**Probiotics and Prebiotics**

**Probiotics/Fermented Foods**

Maintaining healthy gut flora (the “good bacteria”, like in yogurt) is an integral part of optimizing intestinal function and boosting the immune system. Probiotic food sources and fermented foods contain live cultures of these “good bacteria” that promote gut health and generate essential vitamins and other nutrients. These friendly bacteria also aid in the digestion of certain nutrients, such as fiber. Some of the common probiotic “strains” are *Lactobacillus* and *Bifidobacterium*.

<table>
<thead>
<tr>
<th>Non-Dairy Sources of Probiotics and Fermented Foods:</th>
<th>Dairy Sources of Probiotics and Fermented Foods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamari/Soy Sauce</td>
<td>Yogurt</td>
</tr>
<tr>
<td>Miso</td>
<td>Cottage Cheese (Example: Horizon Organic brand)</td>
</tr>
<tr>
<td>Tempeh</td>
<td>Buttermilk</td>
</tr>
<tr>
<td>Kim Chee</td>
<td>Kefir</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Kombucha (fizzy drink)</td>
<td></td>
</tr>
<tr>
<td>Sauerkraut (Example: Bubbies brand)</td>
<td></td>
</tr>
<tr>
<td>Amasake</td>
<td></td>
</tr>
</tbody>
</table>

**Prebiotics**

Prebiotics are food for the healthy bacteria (above) in the intestines. These bacteria release fatty acids (butyrate/butyric acid) used as fuel for the colon, which decrease the intestinal pH. This decrease in pH can promote absorption of some minerals and stop unhealthy bacteria from growing. If you are working to heal your digestive tract, sometimes prebiotics (fiber-rich foods) are difficult to tolerate, so they may be introduced later in the healing process. Overall, the goal is to eat prebiotics when probiotics are taken.

**Sources of Prebiotic Foods:**

<table>
<thead>
<tr>
<th>Chicory Root</th>
<th>Asparagus</th>
<th>Leafy Greens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerusalem Artichokes</td>
<td>Bananas</td>
<td>Berries</td>
</tr>
<tr>
<td>Onion</td>
<td>Honey</td>
<td>Wheat*</td>
</tr>
<tr>
<td>Garlic</td>
<td>Legumes</td>
<td>Barley*</td>
</tr>
<tr>
<td>Leeks</td>
<td>Flax</td>
<td>Rye*</td>
</tr>
</tbody>
</table>

*Contains Gluten
Recipes

Kim Chee

Ingredients
1 head napa cabbage
3 small dried chiles
3 garlic cloves, slivered
1 tablespoon sesame seeds, toasted
1 tablespoon sea salt

Directions
1. Quarter the cabbage length-wise, then cut cabbage and core into julienne (long, thin strips).
2. Toss with the remaining ingredients and pack into a quart jar.
3. Place the jar on a plate to collect liquid that will seep out. Place a weight on top of the mixture so it rests on the cabbage to press it down into the brine.
4. Let stand for four to five days, or until cabbage has lost its bright color. Wash the jar, cover tightly, and store in refrigerator for up to 6 weeks.

Recipe adapted from recipe in *The New Whole Foods Encyclopedia* written by Rebecca Wood.

Dill Sauerkraut

Ingredients
1 medium head cabbage (approximately 2 lbs.)
2-3 tsp sea salt
½ tsp dill (can be replaced with fennel or caraway seeds)

Directions
1. Rinse cabbage, remove outer leaves, and cut into 4 quarters. Remove the core of the cabbage and cut into thin strips.
2. Place strips of cabbage in large bowl and toss with 2 tsp sea salt. Let sit 20 to 30 minutes.
3. Pound the cabbage for 5 minutes using a wooden spoon or meat tenderizer in the bowl to release juices. Pack the cabbage in a canning jar, layering with the dill.
4. If more liquid is needed, make more brine by dissolving 1 tsp sea salt in 2 cups water. Pour into jar until cabbage is covered
5. Loosely place the lid on the jar, place on shelf, and let sit for 7 days. After 7 days, remove darkened vegetables from top, replace lid, and place in refrigerator. Will keep for several months in refrigerator.

Recipe adapted from Katy She Cooks web site at katymcarter.com.
Healthy Sautéed Asparagus

Ingredients
1 lb asparagus
3 Tbsp low sodium chicken or vegetable broth
3 Tbsp extra virgin olive oil
2 medium cloves garlic, chopped and pressed
2 tsp lemon juice
sea salt to taste

Directions
1. Heat broth over medium high heat.
2. While broth is heating, snap off stems of asparagus and cut spears into 2” pieces. Add asparagus to broth when it begins to steam. Cover and cook 5 minutes. Remove from heat and toss with remaining ingredients.

Recipe adapted from “5-Minute Healthy Sauteed Asparagus” recipe on The World’s Healthiest Foods web site at whfoods.org.

Greek Garbanzo Bean Salad

Ingredients
2 cups garbanzo beans (or 1 15 oz BPA-free can)
2/3 cup minced scallion or onion (green, red, yellow)
3 medium cloves garlic, pressed (or 3 teaspoons jarred minced garlic)
1 medium ripe tomato, seeds removed, chopped (if you don’t mind seeds, leave them in)
3 medium ribs celery, diced
3 Tbsp fresh lemon juice
⅛ cup combination of fresh chopped herbs (parsley, cilantro, mint, basil, other)
2 Tbsp extra virgin olive oil
sea salt & pepper to taste
1 small head chopped romaine lettuce

Directions
1. Mix all ingredients except lettuce in bowl and season with salt and pepper to taste. Serve on bed of chopped romaine lettuce.

Recipe adapted from The World’s Healthiest Foods web site at whfoods.org.

Other resources for fermented foods:

http://www.culturesforhealth.com/
Donna Swenk http://www.culturedfoodlife.com/
Purchase: kombucha tea, kefir (Inner Eco Cocounut Kefir), sauerkraut and pickles (Bubbles brand from refrigerator).