



Nature & Nurture Seeds'

Guide to Live Fermentation

What is Live Fermentation?

Also known as “lacto-fermentation”, live fermentation is the natural process in which the starch/carbohydrates in veggies are converted into acid and/or alcohol by microorganisms already present in the veggies. In addition to excluding harmful bacteria, live fermentation allows for the proliferation of *good* lactobacillus bacteria (probiotics!), **creating unique flavors** and a ferment **loaded with microbes that are great for your gut!**

Why Should I Ferment?

1. **Fermented foods are delicious!**
2. **It's super easy!**
3. **It's totally safe!** (see details below)
4. **It's great for your gut!**
5. **It's a great way to preserve your fall harvest!** While live-fermented foods don't last as long as canned foods, they can last for months when stored in the fridge.

Is Live Fermentation Safe?

Yes!

Many modern people think fermentation may be dangerous because they have been warned about botulism in canned food but botulism is only an issue with canning, an entirely different food preservation technique. In live fermentation, you are encouraging the growth of good bacteria and lactic acid, which prevents the growth of harmful bacteria. Canning uses extremely high temperatures with the goal of killing ALL bacteria, but, if done improperly, can potentially harbor dangerous botulism or other harmful bacteria.

On top of the acid and alcohol production that the organisms in your ferment produce to inhibit other bacterial growth, the microbes additionally produce hydrogen peroxide, bacteriocins, and other antibacterial compounds to ward off other microorganisms. All you have to do is let them do their thing, and in time, you're left with a delicious, nutritious, and safe bounty of fermented foods.

Live Fermentation vs. "Pickles"

"Modern" pickling was invented in 1940. It involves cooking veggies in vinegar at high temperatures for long periods of time, and this diminishes vitamins including Vitamin C. But live pickling – also known as live fermentation – is a more traditional technique of food preservation that has been used for centuries. It involves using naturally occurring bacteria (present on the vegetables) and brine (usually salt water) to preserve veggies. Until 1940, fermentation was a primary means of food preservation. Examples include traditional sauerkraut and kimchi.

Live pickling is an all-around better choice because it:

- 1. Enhances the vitamin content of the food**
- 2. Preserves and sometimes enhances the enzyme content** of the food improving nutrient bioavailability in the body
- 3. Improves the digestibility of the food** and even cooked foods that are consumed along with it!

Basic Pickling Recipe



Ingredients:

1 handful of any pickling vegetable (we like using snap beans, beets, carrots, cucumbers, collard & kale, radishes, and/or peppers!)

1 qt water

2 tbsp sea salt

1 clove garlic

Directions:

1. Place a handful of pickling vegetable(s) in an empty quart jar and add 1 clove of garlic.
2. Dissolve 2 tablespoons of sea salt in 1 quart of water to make brine.
3. Pour brine over veggies until jar is full. Place jar on a tray or lipped plate to catch any spillover.
4. To prevent veggies from being exposed to the air (which can cause mold to form on the surface) place some sort of weighted surface, such as a plate with a weight on top, above the veggies so that they remain submerged in the brine. You can also use a container with an airlock. Air is not harmful but may cause non-harmful mold to form on the surface which can be skimmed off with a spoon.
5. Cover jar with a piece of cloth to keep flies out and secure with rubber band. Leave at room temp for 24 hours then install jar lid and place in fridge.
6. Eat any time depending on your tastes.

Kimchi (aka Baechu Kimchi) Recipe

Want to get a little fancy with your ferment? Try this delicious Kimchi recipe adapted from "Wild Fermentation" by Sandor Katz.



Ingredients:

Sea salt

1 pound/500 grams Chinese/Napa Cabbage

A few radishes (optional)

1-2 carrots (optional)

1-2 onions and/or leeks and/or a few scallions

3-4 cloves of garlic

3-4 hot red chilies (Erica loves sweet peppers instead of the traditional hot peppers

- you can just substitute if you like)

3 tablespoons fresh grated ginger

Directions:

1. Chop and soak the cabbage, radish, and carrot in a brine overnight. The brine should be made up of about 4 cups of water and 4 tablespoons of sea salt.
2. Prepare the paste (ginger, garlic, onion, hot/sweet peppers) - this can easily be done in a food processor.
3. Strain the brine off of the cabbage.
4. Mix the vegetables and the paste together.
5. Stuff the vegetable-paste mixture into a jar and pour the brine over it to fill the jar. Ferment at room temperature for 1-3 days and then store in the refrigerator.

-- Recipe adapted from "Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods" by Sandor Ellix Katz, pg. 47 (2003).

Where Can I Learn More?

We would highly recommend checking out any of Sandor Ellix Katz's books on fermentation. In addition to veggie-based ferments, Katz covers in great depth a huge variety of other fermentation practices; dairy, meat, beer, and so much more!

We especially love his book *The Art of Fermentation*.

Happy Fermenting!