

Dispensed by

x *Physicians Exclusive*



MEGA sporebiotic

- Delivers 4 Billion Cells Daily for Maximum Potency & Absorption
- Supports Healthy Intestines
- Survives Harsh Digestive Environments
- Boosts Immunity
- Highly Absorbable Carotenoid Antioxidants

MegaSporeBiotic is the first MEGA dose, ALL spore, probiotic product offered exclusively to health care professionals.

Probiotics – the “for life” supplements

A healthy body starts with a healthy gut, and too many people are unhealthy because of an unhealthy gut. Humans have 10 times more bacteria in their digestive tract than cells in their body. The role these bacteria have in health and disease has been extensively studied, and probiotics are becoming more main stream. Recent studies have shown that very often commercially sold probiotic supplements are ineffective at boosting the immune system, 70% of which is in the digestive tract. Oral supplementation with commonly sold products also does not change the composition of bacteria in your digestive tract. Studies from the Human Microbiome Project and world leading probiotic experts, have found that in order for a supplemented probiotic to be beneficial for its host it must:

- Be an organism that naturally exists in the gut already
- Be supplemented in a higher concentration than what naturally exists in the gut
- Be able to survive the harsh environment of the stomach acid and upper digestive tract
- Should naturally occur in our environment and be stable in both the gut and the environment

Lactobacillus sp. and *bifidobacter sp.* dominate the marketplace as the most frequently used probiotic strains. It is true that these are naturally occurring bacteria in the intestinal tract, but they are not designed to exist and thrive outside of the gut and are thus destroyed by the stomach acid and bile salts when supplemented orally. These bacteria are not found in our environment because they have not evolved for life outside the gut, and therefore they are not natural probiotics. They also exist in numbers that exceed 20 trillion cells in the digestive tract, and so supplementation with even 100 billion cells would not be enough to get the desired immune stimulation.

The Solution-Spores

Bacillus spores are the most widely prescribed prescription probiotics in the world. They have been studied extensively in human clinical trials and have a very long history of use. In addition, they:

- Are a normally occurring organism in the gut
- Exist with a typical population of about 2 million cells so supplementing 4 billion is a much higher concentration than what naturally exists in the gut which will cause the stimulation we require for the probiotic effect.
- Are robust and survive the harsh environment of the stomach acid 100% intact
- Occur naturally in our environment but also thrive in the gut – Nature’s true probiotics.

For the First Time, a Carotenoid Rich Probiotic

MegaSporeBiotic introduces *Bacillus Indicus* (HU36™), the first commercially available carotenoid rich probiotic. This amazing spore produces carotenoids in the digestive tract at the site where they are absorbed. Highly bioavailable forms of lycopene, astaxanthin, zeaxanthin, beta carotene and lutein are manufactured by *Bacillus Indicus* making Megasporebiotic the only probiotic and antioxidant combination supplement in the marketplace.

Megasporebiotic will change your understanding of probiotics in health and disease. This one-of-a-kind product offers health care professionals, for the first time, a powerful first step tool in their pursuit of improving the health and wellness of their patients by restoring balance to the gut.



The Real Benefit To Your Clients

The use of spores as probiotics is highly important as spores are designed to survive through the gastric system and colonize well to produce the needed effects. Additionally, spores make a potent impact in the gut since the spore population in the gut is low enough that the 4 billion spores added each day through MegaSpore Biotic makes a large impact on the sensory systems in the gastrointestinal tract. Spores are also important to police and defend the gut to allow for the natural species found in each individual to flourish. A mega dose, spore culture/consortium with broad spectrum activity, is currently not available to U.S. Healthcare professionals to treat their patients —until now; MegaSpore Biotic is the first. A culmination of research shows that the spores in MegaSpore would confer the following beneficial effects:

- Immune modulation to reduce allergies and asthma
- Immune stimulation of peripheral T-lymphocytes and B-lymphocytes to fight colds, flus and infections.
- Decrease in frequency of urinary tract infections
- Reduction in side effects related to antibiotic therapy
- Effective treatment for small intestinal bacterial overgrowth (SIBO)
- Diminished duration of diarrhea in children 3 to 36 months of age
- Reduced incidence of irritable bowel syndrome diarrhea
- Immune response to adenovirus and influenza-A in-vitro
- Improvement in pain scale in Rheumatoid arthritis patients
- Reduces the inflammation associated with Crohn's disease, IBS, ulcerative colitis.
- Improved growth of the natural flora
- Improved digestion of food and a thus improved nutrient absorption
- Production and absorption of critical nutrients – i.e. carotenoids, quinols, vitamins and enzymes.
- Reduced risk of cardiovascular disease
- Reduction of cholesterol
- Detoxification of the intestinal tract.
- Effective colonization

Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 30

Amount Per Serving	% Daily Value
Proprietary Probiotic Blend 350mg	
4 Billion Spore Cells	
<i>Bacillus indicus</i>	†
<i>Bacillus subtilis</i>	†
<i>Bacillus coagulans</i>	†
<i>Bacillus licheniformis</i>	†
<i>Bacillus clausii</i>	†
†Daily values not established.	

OTHER INGREDIENTS:

Hypo-allergenic plant fiber prebiotic, vegetable capsule.

- Contains no binders, fillers, or flow agents.
- GMO free.
- Contains no dairy, corn, wheat, gluten, salt, sugar, soy, nor artificial colors or flavors.

Brought to you by Physicians Exclusive

Physicians Exclusive was born out of the desire to improve the tools that integrative physicians have to improve the health and well being of their patients. PE was founded by a practicing doctor and is dedicated to creating nutritional supplements with the highest quality, potency, and efficacy for health care professionals. Dr. Tom Bayne believes strongly that most people should take supplements under the direction of a health care professional. Because of this, he has designed therapeutic products that will be sold exclusively to physicians. We invite you to join us on this journey to highly effective supplementation, better health, and improved quality of life for you and your patients.

MegaSporeBiotic is the most advanced probiotic supplement product – offered exclusively to doctors and health care professionals.

Recommended by the country's best practitioners for the world's most important patients.

Interested in learning more about MegaSpore Biotic for your practice?

Please call 855-729-5090 or visit gomegaspore.com

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May, 2014

Healthy Bacteria: Understanding This Foundational Food

By Tom Bayne, DC

It's been called "Foundational Food" and is certainly regarded as a critical nutrient. Probiotics are not a luxury; in fact, they are a very essential nutrient that the human body requires for proper function. Recent advances in science have demonstrated how critical our beneficial bacteria are to our health and wellness and as it turns out, we count on them a lot more than previously thought. We are, in some ways, more bacteria than human!

There are 10 trillion cells that make up the human body, whereas there are more than 100 trillion beneficial bacteria cells that call our body home. There are 10 times more bacteria cells than human cells in and on an average person. It is very clear that there is strong co-evolution between the human host and our 100 trillion passengers as we have come to depend on them as much as they depend on us. Considering that our bodies and our genetics have not changed much in the last 200,000 years, we have to wonder where did our ancestors get their probiotics from? Surely they didn't have special coated capsules with billions of cells and refrigerators full of probiotic tablet options. So, how did they get these essential nutrients into their system where all this co-evolution occurred?

Scientists have studied this very topic and now have a clear understanding of where our distant relatives and us, picked up these important passengers. The first place is from mother. Mom does great things for us from the very start. Most of the beneficial bacteria found in the digestive tract come from our mothers, both when we are in the womb itself and during natural child birth. During the birthing process, the mother's bacteria passes onto the fetus and in fact is swallowed by the fetus and they end up colonizing the baby's digestive tract. Trillions of mom's good bacteria are transferred to her baby this way. Lactobacillus and Bifidobacterium species (commonly found in probiotic products) are among the strains passed from mother to child.

Physical contact with mom and breast feeding expose us to more beneficial bacteria that eventually make a permanent home on us and in us. This is where most of the beneficial bacteria that perform important functions in our digestive systems come from. These bacteria are designed to pass from mother to child during very, very close contact (i.e. the birthing process and breast feeding) as these strains of bacteria are not suited for life outside of the body. They are not designed to leave the body, spend time outside the body and be reintroduced orally. This is why many probiotics formulated with lactobacillus and bifidobacterium species have to be refrigerated to attempt to keep them stable. In fact, numerous studies have demonstrated that a large proportion of probiotic supplements using these strains in the market contain mislabeled strain counts and tend to have a high attrition rate through processing, shelf storage and certainly through the gastric system. (Gibson, G.R. et al 2005; Elliot, E. et al 2004; J.M, et al 1999; Hamilton-Miller, et al 1999)

The second way is through the environment. Our ancestors were hunters and gathers and they ate off the land. Much of the food and liquid they consumed was brimming with mega doses of environmental bacteria. Most of those bacteria died as they passed through the harsh gastric system (gastric barrier), but some didn't. These specialized strains developed an uncanny ability to survive in the outside environment and then pass through the acidic gastric system to end up thriving in the intestines – these became nature's true probiotics. With thousands of years of exposure to these specialized strains of commensal organisms, humans have actually come to require the presence of these strains for proper, healthy function of many of our biological systems. With this ability to live and reproduce in two very different environments (outside the body and inside the body), these strains are said to have a "biphasic" lifecycle. The most well-known, well studied and widely used biphasic probiotics are from the bacillus species. In particular, bacillus subtilis, bacillus clausii and bacillus coagulans; our modern sterilized food systems have all but eliminated these critical species from our diets.

Bacillus – The Original Probiotic

A simple literature search seeking published studies on the prevalence of the bacillus species will reveal the fact that bacillus seems to be a universal probiotic. Bacillus species are quite abundant in the environment and subsequently found as commensal, transient organisms in the gastrointestinal systems of mammals, insects, invertebrates, birds, marine life and even reptiles. Although they have always been classified as "soil organisms," studies are starting to reveal that they are actually digestive tract organisms that use the soil as a vector for transfer from host to host and they have been doing this for thousands and based on some strong evidence, for even millions of years.



Further research into the prevalence of bacillus species in the prehistoric periods reveals that bacillus species even pre-date early humans before the Paleolithic era. Certainly, early humans such as homo-habilis and homo-erectus were abundantly exposed to bacillus, but the data suggests that perhaps even dinosaurs enjoyed the probiotic benefits of this amazing species. The earliest identification of bacillus on earth was published by Vreeland R.H., et al (2000) in the journal Nature. The researchers were able to isolate and then grow viable bacillus cells from a brine inclusion within a 250 million-year-old salt crystal from the Permian Salado Formation.

The second earliest identification of bacillus published in the literature was by Cano R.J., et al (1995) where the researchers isolated and identified a viable bacillus species from the abdominal contents of extinct bees preserved for 25 to 40 million years in buried Dominican amber. This finding is significant in two respects. First, that bacillus was found to be present 25 to 40 million years ago and second, that bacillus was found in the gastrointestinal system of the extinct bee – evidence of ancient probiotic function!

Moving forward on the time scale, Gilichinsky et al. (2008) published research showing the identification and characterization of bacillus species in Siberian and Antarctic permafrost samples dating back three to five million years old. Besides the age, it is significant to note that bacillus has managed to span the globe from pole to pole – this further shows evidence of its abundance in the early earth environment including the period of human evolution. Further, Christner B.C., et al (2003) isolated and characterized bacillus species from ancient glacial ice-cores of the Qinghan-Tibetan plateau in Western China dating back 750,000 years old. This period in time is a crucial time for human development from homo-erectus to homo-sapiens and sure enough, bacillus was present.

Moving further ahead, Christner B.C., et al (2000) published a more in-depth analysis of microbial existence in various locations and age range of ice-cores ranging from five to 20,000 years old from China, Bolivia, Peru, Greenland and Antarctica. The researchers found bacillus to be abundant in all samples spanning all the regions and periods tested. Further, significance of their findings were that they identified bacillus subtilis specifically in all samples and time periods and were able to compare the genomic make-up of the ancient samples to validated bacillus subtilis genome of today – the researchers found 90% and greater homology between the current and ancient strains. Considering that bacteria mutate and replicate very quickly, it is amazing to think that this species (bacillus subtilis) has remained the same for tens of thousands of years. This indicates that the organism is supremely adapted to its environment and function as a transient gastrointestinal microbe and there are no selection pressures favoring a new genotype.



Among the most interesting findings on the prevalence of the bacillus species, is the work of Horneck, G. et al (1994) on the survival of bacillus subtilis in space. The researchers demonstrated that bacillus subtilis was able to survive in space for six years despite the harsh radiation, vacuum, temperatures and other conditions that typically do not support life. In fact, Horneck, et al. and other scientist postulate that bacillus endospores are the most likely candidates to support the Panspermia hypothesis that life exists throughout the universe, distributed by meteoroids, asteroids, comets and planetoids by interstellar and interplanetary collisions. Studies show that bacillus subtilis is able to survive an interplanetary lithopanspermic journey. This outlines the possibility that not only is bacillus a probiotic (meaning "for life"), but perhaps the source of life itself on our planet.

Bacillus species and Bacillus subtilis have functioned as probiotics since life spawned on this earth and certainly throughout the time that humans evolved. We have a highly ordered co-evolution with the species as is demonstrated by their function in the human GI and the molecular specificity with which they interact with human cells. We share genetic material with them for human cellular protein synthesis and we are dependent on them for the proper development of our immune system.

A number of studies have shown that bacillus subtilis plays a key role in the tutoring/training of the immune system and in mitigating a systemic pro-inflammatory and autoimmune state. We rely on them for proper digestion and assimilation of our food and we need them to detoxify our highly exposed gastrointestinal system. They produce more than 24 different antibiotics in vivo that help defend our GI from invading species and even over-growth of our own bacteria. Lastly, we count on them for the production of key nutrients (i.e. vitamins, enzymes, carotenoids, lipids, etc.) right at the sites of absorption where we experience the highest bioavailability. They are not a luxury in a healthy lifestyle, they are a necessity. They are truly "Foundational Food" that our ancestors co-evolved with to bring us to our evolutionarily most fit genotype and phenotype. A true probiotic should be formulated with nature's original probiotic strains, bacillus, to support the trillions of beneficial bacteria passed down from mother to child.

Dr. Tom Bayne specializes in Natural Medicine and has worked in the supplement industry for 18 years in research, marketing, education, product formulation and product development. He has developed an international reputation as a digestive health expert and he lectures internationally on the subject. Dr. Bayne has spent the last four years studying the role of probiotics in health and disease. Dr. Bayne practices in Glenview, Ill. in a practice that is almost exclusively focused on digestive health disorders and autoimmune conditions. *Page from: http://www.dcpracticeinsights.com/mpacms/dc/pi/article.php?id=56964&no_paginate=true&p_friendly=true&no_b=true*



Back to Basics: Probiotics

A definition and standard has been created jointly by the Food and Agriculture Organization of the United Nations and The World Health Organization as to what meets the requirement as a probiotic.

‘Live microorganisms which when administered in adequate amounts confer a health benefit on the host’¹.

It’s important to note, the first part of the definition states the microorganism has to be *live* or it does not fit the definition of a probiotic. Studies by the Food Safety Authority of the United Kingdom and at least three (3) different publications have confirmed that over 90% of strains used in probiotic products today *do not* survive the gastric system. Thus, they do not fit the profile of a live microorganisms or meet the definition of a probiotic.

True probiotics must naturally survive the gastric barrier.

Physicians Exclusive commissioned a global, leading food science laboratory², to conduct a study and compare the survivability of probiotic strains. This study would further validate the findings of several other publications on the survivability of common probiotic strains. The study compared the survival of **MegaSporeBiotic™** versus a leading brand name yogurt, a leading branded Greek Yogurt and a leading dietary supplement probiotic formulation.

The dietary supplement formulation was composed of the most common *lactobacillus* and *bifidobacterium* species used in the probiotic market today. The study looked at the survival of these probiotic sources in United States Pharmacopeia (USP) standard gastric solution; which is the most widely accepted simulated gastric model used in industry today. The following figure shows the survival of each probiotic source after gastric exposure:

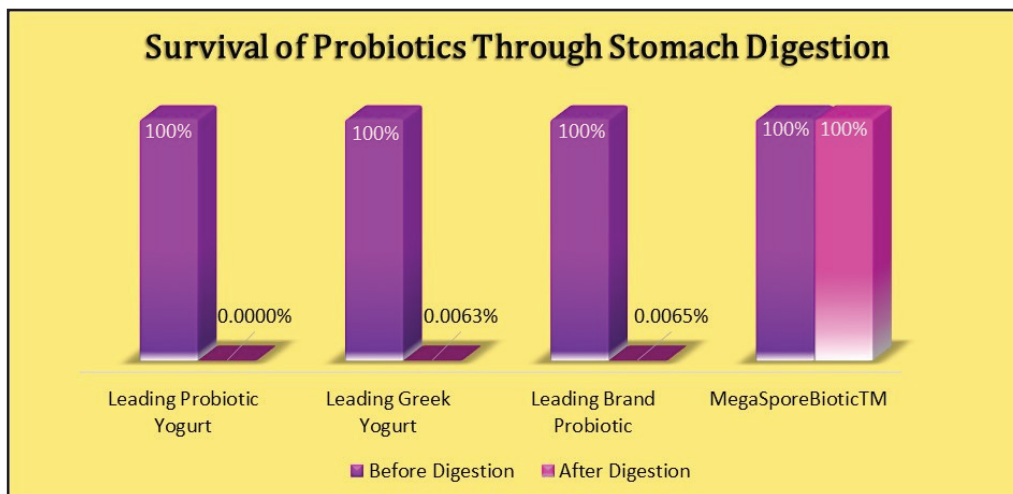


Figure 1: Results of survival study performed by Silliker; complete study available upon request

As the data shows, **MegaSporeBiotic™** was the only product to show **100% survival** through the gastric barrier. None of the other leading sources of probiotics showed comparable results. In fact, over 99.99% of the probiotic bacteria in all leading sources tested were killed by the stomach environment.

If it doesn’t survive and arrive at the site of colonization alive, it is *not* a probiotic.

MegaSporeBiotic™ is the first, pharmaceutical grade probiotic formulation naturally designed to survive the harsh gastric environment and arrive at the site of action alive – ensuring full potency.

¹ Food and Agriculture Organization of the United Nations (2001, October 1-4). Report of a Joint FAO/WHO Expert Consultation on Evaluation of Health and Nutritional Properties of Probiotics. FDA News. Retrieved September 1, 2013 from http://www.who.int/foodsafety/publications/fs_management/en/probiotics.pdf

² Silliker Food Science Center - Crete, IL



Continuous Gut Model Study

Bacillus Subtilis HU58™ and *Bacillus Indicus* HU36™

We commissioned and now have completed a very elaborate gut model study of 2 of our main strains (*Bacillus Subtilis* HU58 and *Bacillus Indicus* HU36). This study was completed at a contract research company called ProDigest, they specialize in digestive studies. The company is a spin-off from Ghent University.

One of the key features that makes this study unique and relevant is the fact that it is a Continuous Model of the gut. Not just a single dose simulated gastric system. Because it's a continuous model it allows us to study the effects of the probiotic on the intestinal flora over longer periods of time. We can specifically look at each region of the GI and the probiotics function in each section and it allows for repeated ingestion effect vs. single dose. The model also allows for studying the effect of the probiotic under fasting and fed conditions vs. just one. This gives us a much more complete understanding of what the functions and benefits are of a particular strain over time, which matches how the product is used in daily life. A sophisticated gut model is the only way to study the function of the probiotic through the digestive system with repeated dosage over a period of time. This cannot be studied in humans and so pharmaceutical companies use this type of model to study the effects of drugs on the digestive system over time. It is the gold standard to understanding if a strain has real probiotic function.

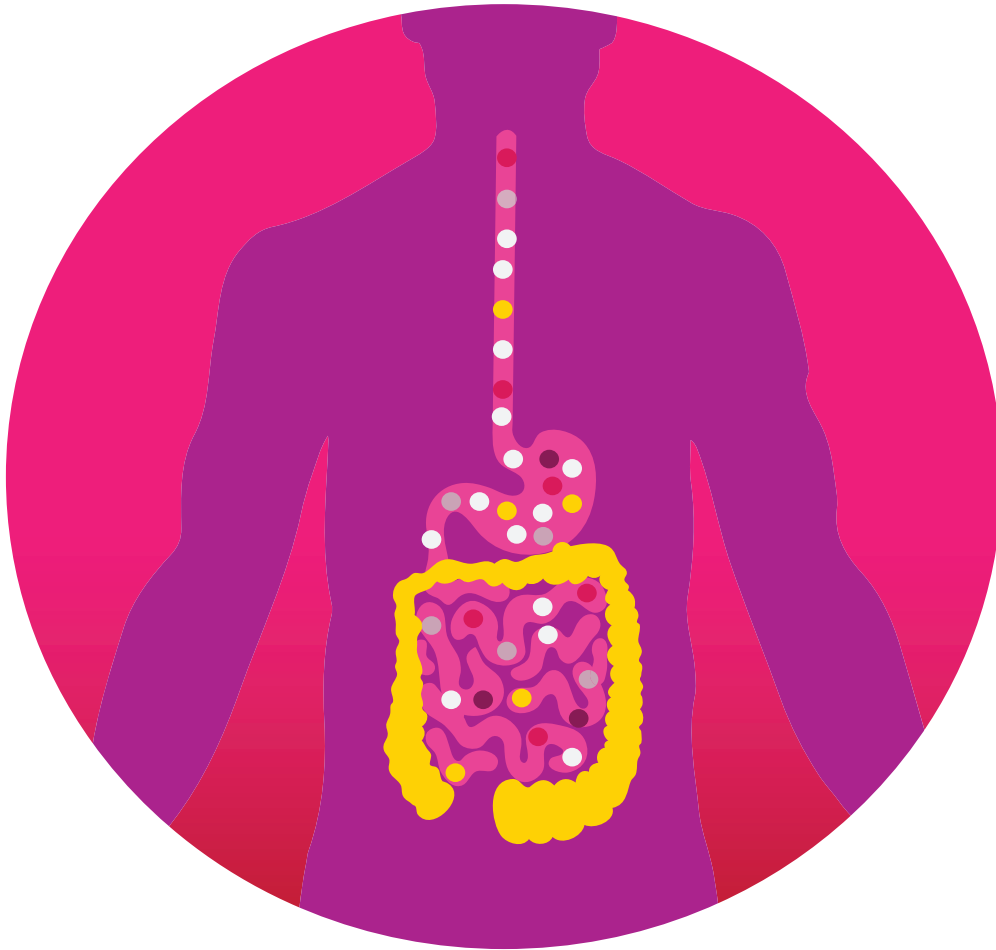
The results were **remarkable** as far as the abilities and functions of these strains. We have not found another probiotic product that has demonstrated these clear probiotic effects. Here are some very brief conclusions:

- 1) Both strains naturally survive the stomach and immediately germinate in the upper GI. This seems like a simple point, but considering that many studies show that most commercial strains of probiotics don't even get past the stomach, this is an important feature to prove. If it doesn't survive the gastric system, it is NOT a probiotic.
- 2) Both strains are well suited for life in the GI and colonize effectively. If it can't colonize, it's not a probiotic. This has to be proven, most people just assume their probiotic colonizes.
- 3) Best germination occurs when taken with food. Most probiotics companies recommend taking it in an empty stomach due to the pH. These strains are stable enough to be taken with food, as nature intended, and in fact these probiotics utilize the food to germinate.
- 4) Both strains showed increased saccharolytic fermentation over proteolytic which favors a lowered pH (beneficial pH change for the GI) and they do not produce gas (which can be an issue for many probiotic supplements).
- 5) Both strains produce significant amounts of short-chain fatty acids (SCFA) from carbohydrate digestion - in particular there is an increased production of acetate initially and then higher levels of butyrate in longer term use. These SCFAs have been shown to be powerful candidates as anti-cancer agents in the GI, reduction of inflammation, repair of the colon, fat metabolism and also supports the growth of favorable endogenous bacteria. There are a number of significant GI benefits from SCFA production and the quantifiable production by these strains shows great therapeutic value. In fact, these strains increase SCFA production by nearly 40% over a normal healthy flora. That is a significant increase in these important nutrients.
- 6) Both strains showed the ability to alter the entire microbiota - this is unique for a probiotic to have demonstrated the ability to alter the microbiota. This has profound implications on the types of claims that can be made with regards to the probiotic benefits of these strains. The Human Microbiome Project has shown that all diseases correlated to the gut comes from a dysbiosis in the gut. That means the balance of good and bad bacteria is off. Thus, a complete and effective probiotic should have the ability to correct that dysbiosis. As far as we have seen, there isn't a single probiotic on the market that has demonstrated this ability other than MegaSporeBiotic®.
- 7) The HU36 strain has now been verified to produce RDA levels of carotenoids in vivo - this is a powerful dietary source of antioxidants.

This study really sets us apart from other probiotics in our space. This is a scientific observation of what the strains are doing in the entire digestive tract over time. Without a study like this, one is simply guessing and making assumptions as to the function of the strains they are using in the digestive system.

LISTEN TO YOUR GUT

It knows the truth about probiotics



If you trust your gut – and you definitely should – it's probably telling you to question the proclaimed efficacy of today's popular digestive health products marketed as probiotics. The truth is, probiotics that can't survive the stomach can never do their intended job in the GI tract. To be a "probiotic," it has to arrive in the GI alive.

- Research clearly shows that the lactobacillus and bifidobacteria strains in most supplements and yogurt are nearly 100% destroyed by stomach acid and thus ineffective – even at high concentrations.
- Bacteria that can't colonize in the digestive tract provide no probiotic benefits your patients.

www.GoMegaSpore.com



MEGA
sporebiotic

Spores – Nature’s Best Designed Survivor



No Contenders

Features	Standard Products	Products with Some Spores	MegaSpore Biotic
Stability in processing		✓	✓
Stability through the GI tract			✓
Efficacious Dose			✓
True Consortium			✓
All Spores			✓
Pharmaceutical Grade			✓
Rich in Carotenoids			✓

Download Free White Paper

“Forget What You Think You Know About Probiotics”

www.GoMegaSpore.com/wp

MegaSporeBiotic is the first MEGA dose, ALL-spore, consortium, probiotic bacterio-therapy product featuring proprietary, pharmaceutical grade strains that remain extremely stable through processing and the stomach to ensure efficacy. (Bacteria must be delivered to the intestines alive to be a true probiotic.)

Additionally, only MegaSporeBiotic provides a function no other probiotic formulations can claim: it produces high levels of potent carotenoids (antioxidants) right at the point of absorption. (Yes, most antioxidant supplements don’t survive the stomach either.)

Go beyond just digestive health with a true probiotic. Find out why MegaSporeBiotic is important to every person who walks in your door, and how your business can benefit.

www.GoMegaSpore.com

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