Benefits of healthy gut flora & probiotics
- First level of defense in health: dynamic relationships between your gut, immune system, and nervous system means if you have an imbalanced gut the other systems will fall out of balance as well
- Healthy gut means happy brain
- “ Resets” gut flora after use of antibiotics
- Healthy flora promote the biosynthesis and metabolism of various vitamins & minerals
- Prevents inflammation of the gut, which is associated with multiple autoimmune and mental health diseases
- Great for pregnant & breastfeeding mothers
- Helps to maintain healthy weight
Basic Kombucha Recipe - 1 Gallon
Recipe from KombuchaKamp.com
Makes 1 gallon - Scale up or down depending on the size of your vessel

Ingredients & Equipment
- 1 cup sugar
- 4-6 bags tea – for loose leaf, 1 bag of tea = 1 tsp
- Kombucha Starter Culture – SCOBY aka Symbiotic Culture of Bacteria & Yeast
- 1 cup starter liquid
- purified/bottled water
- tea kettle
- brewing vessel
- cloth cover
- rubber band

Instructions
1. Boil 4 cups of water.
2. Add hot water & tea bags to pot or brewing vessel.
3. Steep 5-7 minutes, then remove tea bags.
4. Add sugar and stir to dissolve.
5. Fill vessel most of the way with purified water, leaving just 1-2 inches from the top for breathing room with purified cold water.
6. Add SCOBY and starter liquid.
7. Cover with cloth cover and secure with the rubber band.
8. Say a prayer, send good vibes, commune with your culture (optional but recommended).
9. Set in a warm location out of direct sunlight (unless vessel is opaque).
10. Do not disturb for 7 days.
   - After 7 days, gently insert a straw below the SCOBY and take a sip. If too tart, then reduce your brewing cycle next time. If too sweet, allow to brew for a few more days. Continue to taste every day or so until you reach your optimum flavor preference. Your own Kombucha Tea Recipe may vary.
   - Decant & flavor (optional).
   - Drink as desired! Start off with 4-8oz on an empty stomach in the morning, then with meals to help with digestion or as your body tells you it would like some more! Drink plenty of water as it is a natural detoxifyer and you want to flush the newly released toxins out.
Basic Kimchi
How to Make Cabbage Kimchi from www.kitchn.com
Makes 1 quart

Ingredients
1 medium head (2 pounds) napa cabbage
1/4 cup sea salt or kosher salt (see Recipe Notes)
Water (see Recipe Notes)
1 tablespoon grated garlic (5 to 6 cloves)
1 teaspoon grated ginger
1 teaspoon sugar
2 to 3 tablespoons seafood flavor or water (optional, see Recipe Notes)
1 to 5 tablespoons Korean red pepper flakes (gochugaru)
8 ounces Korean radish or daikon, peeled and cut into matchsticks
4 scallions, trimmed and cut into 1-inch pieces

Equipment
Cutting board and knife
Large bowl
Gloves (optional but highly recommended)
Plate and something to weigh the kimchi down, like a jar or can of beans
Colander
Small bowl
Clean 1-quart jar with canning lid or plastic lid
Bowl or plate to place under jar during fermentation

Instructions

1. Slice the cabbage: Cut the cabbage lengthwise into quarters and remove the cores. Cut each quarter crosswise into 2-inch-wide strips.
2. Salt the cabbage: Place the cabbage and salt in a large bowl. Using your hands (gloves optional), massage the salt into the cabbage until it starts to soften a bit, then add water to cover the cabbage. Put a plate on top and weigh it down with something heavy, like a jar or can of beans. Let stand for 1 to 2 hours.
3. Rinse and drain the cabbage: Rinse the cabbage under cold water 3 times and drain in a colander for 15 to 20 minutes. Rinse and dry the bowl you used for salting, and set it aside to use in step 5.
4. Make the paste: Meanwhile, combine the garlic, ginger, sugar, and seafood flavor (or 3 tablespoons water) in a small bowl and mix to form a smooth paste. Mix in the gochugaru, using 1 tablespoon for mild and up to 5 tablespoons for spicy (I like about 3 1/2 tablespoons).
5. Combine the vegetables and paste: Gently squeeze any remaining water from the cabbage and return it to the bowl along with the radish, scallions, and seasoning paste.
6. Mix thoroughly: Using your hands, gently work the paste into the vegetables until they are thoroughly coated. The gloves are optional here but highly recommended to protect your hands from stings, stains, and smells!
7. Pack the kimchi into the jar: Pack the kimchi into the jar, pressing down on it until the brine rises to cover the vegetables. Leave at least 1 inch of headspace. Seal the jar with the lid.
8. Let it ferment: Let the jar stand at room temperature for 1 to 5 days. You may see bubbles inside the jar and brine may seep out of the lid; place a bowl or plate under the jar to help catch any overflow.
9. Check it daily and refrigerate when ready: Check the kimchi once a day, pressing down on the vegetables with a clean finger or spoon to keep them submerged under the brine. (This also releases gases produced during fermentation.) Taste a little at this point, too! When the kimchi tastes ripe enough for your liking, transfer the jar to the refrigerator. You may eat it right away, but it's best after another week or two.

Recipe Notes

- Salt: Use salt that is free of iodine and anti-caking agents, which can inhibit fermentation.
- Water: Chlorinated water can inhibit fermentation, so use spring, distilled, or filtered water if you can.
- Seafood flavor and vegetarian alternatives: Seafood gives kimchi an umami flavor. Different regions and families may use fish sauce, salted shrimp paste, oysters, and other seafood. Use about 2 tablespoons of fish sauce, salted shrimp paste, or a combination of the two. For vegetarian kimchi, I like using 3/4 teaspoon kelp powder mixed with 3 tablespoons water, or simply 3 tablespoons of water.
Boost Healthy Gut Bacteria with Plant-Based Foods

**Broccoli, Cruciferous Vegetables**
Packed with Glucosinolates
Fight Inflammation and Cancer

**Bananas**
Fight Inflammation
Stabilize Gut Bacteria

**Beans**
Release Short-Chain Fatty Acids
Boost Vitamin Absorption, Satiety

**Jerusalem Artichokes**
Rich in Inulin Fiber
Strong Prebiotic

**Blueberries**
Enhance Immune System
Destroy Harmful Bacteria

**Polenta**
High in Fiber
Fermentable Component

**Kimchee, Sauerkraut**
Improves Health of Intestinal Walls
Boosts Immune Function

**Tempeh**
Crowds Out Unhealthy Bacteria
Boosts Nutrient Absorption

PhysiciansCommittee
For Responsible Medicine

www.PCRM.org
**Elderberry Syrup**

The recipe:

- 2/3 cup dried or fresh elderberries
- 3 1/2 cups of water
- 2 Tbsp fresh or dried ginger root
- 1 tsp cinnamon powder
- 1/2 tsp whole cloves or clove powder
- 1 cup raw + local honey

Pour water into medium saucepan and add elderberries, ginger, cinnamon and cloves (do not add honey yet, because the heat will destroy many of its medicinal benefits). Bring to a boil and then cover and reduce to a simmer for about 45 minutes to an hour until the liquid has reduced by almost half. Remove from heat and let cool, pour the liquid through a fine strainer (you can mash the berries at this point if you like). Add your honey and bottle. Store in the refrigerator for up to 3 months. Adding a little alcohol (like brandy or whisky, preferably) will increase the shelf life for 6 months, but still store in your refrigerator.

Dose -- 1/2 tsp to 1 tsp for kids daily

    1/2 Tbsp to 1 Tbsp for adults daily

If the flu does strike, take the normal dose every 2-3 hours instead of once a day until symptoms disappear. Also tastes great on pancakes or ice-cream!
Thyme, Honey & Garlic Syrup

The recipe:
Combine a half-cup of raw + local honey and a half-cup of steeped thyme tea. Add in one chopped clove of garlic. Allow to steep overnight at room temperature or summer the mixture for 5-10 minutes until garlic softens. Strain and use the liquid as a cough syrup. Store in your refrigerator for up to 3 months!

Thyme as medicine -- coughs, bronchitis, throat inflammation
“One of the best herbal cold remedies, it’s often used to help ward off colds and as a rinse to treat sore throat and oral infections. It also makes a fine tea for treating coughs and chest complaints and is used in many antifungal remedies. A recent study shows that it’s rich in antioxidants (most plants are) and has a markedly tonic effect, supporting normal body functions. It seems to have a positive effect on the glandular system as a whole, and especially the thymus gland.”
From Mother Earth News/Rosemary Gladstar, Clinical Herbalist

Raw honey as medicine -- anti-inflammatory, treats cough, treats insomnia, great for skin & wounds
Ayurveda is a compound word i.e., âyus meaning ‘life’ or ‘life principle’, and the word veda, which refers to ‘a system of knowledge’. Hence ‘Ayurveda’ roughly translates as the ‘knowledge of life’ (33). The ancient vedic civilization considered honey one of nature's most remarkable gifts to mankind. Traditionally, according to the texts of Ayurveda, honey is a boon to those with weak digestion. Also it has been emphasized that the use of honey is highly beneficial in the treatment of irritating cough. Honey is regarded by Ayurvedic experts, as valuable in keeping the teeth and gums healthy (34). It has been used for centuries for the treatment of insomnia because it has hypnotic action. Additionally, traditional Ayurvedic experts recommend honey for skin disorders (such as wounds and burns), cardiac pain and palpitation, all imbalances of the lungs and anemia. Honey has a long history of Ayurvedic use for various eye ailments. Applied daily to the eyes, it improves the eye-sight. Moreover, honey is regarded as useful in the prevention of cataract (34).
from Honey in indian system of ayurveda -- Iranian Journal of Basic medical sciences
Traditional and Modern Uses of Natural Honey in Human Diseases: A Review
Tahereh Eteraf-Oskouei1,2 and Moslem Najafi*,2
Garlic as medicine -- colds, anti-fungal, “Early evidence suggests garlic may help prevent colds. In one study, people took either garlic supplements or placebo for 12 weeks during cold season, between November and February. Those who took garlic had fewer colds than those who took placebo. And when they did get a cold, the people taking garlic saw their symptoms go away faster than those who took placebo.” from University of Maryland Medical Center"
Fall is the beginning of Vata Season

**Vata** is called the “king of doshas”. Responsible for every movement in the body. The key to balancing Vata dosha is regularity.

**Ayurvedic Vata Balancing Diet**

**Vata Rasa**
- Favor –
  - Sweet
  - Sour
  - Salty
- Spices –
  - Cumin
  - Ginger
  - Cinnamon

**Vata Diet**
- Breakfast –
  - Hot Cereals
  - Warm Oatmeal
- Lunch –
  - Stir Fry Green Beans
  - Nourishing Stews
- Dinner –
  - Mung Bean Soup
  - Baked Sweet Potato

**Balancing Vata**
- Regular Habits
- Solitude/quiet
- Keep Hydrated
- Don’t Skip Lunch
- Reduce Stress
- Ample Rest
- Stay Warm
- Sesame Oil Massage
- Warm Cooked Foods
INTESTINAL MICROFLORA

$10^{14}$ micro-organisms, >500 different species

- Lactobacilli
- Streptococci
- Enterobacteria
  - Enterococcus
  - Faecalis
- Bacteroides
- Bifidobacteria
- Peptococcus
- Peptostreptococcus
- Ruminococcus
- Clostridia
- Lactobacilli
- and...
The Human Gut Microbiota

PROPORTION OF CELLS IN A HUMAN BODY

HUMAN CELLS
MICROBIAL CELLS

100 000 000 000 000 microbes in the human body

MICROBIOTA AND MICROBIOME

The gut microbiota is a complex ecosystem that contains microbes living in our intestines.
The microbiome is the entire genome (DNA and genes) of the gut microbiota ecosystem.

FACTORS THAT SHAPE THE GUT MICROBIAL COMMUNITY

Breastfeeding
Birth

Environment
Diet

POTENTIAL IMPACT ON HEALTH

Brain function and behaviour
Chronic-metabolic disorders
Diabetes
Obesity

The MyNewGut project will further assess the effect of gut microbiota on human health.