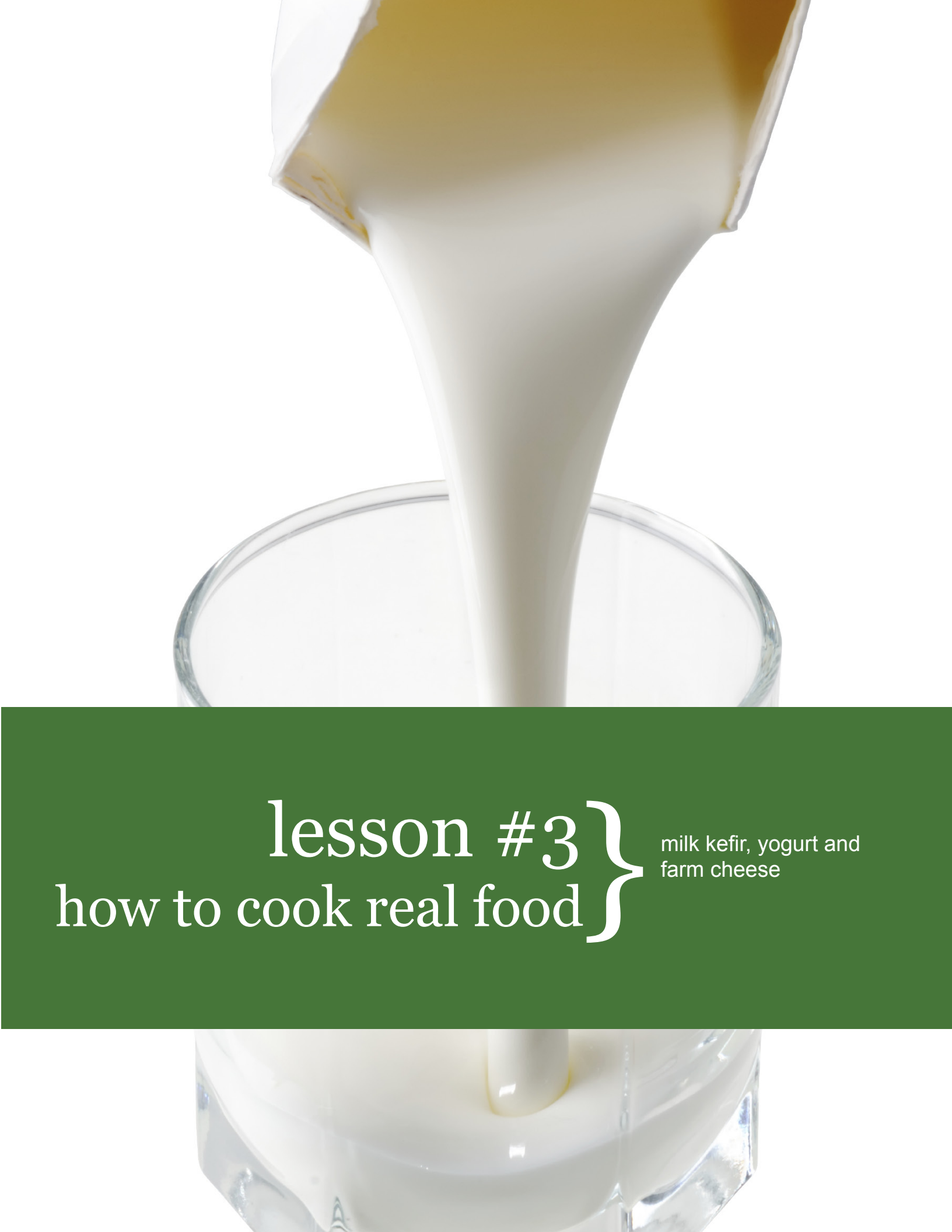

lesson #3
how to cook real food

milk kefir, yogurt and farm cheese

how to cook real food

lesson #3
milk kefir & yogurt

using this workbook} lesson #3

what you can look forward to in this workbook:

how to cook real food

lesson #3
milk kefir & yogurt

food philosophy} preparing homemade yogurt & kefir affordably

Cultured dairy foods offer enormous benefits, combining both the nutritive value of milk with the nutritive value of fermentation. Fermentation of dairy products reduces lactose (milk sugar) while increasing vitamin content, particularly folate. Moreover, the process of fermenting dairy products creates an enzyme-rich food that is also rich in beneficial bacteria - those wee beasties that are critical for human health and proper immune function.

Cultured dairy foods, like all traditional foods, enjoy a long history, but it might surprise to learn that the number of cultured dairy foods far exceeds the yogurt and kefir you find in the dairy section of your supermarket. Moreover, cultured dairy foods are easy to prepare in your own kitchen. Preparing yogurt at home accomplishes two goals: 1) it maximizes the nutritive value of your foods in that you can be certain your milk is coming from a good, grass-fed source and 2) it saves you money. One quart of organic store-bought yogurt may set you back as much as $6.50 while you can prepare a quart at home for as little as $2 to $3 depending on the expense of raw, grass-fed milk.

cost comparison: yogurt & kefir}

cultured dairy food	approximate cost of homemade	approximate cost of storebought
Yogurt	• $2.70 per quart (raw milk)* • $1.50 per quart (organic milk)*	• $4.50 to $6.50 per quart
Kefir	• $2.50 per quart (raw milk) • $1.50 per quart (organic milk)	• $5.50 per quart
Scandinavian-style room temperature yogurts	• $2.50 per quart (raw milk) • $1.50 per quart (organic milk)	NOT COMMERCIALLY AVAILABLE

*Includes energy cost of preparing yogurt.

cultured dairy for optimized nutrition}

Culturing dairy products like milk and cream helps to optimize nutrient density, indeed, not only are cultured dairy foods rich sources of food enzymes and beneficial bacteria, but they're also quite rich in B vitamins. Indeed, the longer you allow kefir, a cultured dairy food, to ferment the richer a source of folate it becomes. This is also similar with other cultured dairy foods like yogurt.

mesophilic & thermophilic yogurts}

Cultured dairy foods like yogurt, can be easily divided into two categories: mesophilic or thermophilic. Mesophilic starters will culture at room temperature. An example of a mesophilic cultured dairy product is Matsoni - to prepare it you simply mix fresh milk with starter and allow it to sit at room temper-

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ature while the beneficial strains of bacteria do their work, eating up the naturally present milk sugars and converting them to lactic acid which accounts for the tangy flavor of Matsoni and other cultured dairy foods.

Thermophilic starters will culture milk products in a slightly warm environment, the yogurt you find on super market shelves is a good example of this technique. Different bacteria strains require different environments.

Mesophilic:
Mesophilic yogurts culture best at room temperature, and, for this reason, they require no expensive equipment or temperature monitoring. If you are short on time, or are looking for an easy way to prepare natural yogurts and cultured dairy products in your home, a mesophilic starter will be your best bet. Examples of mesophilic cultured dairy foods include kefir which originates in the Caucasus as well as piima, fil mjolk and viili which are room temperature yogurts of Scandinavian origin, each of which offer their own, unique characteristics. Bonny clabber, which is also a wild ferment in that it relies on the beneficial bacteria inherently found in raw milk rather than a starter culture, is also a mesophilic cultured dairy food. In this lesson we'll prepare Matsoni or Caspian Sea Yogurt, which is a mesophilic yogurt hailing from Georgia that offers a sweetly tart flavor.

To prepare a room temperature, or mesophilic yogurt, simply combine about 1/4 cup starter to one quart fresh milk or cream in a glass jar, and allow it to sit, covered, at room temperature for 1 to 3 days, or until the yogurt cleanly separates from the glass jar when tilted. Refrigerate and serve.

Thermophilic:
Most yogurts that you've enjoyed are likely to be thermophilic yogurts, including the yogurts you can purchase from your super market or health food store. These yogurts culture best at a temperature slightly above body temperature or around 108 degrees to 112 degrees Fahrenheit
.
To prepare thermophilic yogurt, you need to acquire a starter culture. Stir 1/4 cup starter culture into 1 quart milk and pour the mixture into a yogurt maker, slowcooker or food dehydrato and leave overnight or up to twelve hours. Refrigerate the yogurt after it has adequately cultured so that it will firm up a bit and solidify.

NOTE! In this sneak-preview of how to cook real food we will cover thermophilic yogurts only, for more information on preparing Scandinavian-style room temperature (mesophilic yogurts), please register for the full series now.

Sign Up Now!

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how to cook real food

lesson #3
milk kefir & yogurt

food philosophy} cultured dairy foods from around the globe

There's more to yogurt than what your grocery store offers. Here's a quick guide to yogurts from across the globe, how they're cultured as well as their individual characteristics.

name	origin	characteristics	temperature at which it's cultured	active bacteria & yeasts
bulgarian yogurt	Eastern Europe	Sweet and tangy with a creamy texture. Popular, standard yogurt. It is semi-thick with a custard-like consistency.	108 to 112 degrees Fahrenheit.	Lactobacillus Bulgaricus, Strepto- coccus Thermophilus
greek yogurt (typically strained after culturing)	Greece	Sweet and tangy with a creamy texture. Popular, standard yogurt. Often strained to produce a very thick yogurt with the consistency of cream cheese.	108 to 112 degrees Fahrenheit.	Lactobacillus Bulgaricus, Strepto- coccus Thermophilus
matsoni (AKA caspian sea yogurt)	Georgia, Russia, though popular in Japan.	Thick and smooth with a tarter flavor than most commercial yogurts.	70 to 77 degrees Fahrenheit.	Lactobacillus delbrueckii, Lactococ- cus lactis cremoris, Acetobacter orientalis.
fil mjolk	Sweden	Thick and smooth, though thinner than Bulgarian or Greek yogurt. Mildly tart flavor with a subtle cheeselike aftertaste.	70 to 77 degrees Fahrenheit.	Lactococcus lactis, Leuconostoc mesenteroides
piima	Finland	Very thin yogurt with a buttermilk-like texture and cheeselike flavor.	70 to 77 degrees Fahrenheit	Streptococcus lactis bollandicus, Streptococcus taette
viili	Sweden	Jelly-like and ropey in texture. Sweet and mild in flavor.	70 to 77 degrees Fahrenheit	Lactococcus lactis cremoris, Lacto- coccus lactis diacetylactis, Leuconostoc mesenteroides cremoris
kefir	Caucusus	tart and thin, can be slightly effervescent when fermented under pressure	70 to 77 degrees Fahrenheit	lactobasillus brevis, streptococcus thermophillus, lactobacillus casei, lactobacillus helveticus, lactobacillus delbrueckii, candida maris, candida inconspicua, saccharomyces cerevisiae

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how to cook real food

lesson #3
milk kefir & yogurt

food philosophy} how kefir can boost immunity & build wellness

Milk kefir, a traditional food of the Cacausus, is extraordinarily beneficial. Milk kefir can be easily prepared from raw or pasteurized milk with the use of a SCOBY (symbiotic colony of bacteria and yeasts). It offers myriad benefits and current research indicates it has many applications in the treatment of disease as well as the maintenance of a lively and healthy body.

what is milk kefir?

Milk kefir is, to put it lightly, an acquired taste. Sour and pungent, milk kefir is a cultured dairy food originally from the Caucuses – the region where Europe meets Asia. There it has been traditionally heralded as an elixer of long life and health. It seems that there's wisdom in this tradition: milk kefir is rich in beneficial bacteria, phosphorus, vitamin K, biotin and folic acid – nutrients that are essential to health and well-being. A single component of milk kefir – kefiran – may prove particularly beneficial as it successfully protects beneficial bacteria from damage in the hostile environment of the digestive tract[1].

milk kefir & foodborne illness

Milk kefir is strongly anti-inflammatory[2] and may prove helpful in combating gastro-intestinal distress caused by infections from bacillus cereus[3], salmonella, e coli and helictobacter pylori[4]. Milk kefir is also particularly important in recovering from clostridium difficile infection and associated gastrointestinal discomfort and diarrhea which often accompanies use of antibiotics[5]. Despite the fact that milk kefir is, itself, a symbiotic colony of bacteria and yeasts (or SCOBY), milk kefir also acts as a powerful antimicrobial food – helping to limit the growth of pathogens while encouraging the proliferation of beneficial bacteria in the intestinal tract.

milk kefir and chronic disease

Milk kefir, like other cultured dairy foods, may also play a role in the prevention of cancer as it exhibits antitumoural effects[6]. Cultured dairy foods, including milk kefir, have been found to play a role in the prevention and treatment of bladder cancer[7], breast cancer[8] and colon cancer[9]. Indeed, some researchers have concluded that milk kefir may be one of the most promising foods when it comes to cancer prevention[10].

beneficial components of milk kefir

Milk kefir is cultured from a symbiotic colony of bacteria and yeasts (SCOBY) that is coloquially referred to as kefir grains. The appearance of these small colonies of bacteria and yeast vaguely resembles that of cottage cheese or even cauliflower. Milk kefir grains are white, lumpy and gelatinous and are comprised primarily of lactic acid producing bacteria including lactobacillus brevis, streptococcus thermophillus, lactobacillus casei, lactobacillus helveticus, lactobacillus delbrueckii as well as yeasts that include candida maris, candida inconspicua and saccharomyces cerevisiae[11]. Though, of course, strains of bacteria present may differ from one culture of grains to another.

culturing milk kefir

Obscure and exotic as it may seem, milk kefir is neither difficult to acquire nor difficult to prepare. As with many traditional foods, its beauty lies in its simplicity. It's easy to begin preparing kefir and incorporating it into your family's dietary rotation. Once you've acquired a kefir grains, simply mix them in with milk – preferably raw – and allow it to culture at room temperature for 24 – 48 hours. As it cultures at room temperature, the beneficial strains of bacteria and benign natural yeasts will proliferate, metabolize the milk's lactose and create a sour, thick beverage replete with vitamins, probiotics, kefiran and other nourishing components. The longer milk kefir

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food philosophy} how kefir can boost immunity & build wellness

cultures the more sour and folate-rich it becomes, but take care not to culture it too long lest it become unpalatable.

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troubleshooting} troubleshooting yogurt & kefir making

Wondering why your yogurt turned runny? Or why all of a sudden you've produced curds and whey instead of a nice, smoothe and creamy yogurt? Here's a quick and simple guide to trouble-shooting common issues with culturing yogurts at home.

why is my raw yogurt runny?

Raw milk contains many food enzymes, and these enzymes may help to predigest some of the yogurt's macronutrients resulting in a runny or liquid yogurt. If you absolutely can't stand a runny or liquidy yogurt, you may find that making yogurt out of pasteurized milk results in a texture you prefer.

Yogurt made from whole milk and cream is thicker than low-fat or skim-milk yogurt. Make sure to use full-fat milk or use half whole milk and half cream in making your yogurt.

Adding powdered milk will also increase the thickness of your yogurt, but note that powdered milk can be a source of oxidized cholesterol.

why did my yogurt separate into two layers?

If your yogurt has separated into two distinct layers of curds and whey, its likely that the starter culture has died. This is likely because 1) you left the yogurt to culture for far too long or 2) you cultured the yogurt at too high a temperature. Alternatively, your starter may have been contaminated by something that caused the starter today such as excessive soap residue on your culturing jar or device.

You will need to discard this batch and start over with a new starter.

why is there a clear liquid covering my yogurt?

That clear liquid is fresh whey - the liquid portion of your yogurt that sometimes separates after culturing. Spoon it off and use it to as a starter culture for other fermented foods (see lesson #3). Fresh whey will keep, refrigerated, for six months.

at what temperature should I culture my yogurt?

Different bacteria and different yogurts culture best at one of two temperature levels: 1) room temperature (70 to 77 degrees Fahrenheit) or a slightly elevated temperature (108 to 112 degrees Fahrenheit).

Mesophilic Yogurts (fil mjolk, piima, viili, matsoni) culture best at room temperature (70 to 77 degrees Fahrenheit) and will die at temperatures in excess of 80 degrees Fahrenheit.

Thermophilic yogurts (Bulgarian, Greek and most storebought yogurts) culture best at a slightly elevated temperature (108 to 112 degrees Fahrenheit) and will die at temperatures in excess of 112 degrees Fahrenheit.

I purchased a dry yogurt starter. What should I do differently?

The instructions in these lessons are designed to work with active starter cultures. If you purchased a dried starter, follow the instructions included by the manufacturer until you have a cultured your first batch (you will have a live starter at this point), then follow our recipes and instructions.

why is there a clear liquid covering my yogurt?

That clear liquid is fresh whey - the liquid portion of

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troubleshooting} troubleshooting yogurt & kefir making

your yogurt that sometimes separates after culturing. Spoon it off and use it to as a starter culture for other fermented foods (see lesson #3). Fresh whey will keep, refrigerated, for six months.

how do I know my yogurt is done?

Your yogurt will be done after a period of 8 to 12 hours for thermophilic yogurts (Bulgarian, Greek etc) and 18 to 24 hours for mesophilic yogurts (fil mjolk, piima. When cultured, the yogurt will gently separate from the walls of your jar when the jar is tilted.

how long will my homemade yogurt keep?

Homemade yogurt will usually keep for at least two and possibly three weeks in the refrigerator.

help! there's mold in my yogurt.

This is a very, very rare occurence. If you see spots of mold in your yogurt, it has been contaminated. Discard the yogurt and acquire a new starter.

how often do I have to reculture my pure seed starter?

To maintain the health of your yogurt, you need to reculture your pure seed starter/mother culture at least once a week. Note that you only need to maintain a pure seed starter if you are preparing raw milk yogurt. You do not need to maintain a pure seed starter for pasteurized milk yogurt.

I'm going away. Can I put my yogurt on hold or store it?

Yogurt should be cultured weekly to maintain its viability. If you are going away for an extended period of time, consider sharing your starter with a friend who will take care of it while you're away, culturing it regularly. Alternatively, you could freeze the starter in small two-tablespoon portions. Note, however, that freezing may damage the beneficial bacteria.

what kind of milk should I use with my milk kefir grains?

Milk kefir grains can be successfully cultured in any true milk: cow, goat, sheep, yak etc. You can use raw milk or pasteurized milk, though ultra-pasteurized milk (UHT) typically has trouble holding a culture over an extended period of time.

Milk kefir grains may also be used to culture non-dairy probiotic tonics like coconut water or herbal infusions; however, unless you refresh them in milk at least once a week, they will eventually cease proliferating and may die altogether.

someone gave me dehydrated grains, how do I use them?

Dehydrated milk kefir grains take between 5 and 7 days to rehydrate properly. During that time you need to put them in a new cup of milk every 24 hours. If your home is particularly cold, it may take longer (up to two weeks) for them to rehydrate thoroughly and be active enough to culture kefir.

how do I know when my milk kefir is done?

Milk kefir will be thickened to the consistency of thin buttermilk or yogurt and will smell pleasantly sour and possibly yeast-like.

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troubleshooting} troubleshooting yogurt & kefir making

my milk kefir separated into two distinct layers of curds and whey. what did I do wrong?

Milk kefir goes through several stages (liquid similar to milk, liquid similar to thin buttermilk and curds & whey). If you don't like separated kefir, try culturing your kefir for a shorter period of time.

what's the right temperature for culturing kefir?

Kefir tends to be pretty easy to culture, though we recommend maintaining a temperature of 68 to 78 degrees Fahrenheit. Too much hotter can damage your kefir grains, and too much cooler can retard their growth.

my kefir stopped working!

Your kefir may have stopped working because the ambient temperature has changed or it was subject to drafts of cold or hot air. Try to maintain a constant and steady temperature of 68 to 78 degrees.

my kefir is culturing too fast or too slow.

Two factors affect the ability of kefir to culture: 1) the proportion of grains to milk and 2) the ambient temperature. A higher ratio of grains to milk will result in faster culturing. A higher temperature will typically result in faster culturing; contrariwise, fewer grains to milk and a lower temperature will result in kefir culturing more slowly. Adjust as you see necessary keeping in mind that kefir should typically culture between twelve and eighteen hours, though it can take up to twenty-four.

when will my kefir grains grow and what can I do with them when they do?

Most milk kefir grains, cultured properly and regularly, will begin to proliferate and grow. This process can take anywhere from six weeks to three months. Once you have more kefir grains than you need for culturing milk, pack them up and give them to a friend! Alternatively, some probiotic foods enthusiasts will eat them or blend them into smoothies.

what temperature is needed for culturing coconut kefir?

Coconut kefir should be cultured at about the same temperature as regular milk kefir (68 to 78 degrees) with the ideal temperature hovering around 70 to 72 degrees. If your home is particularly cold you can warm the coconut water to 90 degrees Fahrenheit to speed up the initial culturing process, then culture it in a draft-free location that maintains a steady room temperature.

can I culture coconut milk?

Yes! We recommend using Body Ecology kefir starter for coconut water only, and recommend using vegetal dairy-free yogurt starter or a probiotic supplement for coconut milk yogurt.

can I used canned coconut water for coconut water kefir?

Yes! While we recommend using fresh coconut water from young coconuts, you can also use canned coconut water to culture coconut water kefir. Note, however, that just like UHT milk is hit-or-miss when culturing kefir, so, too, is canned coconut water less reliable in culturing coconut water kefir.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make raw milk yogurt

This tutorial teaches you how to make thermophilic yogurt from raw milk. Thermophilic bacteria thrives in conditions of slightly elevated heat (around 110 degrees Fahrenheit), for this reason it is optimal to gently bring the raw milk up to the temperature of 110 degrees Fahrenheit prior to culturing the yogurt. To make an unheated, raw milk yogurt that cultures at room temperature, see our mesophilic yogurt tutorial. If you intend to continue making raw milk yogurt, make sure that you are also preparing a pure seed starter at least weekly which will help to maintain the integrity of the bacteria you culture and reculture.

how to make raw milk yogurt}

difficulty: easy

ingredients

- 1 qt fresh raw milk
- 1/4 cup starter (or package powdered yogurt starter such as Greek or Bulgarian)

equipment

- saucepan
- thermometer
- mixing bowl
- whisk
- yogurt maker

method

1. Bring raw milk slowly to the temperature of 110 degrees Fahrenheit in a saucepan.
2. Remove the milk from heat, whisk in starter and pour into the container of your yogurt maker.
3. Culture in your yogurt maker for at least eight hours and up to 24 hours, noting that the longer it ferments the more lactose is degraded resulting in a sourer yogurt.
4. Yogurt is finished culturing when the milk solids gently separate from the walls of the jar when tipped gently to one side.

options for yogurt starter}

Powdered and packaged thermophilic yogurt starter such as Bulgarian or Greek yogurt starter or the yogurt starter some- times available in health food stores. One package is usually sufficient to culture one batch of yogurt.

Pure seed starter can be used to reculture future batches of yogurt. Seed starter is only necessary when you are preparing yogurt from raw milk. Use 1/4 cup to culture 1 quart yogurt.

Starter from a previous batch can be used to reculture future batches of yogurt. If you use raw milk to make yogurt as the natural bacteria in raw milk will eventually overtake the specific bacterial strains in your starter and cause your starter to deteriorate over time. This is not an issue for yogurt made from pasteurized milk Use 1/4 cup starter to culture 1 quart yogurt.

Store-bought yogurt can be used just like yogurt from a previous batch to culture and reculture future batches of yogurt. Simply pick up a small tub of plain, organic additive-free yogurt to start your yogurt. Use 1/4 cup to culture 1 quart yogurt.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make pasteurized milk yogurt

While I consume and recommend the consumption of raw milk, sometimes access is limited or completely unavailable. In these instances, you may wish to prepare yogurt from pas- teurized milk. Take care to choose low-temperature pasteurized milk or vat-pasteurized milk when fresh raw milk is unavailable. Likewise, the least processed choice would also be non-homogenized milk and I encourage you to avoid ultra-high temperature (UHT) pasteurized milk. This tutorial, however, should effectively help you to culture any pasteurized milk product thus improving its nutrition through fermentation.

how to make raw milk yogurt}

difficulty: easy

ingredients

- 1 qt fresh raw milk
- 1/4 cup starter (or package powdered yogurt starter such as Greek or Bulgarian)

equipment

- saucepan
- thermometer
- mixing bowl
- whisk
- yogurt maker

method

1. Scald milk by bringing it to 180 degrees Fahrenheit, then remove from heat and allow it to cool to 110 degrees Fahrenheit.
2. Whisk starter culture into milk and pour into the container of your yogurt maker.
3. Yogurt is finished culturing when the milk solids gently separate from the walls of the jar when tipped gently to one side.
4. When your yogurt is finished culturing, reserve one-quarter cup to be used to culture your next batch.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make yogurt without a yogurt maker

Yogurt makers maintain a constant slightly elevated temperature that is ideal for culturing thermophilic yogurts. And while yogurt makers are undoubtedly an ideal purchase for the tried and true yogurt afficianado for their ease of use, you can also culture thermophilic yogurts without a yogurt maker. The key to making yogurt has little to do with equipment; rather, it is simply this: maintain a constant and elevated temperature. That goal can be accomplished with the use of thermoses, slowcookers and dehydrators.

yogurt in a slowcooker}

difficulty: easy | yield: 1 qt | time: 5 mins (active), 2 1/2 hrs (slowcooking), 3 hrs (inactive), 8 to 12 hrs (fermentation)

ingredients

- 1 qt milk
- 1/2 cup starter

equipment

- slowcooker
- spoon
- thick kitchen towel
- mason jar or other container for yogurt

method

1. Heat milk in a slowcooker on low for two and one-half hours.
2. After two and one-half hours, turn off and unplug your slowcooker and leave it to sit for three hours.
3. After three hours, stir starter into milk then cover the slowcooker with a thick kitchen towel and allow the milk to culture for eight to twelve hours.
4. Transfer yogurt to mason jar or other co tainer and refrigerate before serving.

yogurt in a thermos}

difficulty: easy | yield: 1 qt | time: about 10 mins (active), 8 to 12 hrs (fermentation)

ingredients

- 1 qt milk
- 1/2 cup starter

equipment

- saucepan
- thermometer
- whisk
- thermos
- thick kitchen towel

method

1. Heat milk in a saucepan until it reaches 110 degrees Fahrenheit. Stir in yogurt starter into the milk. Pour mixture of milk and starter into the thermose Wrap the thermos in a thick kitchen towel and allow the milk to culture for 8 to 12 hours.
2. Transfer to the refrigerator when the yogurt has finished culturing.

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tutorial} how to make yogurt without a yogurt maker (continued)

yogurt in a slowcooker}

difficulty: easy | yield: 1 qt | time: about 10 mins (active), 8 to 12 hrs (fermentation)

ingredients

- 1 qt milk
- 1/2 cup starter

equipment

- saucepan
- thermometer
- whisk
- mason jar with lid
- dehydrator

method

1. Heat milk in a saucepan until it reaches 110 degrees Fahrenheit. Stir in yogurt starter into the milk. Pour mixture of milk and starter into the mason jar and cover it with a loose lid.
2. Place the mason jar into your dehydrator and turn the dehydrator onto 108 to 110 degrees Fahrenheit. Culture the yogurt for eight to twelve hours.
3. Transfer to the refrigerator when the yogurt has finished culturing.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make milk kefir from active kefir grains

Milk kefir is, to put it lightly, an acquired taste. Sour and pungent, milk kefir is a cultured dairy food originally from the Caucuses – the region where Europe meets Asia. There it has been traditionally heralded as an elixir of long life and health. It seems that there's wisdom in this tradition: milk kefir is rich in beneficial bacteria, phosphorus, vitamin K, biotin and folic acid – nutrients that are essential to health and well-being. A single component of milk kefir – kefiran – may prove particularly beneficial as it successfully protects beneficial bacteria from damage in the hostile environment of the digestive tract.

Milk kefir is traditionally prepared from raw milk and active, live kefir grains - opaque, gelatinous substances resembling cottage cheese in appearance. **Note that if making coconut water kefir from live grains, you will need culture them in milk at least weekly to maintain the bacteria present therein. Unlike a direct-set starter, kefir grains, properly cared for, can be cultured and recultured, indefinitely.**

kefir from active kefir grains}

difficulty: easy

ingredients

- 1 quart milk or coconut water
- 1 heaping tbsp active kefir grains

equipment

- Mason jar with lid and band
- Small, nonmetal sieve or tea strainer
- Wooden Chopstick or Small Wooden Whisk

method

1. Place milk kefir grains in the bottom of a clean mason jar.
2. Cover with 1 quart fresh milk.
3. Very loosely, place the lid and band on the mason jar. You do not want to tighten it because, as with all fermentation, carbon dioxide is created and needs to escape.
4. Culture for 24 – 48 hours at room temperature (68 tpo 78 degrees Fahrenheit). For a for a thin, mild kefir you can culture for 12 hours.
5. Once culturing is complete, strain milk kefir into a new mason jar, cap and refrigerate.
6. Begin reculturing a new batch of kefir, if desired or allow your kefir grains to rest in water in the refrigerator for a few days until you're ready to make kefir again.

beneficial bacteria and yeasts in most* and kefir grains}

lactobacillus brevis
streptococcus thermophillus
lactobacillus casei
lactobacillus helveticus
lactobacillus delbrueckii
candida maris
candida inconspicua
saccharomyces cerevisiae

***NOTE**: no two batches of kefir grains will contain exactly the same strains of bacteria and yeasts.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} storage guidelines for milk kefir grains

Going on vacation? Need to take a break from culturing your milk kefir? Here's some tips to maintain the vibrancy of your milk kefir grains while you're away.

active storage (max length: 1 week)

Place your kefir grains in a clean jar and fill with one-half to one cup milk to cover. Store in the refrigerator for up to one week.

moderate-term storage (max length: 2 months)

Place your kefir grains into plastic bag, and cover with filtered water. Sprinkle 2 teaspoons dried milk powder over the kefir and store in the freezer for up to two months.

long-term storage (max length: 18 months)

Rinse kefir grains thoroughly with filtered water and dehydrate at 68 to 78 degrees Fahrenheit until the grains are dry and brittle. Store in an airtight container at room temperature for up to eighteen months. You may also sprinkle them with powdered milk which will help to ensure their future viability.

what to do with extra milk kefir grains}

Share them! If your milk kefir is bubbling over and producing more and more grains, simply share what you don't need with a friend. Changing the ratio of milk kefir grains to milk by using too many grains to milk may cause too rapid a fermentation which results in an acrid and unpalatable taste. So do yourself, and a friend, a favor and share your milk kefir grains.

Sell them! Post a note online, at a local health food store or in free classifieds and offer your extra kefir grains for sale. The current going rate for active grains from non-commercial sellers is about $5.

Eat them! Kefir grains are edible and many long-time kefir brewers combine their excess grains with frozen fruit, milk kefir or yogurt and a touch of sweetener in smoothies.

Compost them! Excess kefir grains can add a boost of life to the compost pile, infusing it with additional microbial life.

Store them! Store your kefir grains, using the guidelines to the left, for the long-term. This can be useful in case you you damage your kefir grains accidentally - you'll always have a back-up.

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tutorial} how to make farm cheese [paneer]

Homemade cheese can be made with very minimal effort - the simple act of heating milk and adding an acid like vinegar or lemon juice causes curds to separate from whey. Straining the whey from the curds enables you to prepare a simple, traditional farm cheese.

farm cheese}

difficulty: easy

ingredients

- 2 qts milk, not ultra-high temperature (UHT) pasteurized milk
- 1/4 cup lemon juice

equipment

- mixing bowl
- whisk
- heavy-bottomed stock pot
- butter muslin or cheesecloth
- strainer

method

1. Bring milk to a gently boil over a moderate flame and add lemon juice gradually as you stir continuously. The curd will separate from the whey, and you can turn off the heat.
2. Once the milk solids have separated from the liquid whey, drain the cheese in through a sieve lined with cheesecloth.
3. Wrap the cheese well and rinse it under cold running water. Squeeze out as much of the liquid as you can and press the cheese beneath two heavy plates, if desired to fully expel water.
4. Serve as you normally would any cheese and reserve the whey for soaking beans, legumes, nuts and seeds (lesson #8 of How to Cook Real Food)

uses for farm cheese [paneer]}

- as a snack for children.
- as an appetizer or starter.
- in traditional Indian dishes like saag paneer (spiced spinach with farm cheese)
- as a substitute for mozzarella in pizza
- as a substitute for ricotta in lasagna
- grilled in sandwiches
- as an addition to cream-based and cheese sauces.

seasonings for farm cheese}

When you separate the curds from the whey of your farm cheese, consider seasoning the farm cheese with a sprinkling of salt, ground black pepper or chopped fresh herbs, then need this into the cheese with a wooden spoon.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to maintain a pure seed starter for mesophilic or thermophilic yogurts (only necessary for raw milk)

If you plan to pepare yogurts, either mesophilic or thermophilic, from raw milk, it is essential to prepare and mantain a pure seed starter or mother culture. Raw milk is naturally rich in beneficial bacteria and, over time, these beneficial bacteria naturally present in your raw milk will overtake the other bacteria in your yogurt if you continue to use raw milk yogurts to reculture future batches. The result will be clabbered milk which is a traditional food and wild dairy ferment. If you wish to continue culturing specific bacteria or types of yogurt maintaining a pure seed starter ensures that, with each batch, your populating your yogurt with the right bacteria.

pure seed starter or mother culture for raw milk yogurts}

difficulty: easy | yield: 1 qt | time: about 10 mins (active), 8 to 24 hours (fermentation)

ingredients

- 1/2 cup raw milk
- 1 tbsp pure seed starter from a previous batch OR 1 package powdered dry yogurt starter (for first time batches)

equipment

- saucepan
- thermometer
- mixing bowl
- whisk
- mason jar

method

1. Heat raw milk to 160 degrees Fahrenheit, then allow it to cool to room temperature for mesophilic yogurts or 110 degrees for thermophilic yogurts.
2. Mix starter culture into heated and cooled milk.
3. If making mesophilic yogurt (fil mjolk, piima, viili, matsoni), culture your pure seed starter at room temperature (70 to 77 degrees Fahrenheit) for 24 to 48 hours.
4. If making thermophilic yogurt (Greek/Bulgarian), culture your yogurt at 110 degrees for 8 to 12 hours.
5. Make sure to always save at least one tablespoon pure seed starter to reculture future batches.

what kind of yogurt}

Mesophilic yogurts include fil mjolk, viili, piima and matsoni.

Thermophilic yogurts include Bulgarian, Greek and most storebought yogurts.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make room temperature yogurt (mesophilic)

Many cultured dairy foods including yogurts can be cultured at room temperature without added heat, yogurt makers or other equipment. These room temperature or mesophilic yogurts contain bacteria that proliferate best at room temperature, without elevated heat. Mesophilic yogurts include piima, viili, fil mjolk and matsoni. For raw milk purists, room temperature yogurt requires no heat at all and may be the easiest option for making yogurt; however, note that in order to repeatedly make any of these cultures you must maintain a pure seed starter or mother culture.

how to make room temperature yogurt (mesophilic)}

difficulty: easy | yield: 1 qt | time: about 10 mins (active), 8 to 24 hours (fermentation)

ingredients

- 1 qt fresh raw or pasteurized milk
- 1/4 cup mesophilic starter such as fil mjolk, viili, piima, matsoni

equipment

- saucepan
- thermometer
- mixing bowl
- whisk
- mason jar

method

1. Bring raw milk to room temperature in a mixing bowl.
2. Stir in starter culture. Pour milk and starter into a mason jar and cover, loosely, with cheesecloth or a loose mason jar lid.
3. Allow the milk to culture, undisturbed, at room temperature (70 to 77 degrees Fahrenheit) for twelve to eighteen hours.
4. The yogurt is finished when the milk solids separate gently from the side of the jar when tilted.

tips for yogurt making}

Want a thicker yogurt? Raw milk yogurt tends to be runny due to the natural presence of food enzymes. If you'd like a thicker yogurt, consider using a combination of two cups cream and two cups milk.

Do not save any yogurt from raw milk batches to culture future batches. The bacteria in raw milk will overtake the bacteria in your starter culture, producing clabbered milk over time instead of raw milk yogurt. Clabbered milk also offers benefits; however it is not yogurt.

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how to cook real food

lesson #3
milk kefir & yogurt

tutorial} how to make fresh whey / yogurt cheese

Fresh whey can be used as a starter culture for naturally fermented vegetables, fruits, relishes, condiments, chutneys and sodas as well as for naturally cured meats and fish. While not all fermented foods require a starter culture, using a starter culture can help to speed up the fermentation process, when desired, and inoculate fermented foods like ketchup, chutneys, pickles with specific beneficial bacteria present in the whey. While not suitable for those allergic to dairy who may choose to use other starter cultures, fresh whey is easy to make and affordable. As an added bonus, the same method we use to prepae fresh whey - straining - also produces yogurt cheese or a thick, creamy Greek-style strained yogurt. Effectively providing two dishes with just a few simple steps.

fresh whey/yogurt cheese}

difficulty: easy

ingredients

- 1 quart yogurt

equipment

- cheesecloth or butter muslin
- fine-mesh sieve
- mixing bowl

method

1. Line a fine-mesh sieve with cheesecloth or butter muslin over a mixing bowl.
2. Pour yogurt into the muslin or cheesecloth. Allow the yogurt to strain for twelve to twenty-four hours.
3. Transfer the fresh whey to a mason jar and place it in the fridge where it will keep for six months. Transfer the yogurt cheese to a jar or bowl and it will keep for another week to ten days, well-covered and refrigerated).

benefits and uses for fresh whey}

Whey has been used for centuries by European, African, Middle-eastern and south Asian peoples where naturally cultured and raw milk products have enjoyed its traditional use as a byproduct of cheesemaking, yogurt making and raw milk clabber.

Fresh whey is rich in trace minerals including calcium, phosphorus and potassium. It is also a good source of B vitamins including riboflavin, thiamin and pantothenic acid.

Because fresh whey is rich in beneficial bacteria, it can be used as an effective starter for fermented foods. DO NOT substitute dried whey powder available at health food stores. Whey powder is not rich in beneficial bacteria and will not help in food fermentation. Further, it is of quesitonable nutritional value.

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your next steps} kefir sherbet recipe

Make sherbet with your kefir! Kefir will add a pleasant tartness to sherbet, and when blended with natural sweetener, lemon juice and fresh pureed fruit, provides an excellent, but nouris ing frozen treat.

basic kefir sherbet recipe} skill level: easy | yield: 1 qt | time: 5 mins (active), freeze time depends on your ice cream maker)

ingredients

- no more than 1/2 cup unrefined sweetener
- 1 qt kefir
- 3/4 cup citrus juice
- 1/2 cup pureed fruit, as desired

equipment

- mixing bowl
- whisk
- ice cream maker

method

1. Whisk all ingredients together.
2. Pour into your ice cream maker and freeze according to ice cream maker manufacturer directions.

your recipe notes}

ingredients

sweetener (up to 1/2 cup):_____

_____

Kefir (1 quart)

citrus juice (3/4 cup):_____

pureed fruit (1/2 cup):_____

_____

method & appeal

Did you make other adjustments?:

_____

_____

_____

On a Scale of 1 to 5, How would you rate your recipe?

1 2 3 4 5

Do you have any notes for the next time you prepare your new recipe?

_____

_____

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your next steps} kefir sherbet recipe

In developing your new recipe from scratch, it's wise to consider not only what is available to you locally, seasonaly and affordably, but also which flavors marry best together, as this thoughtful attitude toward cooking will help to ensure the success of your recipes, minimizing wasted money, time and effort in the kitchen. Below, you'll find a list of recommended combinations of flavors and ingredients. You can use this chart as a guide or develop your own combinations as well.

sweetener	kefir	citrus juice	pureed fruit
honey, palm sugar	1 quart	lime	pineapple
honey, unrefined cane sugar	1 quart	lemon	strawberry, raspberry
honey, unrefined cane sugar	1 quart	orange	orange pulp & zest
honey, palm sugar	1 quart	lime	lime pulp & zest
honey, palm sugar, unrefined cane sugar	1 quart	lime	fresh coconut
honey, unrefined cane sugar	1 quart	lemon	blueberry

how to cook real food

lesson two
mineral-rich broths, stocks & soups

your next steps} preparing for the second installment on cultured dairy

Sally Fallon Morrell, author of the landmark book Nourishing Traditions and the president of the Weston A Price Foundation, lists making your own salad dressing as one of the first and most important steps one can take in transitioning to a diet based on real, traditional foods – and with good reason: conventional salad dressings available on grocery store shelves are filled with emulsifiers, preservatives and chemical flavor enhancers like monosodium glutamate.

Moreover, most dressings contain industrially produced and processed oils – particularly soybean oil which is produced through a combination of high heat, extraction by chemical solvents such as hexane (a chemical known to produce headaches and nausea) and refining. These are not real foods. The Price-Pottenger Nutrition Foundation lists making your own salad dressing with raw vinegar and extra virgin olive oil as one of its fifteen dietary guidelines. In the next installment, we'll focus on preparing nourishing and flavorful salads and salad dressings.

ingredients we'll use

___ vinegar (apple cider vinegar, red wine vinegar) or other acid like lemon juice

___ unrefined extra virgin olive oil

___ salad greens (lettuce, arugula or other greens)

___ alliums (garlic, red onion, shallot)

___ spices and herbs (chives, dill, parsley, tarragon, cilantro, cumin, crushed red pepper)

___ enrichments (egg yolk, buttermilk, yogurt, kefir)

equipment we'll use

___ mixing bowl

___ whisk

___ blender or food processor

___ measuring cups and spoons

___ knife and cutting board

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