

Making a Wild Fermentation

What is fermentation? Fermentation typically refers to the conversion of sugar to acids, gases and/or alcohol using yeast or bacteria [...] Fermentation is also used much more broadly to refer to the bulk growth of microorganisms on a growth medium. The science of fermentation is known as zymology. (from www.wikipedia.org) People harness this transformative power in order to produce alcohol, to preserve food, and to make it more digestible, less toxic, and/or more delicious. [...] Microbial cultures are essential to life's processes, such as digestion and immunity. We humans are in a symbiotic relationship with these single-cell life-forms. Microflora, as they are often called, digest food into nutrients our bodies can absorb, protect us from potentially dangerous organisms, and teach our immune systems how to function. [...] Fermentation improves the bio-availability of minerals in food. (from *The Art of Fermentation* by Sandor Ellix Katz)

Some Common Examples of Fermentations Include: Yogurt, pickles, sauerkraut, kimchi, kombucha, tempeh, miso, cheese, wine and beer



Kimchi: A spicy Korean pickle, made in an impressive variety of styles. It is prepared by fermenting Chinese cabbage, radishes, or turnips, scallions, other vegetables, and often seafood, with ginger, hot red chili pepper, garlic, and often fish sauce. A basic kimchi recipe from Sandor Ellix Katz's *Wild Fermentation* (time frame=1 week or longer)

- Sea salt
- 1 lbs Chinese Cabbage, napa or bok choy (*Brassica's* are known for their diuretic, anti-diarrheic, anti-inflammatory, antacid, anti-bronchial, anti-ulceric, anti-hoarseness, anti-cancer properties as well as its helpfulness in healing osteoporosis and hyperthyroidism. From <http://www.botanical-online.com>)
- 1 daikon radish or a few radishes (*Raphanus sativus* is known for its antiseptic, antirheumatic, appetite stimulant, diuretic, diaphoretic and rubefacient. Radish is an excellent source of vitamin C, and a powerful immune booster. It has a long history of medicinal use. For example, black radish has been used in folk medicine in cases where bile stimulation is needed, and juice made from the root has been used against stomach disorders. White radish is considered to be very effective in cases of sore throat and indigestion. From <http://www.health-from-nature.net>)
- 1-2 carrots (*Daucus carota* cleanse the intestines, are diuretic, re-mineralizing, anti-diarrheal, an overall tonic and anti-anemic. Carrot is rich in alkaline elements which purify and revitalize the blood. They nourish the entire system and help in the maintenance of acid-alkaline balance in

the body. The carrot also has a reputation as a vegetable that helps to maintain good eyesight. Raw grated carrot can be applied as a compress to burns for a soothing effect. Its highly energizing juice has a particularly beneficial effect on the liver. From (<http://www.carrotmuseum.co.uk>)

- 1-2 onions/leeks/scallions/shallots or more! (*Allium cepa* is known for its blood sugar-lowering action, for lowering glucose works by competing with insulin for breakdown sites in the liver, thereby increasing the life span of insulin, as an asthma treatment, its potent antibacterial activity, cancer-prevention, blood thinning, blood clotting retardation, blood cholesterol lowering, triglycerides lowering, blood pressure lowering, and for its high contents of sulfur, quercetin, flavinoids, and Vitamin C. From <http://www.foods-healing-power.com>)
- 3-4 cloves of garlic or more! (*Allium sativum*, especially in its raw form, has been praised for its healing power and medicinal uses since ancient times. It was used medicinally by the ancient Greeks, Egyptians, Babylonians, Assyrians, Romans and Chinese for its properties as an antioxidant, antifungal, antiviral and antibacterial properties to cancer-fighting and immune-boosting activity. Eating raw garlic lowers the risk of cardiovascular diseases, cancer, asthma attacks, bouts of cold or flu, abnormal hair loss, and some skin conditions. From <http://www.healwithfood.org>)
- 3-4 hot red chillis or more! (*Capsicum annum* are valued for their astringent, anti-bacterial, anti-carcinogenic, analgesic and anti-diabetic counter-irritant and analgesic properties, treatment of arthritic pain, post-herpetic neuropathic pain, sore muscles, etc. They also contain a great deal of Vitamin C. From <http://www.nutrition-and-you.com>)
- 3 tablespoons of fresh grated ginger (*Zingiber officianale* is helpful in preventing vomiting, dizziness, ulcers, diarrhea, liver disease. It can help your body to heal circulatory issues, flu, sore throat, sinusitis, warm you up, and improve your breath. From <http://www.botanical-online.com>)

The Process

1. Coarsely chop the cabbage, slice the radish and carrots, and salt vegetables and beat until juices have sufficiently released.
2. Prepare spices: Grate the ginger; chop the garlic and onion; remove seeds from the chilies and chop or crush, or throw in whole.
3. Kimchi can absorb a lot of spice. Experiment with quantities and don't worry too much about them. Mix spices into a paste.
4. Mix the vegetables with the ginger-chili-onion-garlic paste. Mix everything together and stuff it into a clean quart-size (liter) jar. Pack it tightly into the jar, pressing down until brine rises. Weight the vegetables down with a smaller jar, or a zip-lock bag filled with some brine, or if you think you can remember to check the kimchi every day, you can just use your (clean) fingers to push the vegetables back under the brine. I myself like the tactile involvement of this method, and I especially enjoy tasting the kimchi by licking my fingers after I do this. Either way, cover the jar to keep out dust and flies.
5. Ferment in your kitchen or other warm place. Taste the Kimchi every day. After a week of fermentation, when it tastes ripe, move it to the refrigerator, and alternative and more traditional method is to ferment kimchi more slowly and with more salt in a cool spot, such as a hole in the ground, or a cellar or other cool place. (From *Wild Fermentation* by Sandor Ellix Katz)

Other resources: *Ferment & Human Nutrition* by Bill Mollison, *Healing with Whole Foods* by Paul Pitchford, *Vegetables as Medicine* by Chang Chao-liang, Cao Qing-rong, and Li Bao-zhen