

DR. AXE'S
GUIDE TO
PROBIOTICS

The Good Bacteria that Aids the
Digestive and Immune Systems

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INTRODUCTION

Probiotics are one of the latest health crazes, and manufacturers are cashing in on the consumer trend. You can find “healthy probiotics” labeling on more than yogurt; this marketing ploy is appearing on products such as relish and even pizza!

Probiotic purchases tripled from 1994 to 2003, and sales in 2015 were estimated at \$764 million and the market is estimated to reach \$1.7 billion by 2019.¹

Unfortunately for us, many of these products won't give you the health benefits they claim. Of the hundreds of probiotic products in the supermarket today, only “15–20 have clinical studies behind them,” says a microbiology professor from Lawson Research Institute.

So, what are probiotics, and how can you be sure that the products you buy actually have the health benefits probiotics provide? This ebook has the answers, along with some of my favorite ways to incorporate probiotics in your everyday diet.

— DR. JOSH AXE



CHAPTER 1

What Are Probiotics?

Probiotics are good bacteria that primarily line your gut and are responsible for nutrient absorption and supporting your immune system. If you don't have enough probiotics, the side effects can include: digestive disorders, skin issues, *Candida*, autoimmune issues and frequent colds and flus.¹⁻³

Historically, we had plenty of probiotics in our diets from eating fresh foods from good soil and by fermenting our foods to keep them from spoiling. However, today, because of refrigeration and unhealthy agricultural practices such as soaking our foods with chlorine, our food contains little to no probiotics, and many foods actually contain antibiotics that kill off the good bacteria in our bodies.

Did you know there are actually 10 times more microbes (bacterial cells, including the “good” bacteria probiotics) in and on your body than cells in your body?

Your skin and digestive system by themselves host about 2,000 different types of bacteria. Probiotic benefits have been shown to be effective in supporting immune function and healthy digestion, as well as beautiful skin.

Your good gut bacteria are also responsible for:

- Producing vitamin B12, butyrate and vitamin K24
- Crowding out bad bacteria, yeast and fungi5
- Creating enzymes that destroy harmful bacteria5
- Stimulating secretion of IgA and regulatory T-Cells6,7

Probiotics have been in our systems right from the moment that we entered the world. When a newborn is in the birth canal of the mother during delivery, that's when the baby is exposed to the bacteria of his or her mother for the first time. This event starts a chain reaction inside the baby's GI tract, and the infant's GI tract starts to produce good bacteria.

How Probiotics Work

Your gut contains both beneficial and harmful bacteria. Digestive experts agree that the balance of gut flora should be approximately 85 percent good bacteria and 15 percent bad bacteria.⁸

If this ratio gets out of balance, the condition is known as dysbiosis, which means there is an imbalance of too much of a certain type of fungus, yeast or bacteria that affects the body in a negative way. By consuming certain types of probiotics foods and supplements, you can help bring these ratios back into balance.

Also, it's important to understand that probiotics are not a new idea. Throughout history, cultures have thrived on probiotics found in fermented and cultured foods, which were invented for food preservation long before the refrigerator.⁹

In fact, the refrigerator could be one of the worst inventions for your digestive health because now we don't have to culture or ferment our foods to keep them from spoiling so we lose out on those vital probiotics.

One of the biggest reasons for investing in probiotics is that few of us eat traditional foods or maintain a traditional diet any longer. We don't drink herbal tonics every day or age our own cheeses. Many of the products we buy are processed for speed-to-market and uniformity and in the cheapest, most profitable ways, while fermentation is normally a slow and rather unpredictable craft. Plus, the addition of sugar and pasteurization limit the health benefits of probiotics in our foods.

Additional reasons that the microflora in our systems become unbalanced are:

- Added hormones in foods
- Antibiotic use
- Birth control pills
- Carbonated drinks
- Chlorine
- Fertilizers
- Fluoride
- Pesticides
- Preservatives and additives
- Radiation
- Steroids
- Stress

Prebiotics vs. Probiotics

Another term to mention here is *prebiotics*. Prebiotics have come to light lately for their health benefits, which are similar to probiotics. Prebiotics and probiotics are not the same.

Prebiotics are actually, in simple terms, the foods that probiotics consume

for energy. They're referred to as fermentable fiber. Prebiotics are non-digestible foods that help the healthy bacteria already living in the gut to grow and flourish. Mixed together, probiotics and prebiotics form something called synbiotics.¹⁰ Probiotics are the most commonly referred to of the three.

Prebiotics are found naturally in certain foods. Foods high in fiber often contain prebiotics, too. Prebiotics can be found in the following foods:



Artichokes



Barley



Berries



Bananas



Flax



Garlic



Honey



**Dandelion greens,
kale, chard**



Leeks



Legumes



Whole grain foods

When probiotics get enough prebiotics, they can do their work.

CHAPTER 2

The Biggest Health Benefits of Probiotics

Probiotics hold the key not just for better health and a stronger immune system, but also for supporting digestive health, mental health and neurological health.

New research continues to point out that probiotic benefits and side effects go far beyond what we previously thought.

Probiotic Benefits Begin in the Gut

The first and most-overlooked reason that your digestive tract is critical to your health is because up to 80 percent of your entire immune system is located in your digestive tract! That is an astounding percentage.

In addition to the impact on our immune system, our digestive system is the second largest part of our neurological system. It's called our enteric nervous system and is located in our gut. This is why it is called our second brain!

Many people with health issues such as thyroid imbalances, chronic fatigue, joint pain, psoriasis, autism and many other conditions don't realize that these issues can originate in the gut.

If these issues and many others are connected to our gut health, then what elements are essential for digestive health? Consider this:

"According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), upward of 60 [million] to 70 million Americans are affected



"...60 to 70 million Americans are affected by digestive diseases."

by digestive diseases. 236,000 U.S. citizens die of digestive-related disease every year and 1.9 million are disabled. Digestive disease and disorder cost the US over \$100 billion per year.”¹

These statistics are staggering, yet poor gut health actually affects much greater numbers than these statistics illustrate. That’s because your digestive health affects every physiological system in your body.

And the many toxins we’re subjected to today decrease digestive function,

affecting our ability to utilize nutrients and rid ourselves of cholesterol, triggering chronic inflammation in the body, which is a chief cause of many chronic conditions.

The secret to maintaining digestive health is all about balancing out the good and bad bacteria in your gut. If you’re going to be healthy, you must consider consuming probiotic-rich foods and supplements daily.

Besides helping us to digest our food, probiotics can:

- Compete with unhealthy bacteria for food
- Produce natural antibacterial substances
- Help manufacture vitamins B1, B2, B3, B5, B6, B12, A and K
- Help us to extract minerals from our food
- Help us to produce essential fatty acids
- Eat excess sugar
- Stimulate cell repair
- Increase number of immune cells
- Combat allergies and unhealthy inflammation
- Transform toxic metals and chemicals into useful compounds

20 Probiotic Benefits Proven by Research

The strongest evidence to date finds that probiotic benefits include:

1	Boost immune system
2	Prevent and treat urinary tract infections
3	Improve digestive function
4	Heal inflammatory bowel conditions such as IBS ⁴
5	Manage and prevent eczema in children
6	Fight food-borne illnesses

New studies underway may soon show that probiotics can:

7	Reduce flu and colds
8	Reduce overuse of antibiotics
9	Treat kidney stones
10	Treat colic
11	Prevent cavities and gum disease
12	Treat colitis and Crohn's disease
13	Combat antibiotic-resistant bacteria
14	Treat liver disease
15	Assist in the battle against cancer ²
16	Manage autism
17	Lower cholesterol
18	Fight bacteria that cause ulcers
19	Improve acne
20	Lose weight

Are There Probiotic Side Effects?

Probiotic side effects can sometimes include diarrhea if you take too much, too fast. You can start off with a smaller amount, like one tablespoon of kefir or one probiotic capsule a day, and work your way up.

But overall, the side effects of probiotics are nothing but positive!

Health Benefits of Probiotic Foods



**According to neurologist
Dr. Natasha Campbell-McBride:**

“Every traditional culture, when you look at their traditional diet, they ferment their foods. They fermented everything. You can ferment dairy, grains, beans, vegetables, fruits, meats, and fish. Everything can be fermented, and there were fermented beverages in every culture. When the cabbages were ripe in September, you made it a fermented cabbage.

Perhaps for a month or two, you were eating fresh cabbage, but then for the rest of the year, 10 months of the year, you ate your cabbage in a fermented form. Quite a large percent of all the foods that people consume on a daily basis were fermented. And with every mouthful of these fermented foods you consume trillions of beneficial bacteria.”

Fermented foods have been consumed for over 5,000 years, and even in the past 100 years certain cultures have thrived on probiotic-rich foods.

Germans consumed sauerkraut, Indians consumed lassi, Bulgarians consumed kefir, Asian cultures consumed kimchi, Russians consumed raw yogurt and Kenyans consumed amasi.

Fermented foods give you way more units of probiotics and strains of probiotics than a supplement ever will. When Dr. McBride tested the fermented vegetables, she found that her vegetables had trillions of probiotic units and over 30 strains, which means her one serving of fermented vegetables was equal to an entire bottle of probiotics.

Dr. McBride also states that, “Nature is extremely wise and populated all organic fruit and vegetables, the dust on our soils, and all plant matter with *Lactobacilli*. The fresh cabbage leaves, if it’s organically grown (not the one from chemical farming), will be covered in *Lactobacilli* lacto-fermenting bacteria. You don’t need to add anything. You just chop it up. Add some salt in the initial stages. (The salt is added in the initial stage in order to stop putrefactive bacteria from multiplying.) Then as the *Lactobacilli* stop working and start multiplying, they produce lactic acid. That’s why they’re called *Lactobacilli*. That’s just lactic acid.

“If you look at the research in lactic acid, it is one of the most powerful antiseptics. It kills off lots and lots of bad bacteria ... So, as the lactic acid starts producing, it will kill off all those putrefactive and pathogenic microbes and preserve the food. It’s a great preservative ... A good batch of sauerkraut can keep for five to six years without spoiling or rotting, as long as it is covered by its own juice.”

This process of fermentation does even more than preserve your food — it also makes the nutrients in the food more bio-available. According to Dr. McBride, the amount of bio-available vitamin C in sauerkraut is 20 times higher than in fresh cabbage!³

One of the other aspects that make the probiotic benefits in fermented foods so amazing is that they also kill off bad bacteria!

The healthy bacteria, or probiotics, live longer than the unhealthy ones and actually help end the bad bacteria reign in the gut. This decrease in “bad bacteria” such as *H. pylori* naturally benefits the body with more health and lower rates of inflammation.



4 Most Common Health Problems Supported with Probiotics⁴

1 The Probiotic for Antibiotics

While antibiotics can do a lot of good when needed, it's no secret that they can really do a number on the digestive tract, killing off both good and bad bacteria as they work. The best probiotics to help restore these "friendly flora" in the gut are the strains *S. cerevisiae boulardii*, *Lactobacillus rhamnosus* GG and *Bacillus coagulans* GBI-30.

2 The Probiotic for Boosting Immunity

Specific probiotics that have been studied for their immune-enhancing benefits are *L. casei* DN-114001, *L. rhamnosus* GG and *L. acidophilus* NCFM. These are the strains to choose during the cold and flu months (or anytime of year) to give your body the added protection needed during those times of the year.

3 The Probiotic for Irritable Bowel Syndrome (IBS)

According to experts — although they still don't know for certain the cause of IBS from which millions of Americans, particularly women, suffer — recent studies show that certain types of probiotics can ease the pain, bloating and discomfort of IBS.

Researchers believe that the probiotic strains *Bifidobacterium infantis* 35624 and *L. plantarum* DSM9843 can lead to a decrease in the common symptoms associated with IBS.

4 The Probiotic for Eczema

Eczema is occurring more and more frequently over the last few decades right along with an increase in other allergic conditions. Eczema is an allergic skin reaction afflicting sufferers with itchy, red, scaly patches that can end up being quite uncomfortable.

Some in the scientific community theorize that the increase in these allergic conditions is due in part to living in an overly sanitized world.

We don't encounter bacteria as much as we used to due to hand sanitizers, disinfectants and the like.

Evidence has been growing to show that the strain of probiotics *L. rhamnosus* HN001 and *L. rhamnosus* GG can help calm the immune or allergic reaction that causes unpleasant eczema.

CHAPTER 3

The Best Probiotic Foods



Are you getting enough probiotic-rich foods in your diet? Chances are you're probably not. Probiotics are essential for your digestive health, which most people already know. But did you know there are many other health benefits of consuming probiotic-rich foods that you might not be aware of?

By adding more probiotic foods into your diet, you could experience:¹⁻³

- A stronger immune system
- Improved digestion
- Increased energy from production of vitamin B12
- Better breath because certain probiotics fight Candida
- Healthier skin, since certain probiotics fight eczema and psoriasis
- Reduced cold and flu
- Relief from a “leaky gut” and inflammatory bowel disease
- Weight loss

Sound good? Then it's time to start consuming probiotic-rich foods for better health.

Probiotic foods also:

- Break down sugars to more digestible and healthier products
- Break down carbohydrates into easier to digest and healthier foods
- Help control harmful bacteria in the body
- Fight diarrhea
- Help with indigestion
- Fight chronic inflammation
- Boost immune system function

Here are 12 probiotic foods you should consider adding into your diet today and how they can benefit you.

The Top Probiotic Foods



1. Kefir

Similar to yogurt, this fermented dairy product is a unique combination of milk and fermented kefir grains. Kefir has been consumed for well over 3,000 years, and the term kefir was started in Russia and Turkey and means “feeling good.” It has a slightly acidic and tart flavor and contains anywhere from 10 to 34 strains of probiotics. While similar to yogurt, because it’s fermented with yeast and more bacteria, the final product is higher in probiotics.⁴



2. Cultured Vegetables (Sauerkraut and Kimchi)

Made from fermented cabbage and other vegetables, sauerkraut is not diverse in probiotics, but it is high in organic acids (what gives food its sour taste), which support the growth of good bacteria. Sauerkraut is extremely popular in Germany today. Kimchi is a cousin to sauerkraut and is the Korean take on cultured veggies. Both of the fermented formulas are also high in enzymes, which can aid digestion.⁵



3. Kombucha

Is an effervescent fermentation of black tea that’s started by using a SCOBY, also known as a symbiotic colony of bacteria and yeast. Kombucha has been around for over 2,000 years, originating around Japan. Many claims have been made about kombucha, but its primary health benefits include digestive support, increased energy and liver detoxification.⁶

4. Coconut Kefir

Made by fermenting the juice of young coconuts with kefir grains, this dairy-free option for kefir has some of the same probiotics as traditional dairy kefir but is typically not as high in probiotics. Still, it has several strains that are great for your health. Coconut kefir has a great flavor, and you can add a bit of stevia, water and lime juice to it and make a great-tasting drink.



5. Natto

A popular dish in Japan consisting of fermented soybeans, natto contains the extremely powerful probiotic *Bacillus subtilis*, which has been proven to bolster your immune system, support cardiovascular health and enhance digestion of vitamin K^{2,7-9}. Also, Natto contains a powerful anti-inflammatory enzyme called nattokinase that has been proven to help in the fight against cancer.



6. Yogurt

Possibly the most popular probiotic food is live cultured yogurt or Greek yogurt made from the milk of cows, goats or sheep. In most cases, yogurt can rank at the top of probiotic foods if it comes from raw, grass-fed animals. The problem is there is a large variation on the quality of yogurts on the market today. When buying yogurt, it's recommend to look for three things. First, that it comes from goat's or sheep's milk; second, that it's grass-fed; and third, that it's organic.





7. Kvass

This is a common fermented beverage in Eastern Europe that's been around since ancient times. It was traditionally made by fermenting rye or barley, but in more recent years has been created using beets, fruit, along with other root vegetables like carrots. Kvass uses *Lactobacilli* probiotics and is known for its blood- and liver-cleansing properties and has a mild, sour flavor.¹⁰



8. Raw Cheese

Goat's milk, sheep's milk and A2 cows soft cheeses are particularly high in probiotics, including *Streptococcus thermophilus*, *Bifidobacterium animalis lactis*, *Lactobacillus bulgaricus* and *Lactobacillus acidophilus*. Always buy raw and unpasteurized cheeses if you want to receive any probiotics.



9. Miso

Miso is one the mainstays of traditional Japanese medicine and is commonly used in macrobiotic cooking as a digestive regulator. Miso has been a staple in Chinese and Japanese diets dating back approximately 2,500 years. Today, most of the Japanese population begins their day with a warm bowl of miso soup believed to stimulate the digestive system and energize the body.

10. Tempeh

Hailing from Indonesia, this fermented soybean product is another source of probiotics. Tempeh is created by adding a tempeh starter to soybeans. The product is then left to sit for a day or two. The result is a cake-like product.¹⁵

You can eat tempeh raw or by boiling it and eating it with miso or soy sauce. It can also be used as a substitute for meat in a stir-fry meal. This is commonly deep-fried before eating, but beware this can greatly reduce its nutritional value.



11. Brine-cured olives

Olives that are brine-cured are an excellent source of probiotics, too. Be sure you select a product that is organic first. Next, be certain that your olives aren't made from a huge manufacturer. Choose a smaller company that advertises probiotics. Also make sure that your olives don't contain sodium benzoate. You can eat the olives by themselves as a snack or include them in your favorite recipes.



12. Apple cider vinegar

This offers probiotics as well. Great for controlling blood pressure, cholesterol, diabetes and even weight loss, apple cider vinegar is a great daily addition that will bring many benefits.¹¹⁻¹³ Drink a small bit each day, or use it as a salad dressing.



CHAPTER 4

All About Probiotic Yogurt



Traditional probiotic yogurt is made from dairy that's fermented into a creamy food packed with beneficial probiotics and is a balanced source of protein, fats, carbohydrates, vitamins and minerals. Yogurt is considered a superfood. When it's sourced from grass-fed cows or goats, then yogurt's nutrition is maximized, supplying omega-3 fatty acids, whey protein, calcium, magnesium, potassium, vitamin D, vitamin K2, enzymes and probiotics.

Dairy-based yogurt can be made from goat's milk or sheep's milk, but traditional cow's milk is still the most popular. Also, yogurt is the most-consumed fermented dairy product in the United States today, with the second being kefir.

It's believed that the fermenting of dairy milk dates back over 6,000 years to Central Asia as a way to preserve milk. Historical records place yogurt in India, Persia and Turkey not long after it was seen in Central Asia.

Yogurt was prized for its creamy texture and multitude of uses. Back then, fresh milk was often carried in the stomach linings of animals, where many believe the healthy bacteria, along with the climate, contributed to the fermentation.

Today, however, the process is much different! Dairy milks are heated to the point of killing the existing bacteria, a process known as pasteurization. A starter culture of live bacteria is introduced, and the milk is allowed to ferment for several hours, until it is thick, rich and tart.

10 Scientifically Supported Probiotic Yogurt Benefits

So, why is probiotic yogurt so good for you? In a study published in Nutrition Research, 6,526 individuals were studied, and yogurt intake was directly associated with better overall diet quality, healthier metabolic profiles, healthier blood pressure and triglyceride levels.

In addition, yogurt was found to be an excellent source of calcium, potassium, magnesium, zinc, and vitamins B2 and B12.¹ Yogurt is great for overall health and wellness, and probiotic-rich foods are central to the GAPS Diet Plan.

Here are 10 scientifically supported yogurt health benefits:



1. Supports Healthy Digestion

Healthy bacteria that are added to yogurt help to improve the microflora in the gut, which is responsible for digestion and a healthy digestive tract. These active cultures may help with certain gastrointestinal conditions, including colon cancer, IBS, constipation, diarrhea and lactose intolerance.² Many individuals who struggle with lactose intolerance find that yogurt is a soothing food, not one that causes digestive distress.



2. Lowers the Risk of Type 2 Diabetes

In a recent study, higher intake of probiotic yogurt is directly associated with a reduced risk of developing type 2 diabetes.³ Yogurt supports digestion and the absorption of nutrients throughout the digestive tract; this is essential for healthy blood sugar regulation.



3. Lowers the Risk of Colorectal Cancer

In a large study of over 45,000 individuals published in the International Journal of Cancer, yogurt consumption was shown to protect against colorectal cancer. Researchers indicated “the protective effect of yogurt was evident in the entire cohort.”⁴ The reason for this is a healthier digestive tract, due to the probiotics and healthy bacteria in yogurt.



4. Increases Bone Density & May Help Prevent Osteoporosis

According to Jeri Nieves, PhD, MS and director of the Bone Density Testing Helen Hayes Hospital in New York, “Adequate nutrition plays a major role in the prevention and treatment of osteoporosis, and the micronutrients of the greatest importance are calcium and vitamin D. The combination of calcium and vitamin D has a clear skeletal benefit, provided the dose of vitamin D is sufficiently high.”

Dairy yogurts are high in calcium, and many dairy yogurts are fortified with vitamin D; however, raw cow’s milk yogurt doesn’t need fortification as it contains 38IU of vitamin D per quart!



5. Supports Weight Loss and Increases Fat Loss

According to the University of Tennessee at Knoxville, yogurt increases fat loss. The study showed that three- to six-ounce servings a day for 12 weeks nearly doubled the amount of fat lost versus others in the study. The group that consumed the probiotic yogurt and additional calcium to reach 1,100 milligrams lost 22 percent more weight and 61 percent more body fat. The study also found the belly region and the waist circumference were particularly affected.⁵



6. Boosts the Immune System

In a recent study, researchers found that probiotics found in yogurt and other fermented milk products can improve the gut mucosal immune system by increasing cytokine-producing cells in the intestine. Researchers stated that “Supplementation of probiotic organisms in infancy could help prevent immune-mediated diseases in childhood.”⁶

Another study on infants found that probiotics added to formulas had a significant decrease of number days with fever, antibiotic prescriptions, clinic visits and child care absences.⁷

For adults, yogurt’s probiotics help to keep the digestive tract free of illness-causing bacteria. A randomized and placebo controlled study in Sweden of shift workers found that the placebo group reported more than twice the number of sick days than those who were taking probiotics.⁸



7. Reduces High Blood Pressure

Yogurt typically has over 600 milligrams of potassium per eight ounces! In 36 clinical trials and 17 studies, potassium intake and blood pressure reduction are evident.⁹ The potassium is believed to help decrease sodium reabsorption, while influencing nervous system cell function important in lowering blood pressure and improving heart health.

A study from Harvard School of Public Health led by Alvaro Alonso, MD, PhD, found that people who eat two to three servings (or more) per day of low-fat dairy experience a 50 percent reduction in the risk of developing high blood pressure. So, if you have high blood pressure, start eating yogurt, and if you want to keep a healthy blood pressure, eat yogurt.



8. Reduces Bad Cholesterol

The live probiotics in yogurt, including *Lactobacillus acidophilus*, decrease cholesterol levels, with just one 200-milliliter (seven ounces) serving per day! In a controlled clinical study, researchers witnessed a 2.4 percent reduction in serum cholesterol. They believe that regular intake of probiotic yogurt has the potential of reducing the risk for coronary heart disease by 6 percent to 10 percent.¹⁰



9. Regulates Moods

The effects of probiotics on the digestive tract and blood sugar levels have already been discussed, but as it turns out, the health of our gut is directly related to our mood. In a study from UCLA's Gail and Gerald Oppenheimer Family Center for Neurobiology of Stress that studied brain scans during and after the study, researchers found healthy women who regularly consumed probiotics through yogurt showed more control in emotions and less anxiety when introduced to emotional events.¹¹ The group that consumed yogurt ate two servings per day for four weeks.



10. May Help Fight Chronic Pain & Brain-Related Issues

In the same study mentioned above regarding mood regulation, researchers noted that probiotics have the potential to help with chronic pain, Parkinson's, Alzheimer's and autism.¹¹

Researchers also raised the question of whether repeated courses of antibiotics can affect the brain. Antibiotics are prescribed to kill the dangerous bacteria but also kill the healthy bacteria that reside in our guts. This reinforces my recommendation that yogurt and other probiotic-rich foods should always be consumed and especially taken after courses of antibiotics.

Yogurt Nutrition Facts

Protein, vitamin B12, pantothenic acid, potassium, zinc, riboflavin, calcium and phosphorus make up the nutrient profile of yogurt. It's a complete protein food, with just the right balance of protein, fat and carbohydrates. Just one serving can provide over 25 percent of the daily value of protein and nearly 50 percent of the DV of calcium.

The essential fatty acid, Conjugated linoleic acid (CLA), is not produced by the body. Yogurt is a good source of CLA, which has been shown to reduce the risk for heart disease. It also helps reduce belly fat, negate chemically induced cancer, lowers cholesterol, increases metabolism and strengthens the immune system.¹²

Probiotics in yogurt stimulate healthy digestive function, and help produce vitamin B12 and K. Strains of healthy bacteria added to yogurt and kefir include *Lactobacillus bulgaricus*, *Streptococcus thermophiles*, *Lactobacillus acidophilus*, *Lactobacillus casei* and *Bifidobacteria*. The key is to look for yogurt that contains "live and active cultures."

Omega-3s are healthy fats associated with supporting weight loss, reducing blood pressure, decreasing inflammation, fighting cancer and protecting against cognitive decline. While we mostly focus on the omega-3s in wild-caught salmon and tuna, probiotic yogurt from grass-fed cows makes the list as one of the top food sources available. Dairy products, including yogurt, from grass-fed cows are richer in omega-3s and CLA compared to conventional dairy products.



BEST

Raw Yogurt from Sheep or Goat that Are Grass-Fed, Cultured

Did you know that goat milk is the closest dairy to human breast milk? It's easier to digest than cow's milk due to the high concentration of medium-chain fatty acids. For individuals who are lactose intolerant, goat's milk contains significantly less lactose.

Sheep milk is the creamiest of all dairy, which is one of the reasons that sheep milk cheese is prized the world over. Sheep's milk yogurt is easy to digest, just like goat milk yogurt; either are great yogurts to get all the health benefits of yogurt.

Also, there are cows that have protein more similar to human milk, and those cows are often called A2 cows. The term A2 refers to a healthier form of casein found in milk, whereas A1 casein found in conventional cows may cause similar reactions as those experienced in people who are gluten-intolerant.

When buying or making your own yogurt, you want to look for or make yogurt that is cultured for 24–29 hours to ensure the highest levels of probiotics and the lowest levels of lactose.

SECOND BEST

Raw Yogurt from Grass-Fed Cows

Raw dairy is rich with probiotics and healthy bacteria, and yogurt made from it starts off ahead of the rest. Raw milk is nutrient-dense, helping to increase bone density, build a stronger immune system, build lean muscle mass and so much more. Through the process of pasteurization, the nutrient profile is dramatically changed. This is why I recommend raw milk, raw cheese and other dairy on my Healing Foods Diet (visit draxe.com for more information).

Instead of heating dairy to 161 to 280 degrees prior to adding probiotics, with raw dairy yogurt, the milk is heated only to 105, and only for a short time. This is just enough heat to activate the healthy bacteria, and the fermentation process, without killing the nutrients that make raw dairy so good for you.

THIRD BEST

Organic Yogurt from Grass-Fed Animals

If you don't have access to raw sheep, goat or cow dairy yogurt, your next choice should be minimally processed organic yogurt from grass-fed animals. As I mentioned previously, grass-fed dairy has many nutritional benefits over other dairy, many of which help fight chronic diseases, reduce inflammation and so much more.

Also, if you ferment the dairy for 24–29 hours as recommended as part of the GAPS or SCD diet, it consumes the majority of the lactose and is higher in probiotics.

✖ WORST

Conventional Yogurt (Yes, This Includes Greek Yogurt)

Not all probiotic yogurt is created equally — and conventional yogurt is not the best choice. The over-processing and added thickeners and preservatives diminish this natural health-boosting food's nutritional benefits. Greek yogurt is just yogurt that has been strained. If you enjoy a thicker, richer yogurt, you can strain the recommended yogurts above, keeping the whey for smoothies or other preparations.

✖ WORST of the Worst

Sweetened Conventional Yogurts

Many of the yogurts in the dairy case today are little more than over-processed milk, with a ton of added sugar or artificial sweeteners. Avoid these at all costs. If you need to sweeten your yogurt, that's OK — just do it at home with one of the natural sweeteners I recommend.

OK for Some in Moderation — Non-Dairy Yogurt

Non-dairy yogurts are growing in popularity and are commercially made from almonds, coconut or soy. While the fermenting process is different, these non-dairy yogurts still have the trademark creaminess. These yogurts don't thicken naturally or become creamy when fermented like dairy does; thickeners are added to reach the desired texture and consistency.

Thickeners used include arrowroot, tapioca flour, agar, xanthan gum, guar gum, soy lecithin and other chemical-ridden thickeners. Additionally, not all non-dairy yogurts contain healthy bacteria; read the label carefully to make sure that they contain "live active cultures." Watch for sweeteners in these yogurts; many are highly sweetened and processed.

A Note on Yogurt and Dairy Allergies

Milk allergies are different than a dairy "sensitivity" or intolerance. A true milk allergy can cause anaphylactic shock. A sensitivity to lactose or casein can cause uncomfortable symptoms, but it has rarely become an allergy and acted like a true allergy. Most individuals who are sensitive to dairy products can enjoy real yogurt from goat milk, sheep milk and A2 cow milk.

In fact, a study published in the American Journal of Clinical Nutrition found that for men with lactose malabsorption, consumption of raw yogurt with live bacteria helped with digestion and increased the butyrate in the system.¹³

How to Make Yogurt

Yes, you can make your own yogurt at home! Preparing it at home is cost-effective, and you are in control of every ingredient that goes in. Make rich and creamy yogurt, without unnecessary additives, with whatever dairy milk you desire.

Tools and Ingredients Required:

- slow cooker
- ½ gallon raw, grass-fed milk from cows, sheep or goat*
- mesophilic yogurt cultures
- glass jars
- thermometer
- 2 towels

*Can substitute pasteurized milk if desired



NOTE: If you want a thicker consistency, after the chilling stage, place several layers of cheesecloth in a strainer, over a large bowl. Place yogurt in strainer, and allow to drain overnight in the refrigerator. Don't toss away the whey liquid! It's packed with nutrients, beneficial bacteria and protein. Reserve for other uses.

1 First, test the temperature of slow cooker. Add ½ gallon tap water to your slow cooker, and turn on low for 2½ hours. Use your food thermometer to check temperature. If the water is above 115 degrees F, it's too high, and it will essentially kill the raw milk's healthy bacteria. If you're not using raw milk, above 115 degrees F is fine.

*If the heat of the water is between 110–115 degrees F, you are free to proceed!

2 Unplug the slow cooker and allow to cool to room temperature. Dump out the water and dry. Add the dairy milk (at or near room temperature) of choice, cover with the lid and turn on low. Set a timer for 2½ hours. Turn off slow cooker and unplug it. Do not remove the lid to peek! Allow milk to remain in the slow cooker, lid in place, for 3 hours.

3 Remove 2 cups of the milk to a stainless bowl, and add the starter culture according to the instructions. Mix thoroughly and pour back into the crock, and replace lid. Immediately wrap the unplugged crock in towels (warmed in the dryer if the room temperature is low) and let set for 18–24 hours undisturbed. This is the culturing period.

4 After 18–24 hours, remove from the slow cooker by filling clean, dry jars. Seal and refrigerate for at least 6–8 hours. While cooling, the yogurt will continue to thicken. Yogurt made from raw dairy will not be as thick as conventionally made yogurt available in the store.

Yogurt Recipes



Breakfast Parfait

In the bottom of a glass, place 3 ounces of yogurt. Sprinkle a tablespoon of my Grainless Granola (see page XX); repeat another layer of 3 ounces of yogurt; and top with a handful of fresh blueberries, raspberries or blackberries.



Cucumber Raita

A classic accompaniment to Indian foods, raita is a cooling combination of yogurt, garlic and cucumbers. Grate 1 medium cucumber, and squeeze dry. Mix with 2 cups of yogurt, 1 clove of garlic (minced) and 2 tablespoons of chopped mint leaves. Sprinkle top with a touch of paprika, and chill thoroughly before serving.



Healthy Chocolate Pudding

Mix 1 cup of yogurt with raw honey or stevia, and 2 teaspoons of pure cocoa. Mix well and refrigerate for 2 hours before enjoying.

Simple Yogurt Swaps and Uses

Use yogurt in place of mayonnaise (or a vegan version of mayo) in your favorite salad dressing recipe.

Replace sour cream with yogurt in most recipes; if using as a cream sauce, add just at the end of cooking so as not to “break” the yogurt.

Top your breakfast (or mid-afternoon snack) yogurt with a tablespoon of ground flax seeds. This adds 3 grams of fiber, and more healthy omega-3s!

Use yogurt to make perfect BBQ chicken! The healthy bacteria help the chicken to retain moisture, and tenderize it at the same time. Mix 1 ½ cups of yogurt, 3 minced garlic cloves, the juice of 1 lemon and 3 tablespoons of olive oil together in a resealable bag. Add chicken pieces and allow to marinate in the refrigerator for 3–6 hours. Remove from marinade and allow to come to room temperature before throwing it on the grill. This is the secret to perfectly BBQ’d chicken!

Yogurt Uses

Yes! There are plenty of non-culinary uses for yogurt. Add yogurt to your beauty regimen to experience probiotics benefits for your complexion. Your hair and skin will thank you!

Fight Acne with Yogurt

Mix 2 tablespoons of yogurt, 1 tablespoon oats and 1 tablespoon raw honey. Apply over face, paying particular attention to acne-prone areas or breakouts. Leave on 10 minutes, rinse thoroughly with warm water and pat dry.

Moisturize Dry Skin

Mix 1 tablespoon of yogurt with ½ tablespoon of coconut oil, and apply to face, elbows or even heels. Relax for 10 minutes, and wipe off with a tissue.

Moisturize Dry Hair

Mix 2 tablespoons of yogurt and 2 tablespoons of coconut oil, and apply to hair. Wrap hair in a towel, and relax for 30 minutes. Rinse thoroughly in the shower, and follow with the Homemade Honey Citrus Shampoo (see page 39). Rinse thoroughly.

GRAINLESS GRANOLA

Total Time: 15 minutes | Serves: 8

INGREDIENTS

1 cup raw pecans, chopped
1 cup dried apples, chopped
1 cup raisins
1 cup raw sunflower seeds
½ cup raw almonds, chopped
2 tablespoons raw honey
Pinch of each: ground clove,
cinnamon and nutmeg

DIRECTIONS

1. Preheat the oven to 350 degrees F.
2. In a bowl, combine all ingredients.
3. On a greased baking sheet, spread all ingredients.
4. Bake for 12-15 minutes.

CHAPTER 5

What to Look for (and Avoid) in Probiotic Supplements

Most people, including children, are in need of a probiotic boost due to the use of prescription medication, particularly antibiotics, as well as high-carbohydrate diets, the consumption of chlorinated and fluoridated water and even conventional foods such as non-organic meat and dairy that contain antibiotic residues. These chemicals kill off probiotics in your system, which can damage your digestive tract over time.¹

The Top 7 Probiotic Killers



**Prescription
antibiotics**



Sugar



Tap water



Grains



**Emotional
stress**



**Genetically
modified
(GM) foods**



**Chemicals and
medications**

In order to improve your gut flora balance, make sure to avoid the probiotic killers. We're exposed to many of these foods, toxins and stressors on a daily basis, and if you're going to restore your digestive health, they must be addressed. If they're not addressed, your gut micro-organisms become imbalanced and your system can become a breeding ground for bad bacteria, yeast, viruses, fungi and parasites.²

The only way to fix both this issue *and* your gut is to eliminate the foods that feed bad bacteria and start consuming probiotic-rich foods and supplements.

How to Pick the Best Probiotic Supplements

It's important to note that there are different types of strains of probiotics. The probiotic benefits experienced with one probiotic strain may be completely different from the health benefits seen from another probiotic.

Certain strains of probiotics support immunity, others digestion, and some even help burn fat and balance hormones.

If you want to use probiotics to help with a specific health concern, it's vital to select the right probiotic for the right issue. Or, consume a wide range of probiotics in your food, which will help you be covered.

You are what you digest, and there are no other compounds in the world that

support digestion and the assimilation of nutrients better than living probiotics. While many companies now produce probiotics, the majority of them are ineffective at best. Most probiotic supplements today are destroyed by your stomach acid before they ever get to your digestive tract.

When reading a probiotic label, it should reveal the genus, species and strain of the probiotic. The product should also give you the colony-forming units (CFUs) at the time of manufacturing.

Also, the majority of probiotics can die under heat, so knowing the company had proper storing and cooling of the facility is also important.

There are five specific things you want to consider when buying a probiotic supplement:

- 1 Probiotic capsules supplements** — look for brands that are reputable.
- 2 High CFU count** — purchase a probiotic brand that has a higher number of probiotics, from 15 billion to 100 billion.
- 3 Strain diversity** — search for a probiotic supplement that has 10–30 different strains.
- 4 Survivability** — look for strains and other cultures or formulas that ensure probiotics make it to the gut and are able to colonize.
- 5 Research** — do your homework and look for brands that have strains that support your specific needs.

What Else to Look for in Probiotics

Stay away from general health claims and consider how much information is really on a label. Make sure to check the following:

- **Stability:** Probiotics need to be kept cold in order to preserve their potency. This applies to their production, transport, storage and sales.
- **Date:** The fresher the better when you're talking about living organisms.
- **Sugar:** Sugar is not a good food source for probiotics. Prebiotics are the food source meant to keep probiotics alive. A synbiotic is a supplement that contains both prebiotics and probiotics. The best synbiotics contain healthy plant starches and fiber.
- **Living vs. dead:** "Live and active cultures" are a better bet than "made with active cultures." After fermentation, the product may be heat-treated, which kills off both good and bad bacteria (extending shelf life).
- **Bacteria type:** "Live and active cultures" does not necessarily mean that the kinds of bacteria the product holds have been proven as beneficial. The bacteria strain should consist of two names and two letters: the genus, species and strain. If the label lists two names, it could be any one of hundreds of bacteria without research or proven health benefits behind it.
- **Potency:** This is where it gets tricky. Most probiotic products don't list the amount of bacteria their products contain, and the amount that's effective depends upon many qualifiers. Health benefits can occur with 50 million colony-forming units (CFU) for certain conditions and may take as many as 1 trillion CFU for others. The higher the number the better. The Food Standards Code claims that at least 1 million live bacteria per gram are necessary in yogurt and other fermented drinks to provide the 10 billion CFU needed for health effects.

Beneficial Probiotic Strains

- *Bifidobacterium bifidum* — the most dominant probiotic in infants and in the large intestine. Supports production of vitamins in gut, inhibits harmful bacteria, supports immune system response and prevent diarrhea.³
- *Bifidobacterium longum* — supports liver function, reduces inflammation, removes lead and heavy metals.⁴
- *Bifidobacterium breve* — helps colonize healthy gut community and crowd out bad bacteria.⁵
- *Bifidobacterium infantis* — alleviates IBS symptoms, diarrhea and constipation.⁶
- *Lactobacillus casei* — supports immunity, inhibits H. pylori and helps fight infections.⁷

- *Lactobacillus acidophilus* — relieves gas and bloating, and improves lactose intolerance. Shown 61 percent reduction in e. coli, lower cholesterol levels and creation of vitamin K. Also, important in GALT immune strength.⁸
- *Lactobacillus bulgaricus* — a powerful probiotic strain that has been shown to fight harmful bacteria that invades your digestive system and is stable enough to withstand the acidic digestive juices of the stomach. It also neutralizes toxins and naturally produces its own antibiotics.
- *Lactobacillus brevis* — shown to survive the GI tract, boost cellular immunity, enhanced natural T-killer cells and kill H. pylori bacteria.⁹
- *Lactobacillus rhamnosus* — supports bacterial balance and supports healthy skin. Helps fight urinary tract infections, respiratory infections, and reduce anxiety by reducing stress hormones and GABA neurotransmitter receptors. Also, survives GI tract.¹⁰
- *Bacillus subtilis* — an endospore probiotic that is heat-resistant. Elicits a potent immune response and supports GALT. Suppresses growth of bad bacteria like salmonella and other pathogens.^{11,12}
- *Bacillus coagulans* — an endospore probiotic that is heat-resistant and improves nutrient absorption. Also has been shown to reduce inflammation and symptoms of arthritis.¹³
- *Saccharomyces boulardii* — a yeast probiotic strain that restores natural flora in the large and small intestine and improves intestinal cell growth. It has proved effective in treating inflammatory bowel disease like Crohn's disease. It's been shown to have antitoxin effects, be antimicrobial and reduce inflammation.¹⁴⁻¹⁶

Action Steps:

Do your best to remove substances that can destroy probiotics, like sugar, grains, GMOs, tap water, antibiotics and emotional stress from your life.

Consume two servings daily of probiotic-rich foods.

Take a probiotic supplement that has at the very least 10+ strains of probiotics with at least 15 billion CFUs.

CHAPTER 6

Delicious Probiotic Recipes & Homemade Products

Getting your probiotics fix doesn't have to be a chore. There are numerous ways to obtain probiotics in delicious forms — or even in products such as deodorant.

Here are some of my favorite probiotic recipes and homemade products. Try out your favorites!

HOMEMADE PROBIOTIC DEODORANT

Total Time: 4 hours | Serves: 30-90



INGREDIENTS:

- 1/4 cup coconut oil
- 1/4 cup grated beeswax
- 1/4 cup baking soda
- 1/4 cup shea butter
- 3 tablespoons arrowroot powder
- 3 capsules of live probiotics
- 10 drops of tea tree oil
- 10 drops of essential oil of your choice (lavender/citrus for women and cypress/bergamot for men)

DIRECTIONS:

1. In a double broiler, melt the coconut oil and beeswax together.
2. Stir gently until completely melted and combined.
3. Next, add the remaining ingredients and stir.
4. Once mixed, quickly pour the mixture into an empty deodorant container.
5. Keep the container upright and allow the mixture to cool and harden before use.

HOMEMADE HONEY CITRUS SHAMPOO

Total Time: 2 minutes | Serves: 20-30

INGREDIENTS:

1 cup water
5 tablespoons honey
5 drops of lemon essential oil
5 drops of melaleuca essential oil

DIRECTIONS:

1. In a bowl, combine all ingredients and mix well.
2. Transfer to a container, and mix well before each use.

HOMEMADE PROBIOTIC TOOTHPASTE

Total Time: 2 minutes | Serves: 20

INGREDIENTS:

1/4 cup coconut oil
3 tablespoon bentonite clay
2 capsules of live probiotics
10 drops of peppermint essential oil

DIRECTIONS:

3. In a small bowl, mix all ingredients.
4. Put into a rubber toothpaste tube or sealed glass container.
5. Brush teeth for 2 minutes two to three times daily.



BERRY SMOOTHIE

Total Time: 2 minutes | Serves: 1

INGREDIENTS:

6 ounces kefir or goat's milk yogurt
1 cup raspberries
1/4 teaspoon vanilla extract
Stevia to taste

DIRECTIONS:

1. In a high-speed blender, combine all ingredients until smooth.



HOMEMADE HONEY FACE WASH FOR CLEAR SKIN

Total Time: 2 minutes | Serves: 30

INGREDIENTS:

- 2 capsules of probiotics
- 1 tablespoon coconut oil
- 3 tablespoons honey
- 1 tablespoon apple cider vinegar
- 20 drops of melaleuca essential oil

DIRECTIONS:

1. In a small bowl, open and empty the capsules.
2. Add the remaining ingredients and blend with a hand blende
3. Pour the mixture into a convenient bottle and store in cool place.

BROCCOLI SALAD

Total Time: 5 minutes | Serves: 2

INGREDIENTS:

1 teaspoon sea salt
5–6 cups fresh broccoli florets
½ cup slivered almonds
½ cup cooked turkey bacon, chopped
¼ cup red onion, chopped
1 cup frozen peas
1/4 cup unsweetened cranberries
2 tablespoons coconut vinegar
¼ cup honey
1 cup coconut kefir

DIRECTIONS:

1. Bring a large pot of water to a boil. Add the salt and broccoli and cook for 1–2 minutes. Drain the broccoli.
2. In a serving bowl, combine the broccoli, almonds, bacon, onion and peas.
3. In a separate bowl, mix the remaining ingredients and dress the salad.





CHEESY BREAD

Total Time: 45-50 minutes | Serves: 8

INGREDIENTS:

- 8 eggs
- 1 cup kefir
- ½–¾ cup water
- 1 teaspoon each: sea salt and ground black pepper
- 4 cups almond flour
- 1½ cups chia seeds
- 2 cups of raw cheese

DIRECTIONS:

1. Preheat the oven to 350 degrees F.
2. In a medium bowl, whisk together the eggs, kefir, water, salt and pepper.
3. Add the flour, chia seeds and raw cheese to the mixture.
4. Pour into a greased loaf pan and bake for 30-40 minutes.

ZUCCHINI LASAGNA

Total Time: 45 minutes | Serves: 6

INGREDIENTS:

1 red onion diced
4 garlic cloves, crushed
2 tablespoons olive oil
2 1/2 pounds grass-fed ground beef
2 tablespoons oregano
2 tablespoons basil
1/2 teaspoon cayenne pepper
1/2 teaspoon sea salt
3 cups diced tomatoes
6 ounces tomato paste
6 zucchinis thinly sliced
1 cup black olives sliced
1 cup raw cheese, shredded

DIRECTIONS:

1. Preheat the oven to 350 degrees F.
2. In a large pot, sauté the onions and garlic in the olive oil for about 3 minutes.
3. Add the ground beef and brown. Add in all remaining dry ingredients and stir. Mix in the diced tomatoes and tomato paste.
4. In a greased 9" x 13" baking dish, place a layer of sliced zucchini and then ladle on a thick layer of the meat mixture and top with the sliced black olives.
5. Top each meat and olive layer with another layer of sliced zucchini and top with a final layer of the remaining meat mixture. Top with the shredded cheese. Cover tightly with aluminum foil.
6. Bake for 30 minutes and serve.



HEALTHY BLUEBERRY COBBLER

Total Time: 70 minutes | Serves: 9-12

INGREDIENTS:

Coconut oil

3 cups washed blueberries

2 cups almond flour

1/4 cup coconut flour

1/4 teaspoon sea salt

1/2 teaspoon baking soda

1/2 cup honey

1/4 cup butter, soft

1 drop of almond extract

3 tablespoons flax-meal whisked with 9 tablespoons
warm water, allowed to plump up for 5 minutes

1 tablespoon apple cider vinegar

DIRECTIONS:

1. Preheat the oven to 350 degrees F.
2. Grease an 8" x 8" glass dish with coconut oil.
3. Place the blueberries in the pan, reserving a few berries for the top, if you wish.
4. In a medium bowl, whisk together the flours, salt and baking soda.
5. In another bowl, whisk together the honey, butter and extract.
6. Combine the wet and dry ingredients, stirring in the flax mixture. Once well-combined, quickly stir in the apple cider vinegar.
7. Pour the batter onto the berries, spreading up to the edges.
8. Bake for 40-50 minutes, or until the batter is set on top. If desired, top with the reserved berries.

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