

time limited Bonus

little  
healthy  
secrets



Including the top 10 tips for unlocking the secrets  
to *digestive health* and enjoying a better life

THE POWER OF PROBIOTICS  
SPORE-FORMING PROBIOTICS - THE SMART CHOICE

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# Chapter 1. Your Digestive System

A healthy digestive system is essential for a healthy body.



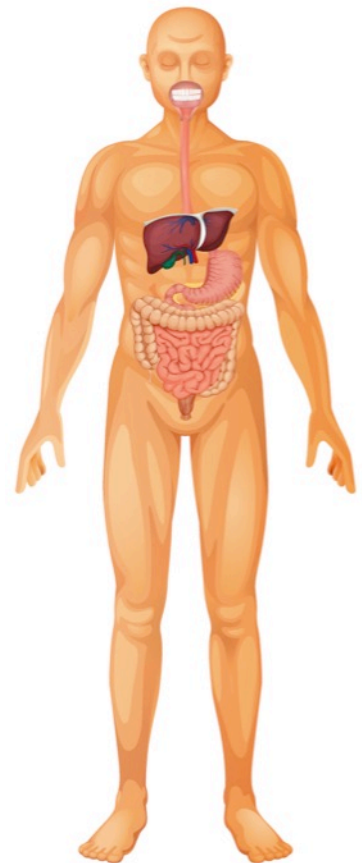
On the one hand it performs the obvious function of passing food through your body and getting rid of the bad stuff—eliminating the harmful bacteria. On the other hand it is responsible for making sure your body properly absorbs the good stuff—all of the nutrients

from food and drink.

In the average adult the gastrointestinal tract is a staggering 28 feet long and directly connected to the functioning of your entire system, pivotal to everything that goes on in your body.

Inside your digestive system reside more than 400 species of bacteria, the good and the bad. In fact, there are nearly 100 trillion bacteria in the gut—10 times more bacterial cells than the total number of other cells in your whole body.

Maintaining a balance of intestinal bacteria is critically important for digestion and for your whole being. But it's harder than ever these days to maintain that balance; to keep up



the levels of probiotics—the good bacteria. Your body is constantly subjugated to the threats of modern life—our unhealthy diet, stress, travel, use of antibiotics and other medications, for instance.

Too many of the bad microorganisms such as yeast and parasites, or, conversely not enough of the good bacteria, the probiotics, can have major negative consequences on your health.

Primarily, the imbalance can lead to the kind of digestive disorders we all experience from time to time and don't like to talk about. They range from constipation to diarrhea, from acid reflux to gas, to bloating and irritable bowel syndrome, and more serious ailments such as Candida, colitis, Crohn's disease, Irritable Bowel Syndrome and diverticulitis.

They're often not only uncomfortable, but also downright embarrassing. They can be extremely painful - and dangerous.

Here's one way of looking at it. Think of the digestive tract as being like a supermarket with hundreds of shelves. Those shelves are meant to display all kinds of wonderful products. But instead because of stress and unhealthy lifestyle the good stuff is kept off the shelves giving bad stuff the chance to get displayed. As a result you fall ill. Your doctor prescribes antibiotics, which immediately proceed to not only wipe out the bad bacteria but also the good bacteria as well.

That's where probiotics come into play to restore balance and harmony in your traumatized digestive system and to help stop the vicious cycle from repeating itself.

There are actually dozens of different probiotic bacteria with proven health advantages. The most common groups include *Lactobacillus* and *Bifidobacterium*. Then there are many different species within each group, and each species has many strains. It's worth bearing in mind that different probiotics work for different health conditions. Therefore, choosing the right kind of probiotic is essential.

## **REVEALING STATISTICS**

The statistics bear out the fact that there is an epidemic of digestive disorders in the U.S. today.

- More than 100 million Americans have digestive ailments of one kind or another.
  
- There are in excess of 200 over-the-counter remedies—a multi-billion dollar industry.
  
- Two of the top five best-selling drugs tackle digestive health concerns.

But drugs are not the answer. You need the healthy, natural solution: probiotics.

## Chapter 2. The Secret to a Healthy You

So what are probiotics and what can they do for you? Of course, everyone has heard of *antibiotics* and it's almost getting to the point where most people have heard about *probiotics*, even if they're not exactly sure what they are and what they do.

**The word probiotic comes from the Greek “for life” which is the literal translation.**

The definition from the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) is: *“Live microorganisms which when administered in adequate amounts confer a benefit on the host.”*

What does that mean exactly? What they're saying is that there are living organisms such as bacteria, fungi, viruses (also called microbes). Get enough of them. Get enough of the right kind of them. And you'll see a health benefit.



But bacteria are bad. Right? Actually, that's half right. Our digestive tract is filled with both bad and good bacteria. Probiotics are



the good guys, the good bacteria or friendly flora. You want more of them in your army to battle the bad guys, the bad bacteria.

Can you get probiotics from regular food? Yes, you can. In years gone by probiotics were a natural part of the daily diet. After all, fermenting foods was one way of preserving them

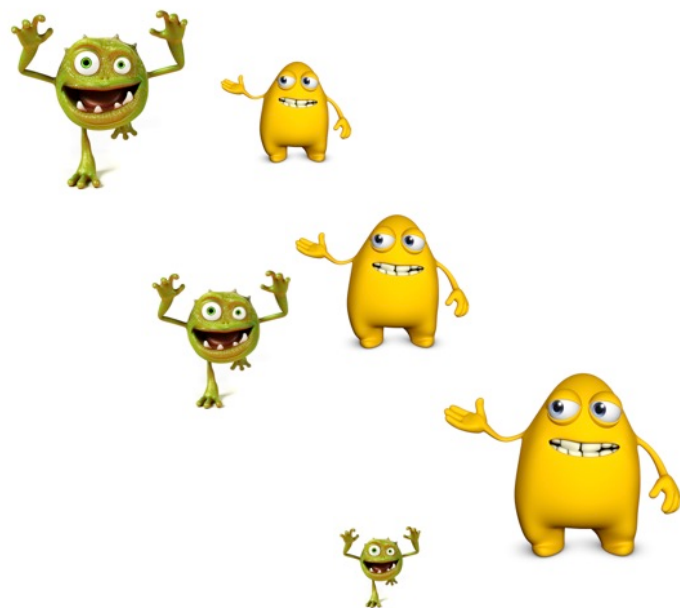
before refrigeration was invented. But it's not the kind of food that is regularly consumed in the modern western highly-processed diet: lacto-fermented fruits and vegetables, sauerkraut, miso, kimchi, natto, tempeh, and non-pasteurized meats such as salami and some sausages and non-pasteurized yogurt. Not your everyday cuisine!

That's why taking probiotic supplements on a daily basis is so essential for good health.

Research in support of various strains of probiotics for specific ailments continues to build.

In particular:

- Digestive Health
- Immune Health
- Weight Management
- Post Antibiotic Support



### **Digestive Health**

The biggest body of research for probiotics centers on digestive health. Probiotics have been shown to help reduce gas, bloating, constipation, diarrhea and other symptoms. Studies have also found them to be beneficial against inflammatory bowel diseases such as Crohn's

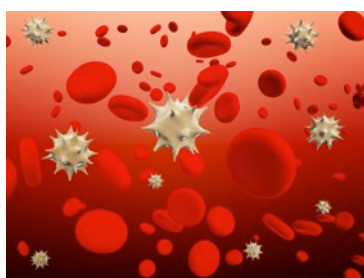
disease and ulcerative colitis.<sup>123</sup> Probiotics may also be useful against *Helicobacter pylori* infections, the main driver of ulcers and stomach cancer.<sup>4</sup>

## Immune Health

Digestive health and the immune system are inextricably intertwined. Some 70 percent of the immune system lives in your digestive tract. For a healthy immune system you must have a healthy digestive system. For a healthy digestive system you must have the right amount of probiotics.

Your immune system is comprised of special cells, proteins, tissues and organs which protect against attack by would-be invaders, the bad bacteria, germs, infections and diseases.

Your immune system—all of it—is protected from the toxic chemical factory in your gut by



a lining that is so micro thin that it is no thicker than one cell.

If that barrier is penetrated and all the bad stuff gets into your bloodstream instead of the good stuff (the vitamins and minerals, for example) the consequences can be severe. It's

what known as leaky gut syndrome and it is as nasty as it sounds.

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<sup>1</sup> Calafiore, A, Gionchetti P, Calabrese C, et al. Probiotics, prebiotics and antibiotics in the treatment of inflammatory bowel disease. *J Gastroenterol Hepatol.* 2012;1(6):97-106.

<sup>2</sup> Haller D, Antione JM, Bengmark S, Enck P, Rijkers GT, Lenoir-Wijnkoop I. Guidance for substantiating the evidence for beneficial effects of probiotics: probiotics in chronic inflammatory bowel disease and the functional disorder irritable bowel syndrome. *J Nutr.* 2010;140(3):690S-697S.

<sup>3</sup> Jonkers D, Penders J, Masclee A, Pierik M. Probiotics in the management of inflammatory bowel disease: a systematic review of intervention studies in adult patients. *Drugs.* 2012;72(6):803-823.

<sup>4</sup> de Bortoli N<sup>1</sup>, et al. Helicobacter pylori eradication: a randomized prospective study of triple therapy versus triple therapy plus lactoferrin and probiotics. *Am J Gastroenterol.* 2007 May;102(5):951-6. Epub 2007 Feb 21.



If that barrier is damaged you can become allergic to foods that you've never had problems with before. You become ill. Your immune system goes into overdrive and you end up with inflammation throughout your body. Several different probiotic strains can enhance immune function and lead to reduced risk of infections, including the common cold.

### **Weight Management**

Studies<sup>5</sup> have shown that overweight people actually have different gut bacteria than skinny people. Many scientists now believe that our gut bacteria are important in determining body fatness.

Some probiotic strains definitely help with fat loss. One major study of 210 people, published in 2013, found that one probiotic led to 8.5 percent loss in belly fat over just 12 weeks. When they stopped taking the probiotic, they re-gained the belly fat within four weeks. There is also some evidence that *Lactobacillus rhamnosus* and *Bifidobacterium lactis* can help with weight loss and obesity prevention.

Recent research at Loughborough University in the United Kingdom has found that probiotics may combat the type of insulin resistance that contributes to obesity and the development of type 2 diabetes.

Lead researcher Dr. Carl Hulston says that if the tight junctions between the cells in the lining of your gut break down, the gap allows “inflammation-causing agents” to get into your bloodstream and cause trouble. According to his study, he says, that the *Lactobacillus* strain appears to seal those junctions and prevent this “leaky gut” situation.

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<sup>5</sup> Wallis, Claudia. How Gut Bacteria Help Make Us Fat and Thin. *Scientific American*. 2014 June. Volume 310, Issue 6.

## **Post Antibiotic Support**

When people take antibiotics, especially for long periods of time, they often suffer from diarrhea—even for quite a while after the infection has been wiped out. Why? Because the antibiotics kill many of the natural bacteria in the gut, which shifts the balance and gives the “bad” bacteria the opportunity to dominate. Dozens of studies have provided strong evidence that probiotic supplements can help cure antibiotic-associated diarrhea.

*Pro*biotics are designed to have the opposite effect of *anti*biotics. We all know that doctors prescribe antibiotics to kill bacteria and viruses. But antibiotics don’t discriminate and they kill the good as well as the bad. With probiotics you are being proactive.

**And more.** Probiotics have been shown to be beneficial for a wide range of other health problems including the reduction of systemic inflammation, a leading cause of many diseases; easing depression and anxiety; lowering cholesterol and blood pressure and treating some skin complaints.

## Chapter 3. How To Choose The Right Probiotic

The benefits of probiotics are clear—and more studies providing supportive evidence are being conducted across the globe. As a result the popularity of probiotics is growing. But not all probiotic products are created equal. It's important to know what to look for and what to avoid.

There are some common pitfalls you should bear in mind when selecting a probiotic supplement.

### **Rigorous Research**

Check to see if your probiotic supplement contains cultures that have rigorous research. Some of those tested in clinical trials include: *Bifidobacterium bifidum*, *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Lactobacillus rhamnosus*, *Lactobacillus casei*, *Lactobacillus bulgaricus* and spore-forming DE111® *Bacillus subtilis*.

### **Dead on Arrival**

The acids in your stomach are so powerful that they destroy most probiotics before they can get through to your small and large intestines. So, you need to find a probiotic that has a coating to prevent this from happening.

One proprietary brand that protects the probiotics from stomach acidity and doesn't release them all at once is called DRcaps®. DRcaps, which have Vegan, Non-GMO, Vegetarian Society, Halal and Kosher certifications, also help mask taste and odor and reduce bad aftertaste. (DRcaps® is a registered trademark of Capsugel).

### **Temperature Trouble**

Probiotics are extremely delicate. Many brands need to be refrigerated—and that means 100 percent of the time. You're better off with a product that doesn't need to be refrigerated.

## **Prebiotics**

Prebiotics work hand in glove with probiotics. They nourish probiotics and help them work more effectively. So you need to find a supplement that also contains prebiotics. In fact, prebiotics are so important we've devoted the next chapter to the subject.

## Chapter 4. Probiotic-Prebiotic Partnership

So, what's a *prebiotic*?

In a nutshell, prebiotics are food for probiotics; they fuel probiotics. Working together in partnership prebiotics and probiotics rebalance the bacteria in your gut.

In order for a substance to be considered prebiotic, it must be selectively fermented by the good bacteria and not by the bad bacteria.



Or as the Food and Drug Administration (FDA) official definition puts it, “a non-digestible food ingredient that beneficially affects the host by selectively stimulating the growth and/or activity of one or a limited number of bacteria in the colon, and thus improves host health.”

In your everyday diet this means it's important to focus specifically on increasing prebiotic-rich foods, not just fiber-rich options. And while yogurt is the star of the probiotic world, prebiotics are found in whole grains, chicory, garlic, onions, leeks, artichokes, and bananas.

Conventional prebiotics are generally fibers or starches (e.g., oligosaccharides). One familiar probiotic is a type of soluble fiber called fructooligosaccharides—more easily remembered as FOS!

FOS, however, has been shown to have significant drawbacks including:

- The need for large dosages to be effective
- Potential for flatulence

- Sensitivity to their specific environment
- They only work in the colon

As a result of extensive research, there is now a novel probiotic called PreforPro® that supports the growth of healthy bacteria in the gut through a mechanism that is not fiber or starch-based. PreforPro® addresses the drawbacks of typical prebiotics because its benefits include:

- Effectiveness in small doses within hours (not days)
- Functions in both the small and large intestines
- Does not cause flatulence
- Not affected by varying gut environments
- Works with a broad spectrum of probiotic species

PreforPro® has been shown both in the laboratory and with patients to preferentially promote the growth of beneficial probiotic strains such as *Lactobacillus*, *Bifidobacterium* and *Bacillus subtilis* when competing with undesirable bacterial strains. The effects are achieved at small doses within hours, in both the small and large intestine.

## Chapter 5. VIP Probiotics – Make Sure You Get Spore-Forming Bacteria Strains

There are numerous different kinds of probiotics. Many of them work synergistically for the healthy functioning of your body. Some bacteria are able to form spores around themselves, which gives the organism the ability to survive in hostile environmental conditions—such as the toxic acids in your stomach.

Renowned TV doctors Mehmet Oz and Michael Roizen put it this way: “Spore form probiotics are the Chuck Norris of probiotics: total tough guys. They have to be to survive splashing around in your stomach’s acid bath. Wimpier types -- including live cultures in yogurt -- often throw in the towel.”

Bacterial spores, in fact, are made of a tough outer layer of keratin that is resistant to chemicals, staining and heat. The spore allows the bacterium to provide protection from various traumas, including temperature differences, absence of air, water and nutrients. Here are some of the most important and details of the specific roles that key probiotics play, starting with the most important: DE111® *Bacillus subtilis*.

### **DE111® *Bacillus subtilis***

*Bacillus subtilis* supports the normal proliferation of beneficial bacteria and crowds out other bacteria.

DE111® is a special clinically researched probiotic strain of *Bacillus subtilis* that has been fully genome sequenced and uploaded to GenBank, the National Institutes of Health genetic

sequence database. This spore-forming bacteria works as a complement to many of the non-spore strains, helping them work more effectively.

Spore forming bacteria are a diverse group of very hardy bacteria, characterized by their ability to form endospores to protect themselves when conditions are not favorable. *Bacillus subtilis* has the ability to form spores that protect the microbes from harsh conditions until they enter an environment ripe for germination, such as the GI tract.

John Deaton, PhD, says, “DE111 is a classic *Bacillus subtilis* strain that supports the normal proliferation of beneficial bacteria and crowds out other bacteria in the gut. *Bacillus subtilis* has the ability to form spores that protect the microbes from harsh conditions until they enter a more favorable environment, such as the GI tract,” he explained.

By crowding out bad bacteria such as *E. coli*, DE111 *Bacillus subtilis* makes room for the growth of good bacteria. DE111 supports digestive and general health by producing enzymes that aid in the digestion of dietary fats and complex carbohydrates into beneficial small chain fatty acids such as omega-3 and omega-6. It also helps digest and convert sugar and fats, and helps maintain glucose, cholesterol, and triglyceride levels in the blood.

Because of its spore-forming ability, *Bacillus subtilis* offers additional benefits as a probiotic:

- Remains viable under a wide temperature range, doesn't require refrigeration
- Survives passage through the acidic environment of the GI tract
- Can persist in the GI tract, increase its numbers and then resporulate



- Supports the normal immune reaction of intestinal cells.<sup>67</sup>
- Crowds out bacterial pathogens and maintains healthy gut flora.<sup>8</sup>
- Communicates with intestinal cells to maintain gut barrier function

### **Bacillus coagulans**

New research shows that *Bacillus coagulans* has multiple beneficial effects. In one eight-week trial patients with Irritable Bowel Syndrome (IBS) had significant improvement in abdominal pain and bloating.<sup>9</sup> Individuals with Crohn’s disease experienced a greater decrease in CDAL—a scale that evaluates diseases activity, and a greater drop in the number of liquid-like stools. Most impressively, four out of five patients were able to stop taking anti-diarrheal medication, compared with only one out of six in the placebo group.

In other research—a 30-day clinical trial—there was a significant increase in immune response to both adenovirus and influenza A. And there’s hope for arthritis sufferers as well. Two 6-day studies, one for osteoarthritis and one for rheumatoid arthritis, showed decreased inflammation, less pain, less stiffness, and improved mobility.

### **Lactobacillus acidophilus**

*Lactobacillus acidophilus* is one of the most highly studied and widely used probiotic organisms. Scientists have discovered that *Lactobacillus acidophilus* helps maintain the proper balance of bacteria within the digestive tract, promoting digestive functions and

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<sup>6</sup> Bonomo R, Luzi G, Frielingsdorf A, Aiuti F. Ruolo delle IgA secretorie nelle funzioni dell’immunita locale dell’apparato digerente. Impiego di spore di *B. subtilis* in alcune forme morbose con deficit di IgA e ipogammaglobulinemia. *Chemioter Antimicrob.* 1980;3:237–240.

<sup>7</sup> Ciprandi G, Scordamaglia A, Venuti D, Caria M, Canonica G W. *In vitro* effects of *Bacillus subtilis* on the immune response. *Chemioterapia.* 1986;5:404–407.

<sup>8</sup> Vacca A, Pantaleo G, Ronco M, Dammacco F. Chemoimmunotherapy for multiple myeloma using an intermittent combination drug schedule (melphalan + prednisone) and alternating course of *B. subtilis* spores. *Chemioterapia.* 1983;2:300–305.

<sup>9</sup> Hun, L. *Bacillus coagulans* significantly improved abdominal pain and bloating in patients with IBS. [Postgrad Med.](#) 2009 Mar;121(2):119-24. doi: 10.3810/pgm.2009.03.1984.

supporting the immune system. Recently, *L. acidophilus* in combination with essential fatty acid supplements has been recommended for the preventative treatment of systemic candidiasis. It has also been researched as a weapon in the war against IBS (Irritable Bowel Syndrome).

### **Bifidobacterium lactis**

*Bifidobacterium lactis* is very effective in resisting acid digestion, preventing diarrhea, relieving constipation and decreasing chronic pain and inflammation of the colon. It's a great supplement for your stomach and intestinal tract. Recent results show it is able to stimulate the body's immune response, especially in the elderly. *Bifidobacterium Lactis* is also very beneficial in preventing and treating atopic eczema in children with food allergies.

### **Bifidobacterium longum**

*Bifidobacterium longum* has a high resistance to gastric acid and supporting a healthy immune system. *Bifidobacterium longum* also has been shown to treat constipation, reduce inflammation associated with inflammatory bowel conditions, prevent high cholesterol levels and reduce the development of certain allergies. Probiotic supplements are also beneficial in repopulating *Bifidobacterium longum* colonies in the digestive tract that have been destroyed by antibiotic use.

### **Lactobacillus rhamnosus**

*Lactobacillus rhamnosus* is one of the most intensely studied bacteria in the gastrointestinal tract and is able to tolerate and even thrive in the harsh acidic conditions of the stomach. The most common benefit is a reduction in the frequency and duration of diarrhea. *Lactobacillus*

*rhamnosus* has been shown to help maintain the integrity of the stomach lining, have an anti-inflammatory effect, support immune function and promote a healthy urinary tract system.

It also helps in weight loss. In a 12-week weight loss study, those women who took *L. Rhamnosus* lost more weight than those who didn't. After the study those taking the supplement continued to lose weight; the other women didn't.

### **Lactobacillus salivarius**

*Lactobacillus salivarius*, which lives in the mouth and small intestine, has been shown to be effective in assisting in dental health. Researchers have also noted that *Lactobacillus salivarius* support homeostasis within the intestines so this probiotic may also be involved in immune response.

### **Lactobacillus casei**

*Lactobacillus casei* has been found to assist in the colonization of beneficial bacteria.

*Lactobacillus casei* is active in a broad temperature and pH range, and can be found naturally in the mouth and intestine of humans. It is a lactase producer which aids in the optimal digestion of lactose, promoting optimal digestive health.

### **Bifidobacterium breve**

*Bifidobacterium breve* goes to work in the digestive tract to ferment sugars and produce lactic acid, as well as acetic acid. *Bifidobacterium breve* is like a champion among probiotic bacteria due to its superior ability to metabolize many types of food.

### **Lactobacillus plantarum**

*Lactobacillus plantarum* is able to help reduce unhealthy bacteria (naturally present in the body) while preserving vital nutrients, antioxidants and vitamins. One of the most notable talents of *Lactobacillus plantarum* is its ability to synthesize L-lysine, an essential amino acid which is required for countless functions in the body.

## Chapter 6. Fun Facts About Probiotics

How important are probiotics? Here are some facts and figures that spell it out for you.

- 100 trillion bacteria. That's how much bacteria is in your gastrointestinal tract.
- 85% v 15%. In healthy people 85% of our bacteria are good; 15% are bad.
- 400. There are more than 400 strains of beneficial bacteria in the normal digestive tract.
- 10x. Bacterial cells outnumber human cells by a factor of 10.
- 3 to 5 pounds. The average person carries anywhere from three to five pounds of bacteria.
- 5,000. That's how many species of bacteria can be found in the human mouth.
- \$28 billion. That's how much Americans spend annually on probiotic foods and supplements.
- Number of studies for probiotics with children 1,083; irritable bowel syndrome 443; diarrhea 1,081; immune health 1,659.
- 70% of your immune system lies in your digestive tract, making intestinal health vital for the health of your whole body.

## Chapter 7. Top Ten Tips for Digestive Health

1. **FIBER FIRST.** This is probably the best known piece of advice. For good reason. Most Americans don't get the recommended daily intake of fiber. Select fruits, vegetables, whole grains, nuts, beans and cereals instead of processed food.
2. **EAT OFTEN, EAT SMALL.** Gastroenterologists suggest consuming four to five small meals spread throughout the day to aid digestive flow—as long as you don't increase the calories.
3. **KEEP MOVING.** Everyone knows that exercise is good for you. Not so well known is the fact that movement helps your body move food more effectively through the digestive system.
4. **DON'T LIGHT UP.** Smoking not only causes cancer but also aggravates the digestive system and may play a role in heartburn and peptic ulcers. Another good reason to stop if you tend to indulge.
5. **FAVOR FISH.** In today's society we just don't seem to eat fish as much as our forebears. Ideally, you should have fish like salmon, tuna, herring and mackerel that are rich in Omega-3 fatty acids three to four times a week. They help reduce inflammation and restore balance.

6. WATER, WATER EVERYWHERE. Some good old H<sub>2</sub>O helps digest food as well as preventing and alleviating constipation. At minimum drink a glass of water with every meal.
7. ONE BITE AT A TIME. Chew your food slowly and thoroughly. You'll enjoy it more and digest it better. You'll feel full sooner and lessen the risk of over-eating and upsetting the digestive tract.
8. FORGET THE FRY. Yes, you love the taste but greasy fried foods are high in fat and hard to digest making your stomach work overtime. Fat slows digestion and gives food more time to ferment which can create intestinal gas.
9. LIMIT THE BOOZE. Drinking too much alcohol can inflame the lining of the stomach and interfere with nutrient absorption. There's also the risk of damaging your pancreas, ruining its ability to secrete digestive enzymes.
10. PROBIOTIC POWER. Probiotics are the good bacteria that support digestive health—and immune health. We don't get enough in our food, so we should take a daily supplement.

Not all probiotics products are equal. Most do not have spore-forming bacteria and most do not have protective capsules so that the probiotics are able to survive the acid assault of the human stomach. In particular, it's necessary to have well-researched, highly reputable and clinically proven bacteria such as DE111®® Bacillus subtilis and coated capsules such as DRcaps®. It's not only important to have the right kind of probiotics but also in the right

amounts. It's also vital to find a probiotic that's combined with a *prebiotic* that feeds the probiotics and make them more effective. And avoid the FOS probiotic which has so many side effects. Look instead for non-starch and well-researched PreforPro®.

Whether you an on-the-go soccer mom or someone with digestive problems, whether you're young or elderly, scientific research increasingly indicates the need for all of us to supplement daily with probiotics.

All of the research takes us to two products that deliver the probiotic and prebiotic punch that everyone needs to consider on a daily basis.



## Chapter 8. What the Experts Say

“Spore form probiotics are the Chuck Norris of probiotics: total tough guys. They have to be to survive splashing around in your stomach’s acid bath. Wimpier types -- including live cultures in yogurt -- often throw in the towel.”

--Dr. Mehmet Oz and Dr. Michael Roizen

“Though microscopic in size, these valuable bacteria provide a veritable grocery list of health benefits for the whole body—from birth to adulthood and well into our senior years.”

--Brenda Watson, best-selling author and PBS-TV health educator

“Probiotics, believed to help with digestion, are increasingly being studied to treat wide-ranging conditions, from colic to cholesterol and the common cold.”

--Wall St. Journal

“You can kind of think of probiotics as more or less a toolbox. Some strains are going to be really good at doing one thing, and others are going to be good at doing another.”

--Joseph Sturino, assistant professor, Texas A&M University food and nutrition department

“There's convincing evidence that the right products will do us good.”

-- Glenn Gibson, Professor of Food Microbiology, Reading University,  
UK

“By giving probiotics, you reduce the risk of antibiotic-associated diarrhea that occurs in 40% to 75% of hospitalized patients on antibiotics.”

--Fergus Shanahan, MD, Alimentary Pharmabiotic Centre, National  
University of Ireland at Cork.

“The good news is that a lot of extremely high-quality research is going on now.”

--Eamonn Quigley, MD, world-famous gastrointestinal disease researcher

“*Bacillus subtilis* has the ability to form spores that protect the microbes from harsh conditions until they enter a more favorable environment, such as the GI tract.”

--John Deaton, PhD

## Chapter 9. Research

Want to know more? Interested in the scientific research behind probiotics and prebiotics? Here's a selection of good studies for readers who want to dig deeper.

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