemical-free soap and hot water will do just fine. Try not to worry so much about measuring out exact amounts of food and ferment. This process is pretty flexible. Just make sure to fill each jar near to the top to minimize oxygen exposure. Keeping several size wide mouth mason jars, lids and rims on hand (half-pint, pint, and quart) will help take care of leftover ingredients too small to put in a larger jar, but too large of an amount to throw away.

## **How does the fermentation process work?**

The beneficial bacteria responsible for orchestrating the fermentation process are mostly from the Lactobacillus and Bifidus species. As these bacteria divide, they produce a substance called lactic acid, which is responsible for that characteristic sour flavor we associate with fermented foods. Bacteria typically divide every 20 to 30 minutes at temperatures between 41° and 140°F. Their division is exponential, i.e., one microbe becomes two, which become four, which become eight, which divide into 16, then into 32, and so on.

Microbes need optimal conditions to reproduce including moisture, slight acidity, time and warmth. In cooler temperatures foods ferment at a slower pace. Warmer temperatures encourage microbial division resulting in a faster fermenting process.