



Qore™ *probiotic*

Qore™ Probiotic Product Profile

*Improves Healthy Digestion,
Immune System Function,
and Nutrient Absorption**

Qivana's Revolutionary Approach to Digestive Health

Your intestinal tract contains over 100 trillion bacteria—both good and bad. The friendly or healthy bacteria are vital to proper development of the immune system, to protection against microorganisms that could cause disease, and to the digestion and absorption of food and nutrients.¹ Creating and maintaining a healthy balance of beneficial bacteria can best be achieved by using probiotics. Probiotics are tiny organisms that help restore health and balance to the intestinal tract.

When selecting a probiotic supplement, the most important factors are: guaranteeing the supplement contains the specific probiotic strains and species that have a known pedigree and are backed by research, and then ensuring the probiotics can be kept alive and viable until they are delivered to the site of action. Qivana's Qore™ Probiotic is a revolutionary probiotic supplement created with the most proven species of probiotics in the world and is guaranteed to deliver live, healthy bacteria in the intestinal tract. Qore Probiotic uses Trisphere™ technology, the most advanced delivery system available on the planet, and is the only delivery technology that can guarantee the number of beneficial organisms that will actually make it into your GI tract alive, viable, and intact.

Healthy Bacteria Can Help Strengthen Your Overall Health

The good bacteria live, colonize, thrive, and reproduce in your gastrointestinal tract, beginning just below the stomach, and form a complex and enormously diverse ecosystem. These resident bacteria synthesize the B-complex vitamins, crowd out yeast and parasites, help regulate blood cholesterol levels, and produce antibiotic compounds.² When the bacteria in your gut are abundant and healthy, they promote good health, prevent illness, and protect your well-being. Their health is literally your health. Maintaining a healthy intestinal tract is essential because your GI tract contains 80% of the cells that make immune antibodies.

Every day you make choices and are exposed to environmental stressors and that compromise and diminish these good bacteria—junk foods, caffeine, artificial sweeteners, trans fats, pesticides, antibiotics, chlorinated drinking water, and other toxins. These factors, along with your own lifestyle choices including inadequate nutrition, alcohol, and stress can all wreak havoc in the gastrointestinal tract by destroying healthy bacteria in your gut.



Qore™ *probiotic*

When the delicate balance of healthy bacteria in your system is compromised, undesirable bacteria is allowed to multiply, and unfriendly organisms such as disease-causing bacteria, yeasts, and fungi set up shop in your digestive tract. When the ratio of good bacteria to bad is lowered, problems begin to arise such as excessive gas, bloating, constipation, intestinal toxicity, and poor absorption of nutrients. While it's true that non-beneficial bacteria are naturally occurring in the intestinal tract, problems begin when their growth goes unchecked. As a result, local and systemic health challenges can develop, making you vulnerable to infection and illness.²

Fortunately, you can help your body restore and maintain a healthy balance of good bacteria in your system with probiotics.

What are Probiotics?

The United Nations Food and Agricultural Organization and the World Health Organization and the International Scientific Association for Probiotics and Prebiotics (ISAPP), calls probiotics, “live microorganisms, which, when administered in adequate amounts, confer a health benefit on the host.”³

Probiotics are tiny organisms that help restore health and balance to the intestinal tract. Probiotics are essentially the opposite of antibiotics and are often referred to as friendly or beneficial bacteria.

Probiotics can be found in some foods like yogurt, olives, kim chee, sauerkraut, buttermilk, aged cheeses, miso, tempeh, cultured dairy products, some juices, and soy beverages.² However, the most effective way to guarantee that you increase and maintain the amount of healthy bacteria in your system is to take a high-quality probiotic supplement.

Increased research and interest in probiotics in the last decade has led to a greater amount of available products. Americans' spending on probiotic supplements, for example, nearly tripled from 1994 to 2003.² However, not all products deliver adequate results. When searching for a probiotic product, it's essential to find one that contains enough healthy bacteria, as well as a delivery system that enables the good bacteria to survive harsh stomach acids and reach your gut alive, intact, and viable.

Qore™ Probiotic

Qore Probiotic is a revolutionary probiotic supplement created to help replenish healthy bacteria in the gut with a unique and proprietary blend of probiotics. Qore Probiotic helps the digestive system reach its potential by supporting healthy digestion, immune system function, and aiding in nutrient absorption.

Qore Probiotic uses Trisphere™ technology, a proprietary triple-layered beadlet, to deliver our proven bacteria to the intestines. Trisphere technology is the most advanced and revolutionary delivery system available on the planet because it provides a guarantee of the number of organisms that will actually make it into your GI tract alive, viable, and intact. This delivery method is 100% more effective than traditional two-piece capsules and 50% better than enteric coated two-piece capsules at keeping the bacteria alive and usable, and delivering them to your intestinal tract.



Qore™ *probiotic*

Qore Probiotic is scientifically designed to:

- Promote healthy digestion and the balance of healthy gut flora
- Improve intestinal ecology and overall well-being
- Reduce lactose intolerance symptoms
- Promote bowel regularity and prevent diarrhea
- Reduce gastrointestinal discomfort
- Improve the level of naturally occurring good bacteria
- Reduce the generation of toxic metabolic end-products
- Support improved nutritional status
- Inhibit the adhesion and/or invasion of pathogenic bacteria, including pathogenic and food-borne microbes, onto the intestinal cells
- Support intestinal mucosal immunity (IgA), and activate the modulate specific systemic immunological functions for immune/inflammation protection and infection prevention
- Support oxalate degradation activity

Key ingredients: Lactobacillus acidophilus, Bifidobacterium Bifidum, Bifidobacterium longum, Bifidobacterium lactis.

Why Probiotic Supplements Fail

With new research confirming their importance, consumers are becoming savvy to the benefits of daily probiotic supplements. However, whether or not the supplement can actually promote health will ultimately be determined by the quality and consistency of the strains used, and the delivery system's ability to keep these organisms alive from the time of manufacturing, until they reach your GI tract.

Datamonitor reported 233 probiotic product launches in 2008, but nutritionists warn that not all the probiotic-containing products found on store shelves provide the health benefits they claim.⁷ Few of the claims are indeed backed by science, while many are just marketing hype.

For example, it matters little if a label claims that a pill contains 15 billion cfu of bacteria when it was manufactured. It only matters that the bacteria is alive when taken, and then delivered to the site of activity, alive, in tact, and viable. If they are dead when taken, or killed by stomach acid, heat, bile, or digestive secretions, then no health benefits will result. The study investigating this issue determined that of the 55 products evaluated, 40% had undetectable limits of probiotics, and 47% of the bacterial identities were mislabeled.⁴

In a 2006 study, ConsumerLab.com, which tests nutritional products, found that just eight of 13 probiotic supplements met its quality standards.⁷

For a probiotics supplement to be effective, it must be delivered alive to its site of action. Most capsules, tablets, powders, liquids, foods, and pills, even if enteric-coated, deliver little if any viable probiotics where they can colonize. These delivery systems are unable to keep these bacteria alive and transport them to the site of action where they can be utilized by the intestinal tract. What this simply means is that even if your system receives the good bacteria, it's most often dead and in a state that isn't beneficial or usable to your system. Ultimately, you're taking a chance by using a probiotic that can't guarantee its delivery system. In the long run, you may not be receiving the health benefits that you're hoping and paying for.

**Qore™** *probiotic*

Qore™ Probiotic Trisphere™ – A World-Class Delivery System

The Qore Probiotic Trisphere™ is the most advanced probiotic delivery system in the world. The Trisphere protective capsule insulates these beneficial bacteria from the exterior environment, and keeps them viable through broad fluctuations in exterior temperature. One of the most difficult feats for these probiotics is to make it through harsh stomach acid unharmed. Qore Probiotic has shown positive proof of surviving the GI journey and the environment in healthy individuals, as well as favorably increasing the micro-flora population density.³⁵

Most probiotic products state the number of bacteria “at time of manufacturing.” When you buy one of these other probiotic supplements, you have no idea how many of these bacteria are actually alive when you purchase the product. Recent studies show that many of these bacteria die in manufacturing, processing, quality control, warehousing, and transport, making those products completely ineffective in a matter of weeks. Qore Probiotic’s label claim provides a guarantee of the number of organisms that will actually make it into your GI tract alive, viable, and intact. And unlike most probiotics, which require refrigeration, Qore Probiotic is shelf-stable at room temperature for up to 18 months.

Trisphere™ technology is a proprietary triple-layered beadlet that has been shown to be far superior to all other current methods of probiotic delivery systems. In fact, research shows that the Trisphere is 100% more effective at keeping probiotics alive in stomach acid than traditional 2-piece capsules, and 50% more effective than enteric coated 2-piece capsules.

It is important to remember that only a proven probiotic, delivered live to the site of action and benefit, can have the opportunity and potential to make any difference to your health. You could spend more or less money on other products, but you cannot get a better guaranteed viable and proven potent probiotic and delivery system.

Qore Probiotic Guarantee

At Qivana, we are committed to your good health, and we simply provide the highest quality probiotics available. We know their scientific studies. We confirm their genera, species and specific strain, so we know they can work for you. We ensure their potency by testing, and we deliver them alive and active using the absolute finest high-technology available on the planet. Qore Probiotic is patented worldwide. It’s proven. It’s a bit more expensive, but it works where others fail.

Understanding the Pedigree of the Strains

Each probiotic strain is unique, and while there are hundreds of different choices available in the market, only a few strains have proven pedigrees, backed by scientific studies. While there are substantial research demonstrating probiotic-induced health benefits, it should be remembered that these effects have only been documented for a limited number of strains. These health benefits cannot be presumed to translate across similar, or even the same species. The research must be done on the exact strain within that species. While other probiotic products don’t know their specific species, Qore Probiotic has been created with some of the most resilient strains, with a known pedigree, and thoroughly documented health benefits.

**Qore™** *probiotic*

In choosing a probiotic, claims of efficacy should be made only for products that have been tested in studies and found to be efficacious. Therefore, consumers should look for products that list a specific strain of proven bacteria clearly on the label. It is likely that different strains and different effects require different dosages. Because they lack the pedigree, most manufacturers don't know the correct dose or even the efficacy of the strains used. For example, probiotics are able to inhibit, displace and compete with pathogens for adhesion sites, although these abilities are very strain-dependent.

Products can contain different strains of the same species, but that doesn't mean that the strains are the same. A product that simply uses the first two names may include a similar, but not identical, bacterium that doesn't have the same scientific research and backing behind it.

For example, the strain *Lactobacillus acidophilus* (*L. acidophilus*) was chosen to be in Qore Probiotic due to its strong pedigree and the fact that it has been consumed safely for decades in various foods. Its listing can be found in the Inventory of Microorganisms With Documented History of Use in Human Food,¹³ and the Qualified Presumption of Safety list,¹⁴ developed by The European Food Safety Authority.

The full value of a specific probiotic strain is from systematic *in vitro*, *in vivo* studies, and in human clinical trials. For example, *L. acidophilus* NCFM is one of the best understood and documented probiotic strains on the planet. It appears in over 75 publications, with 20 plus peer-reviewed journals which reference the human studies, in characterization, efficacy, and safety of *L. acidophilus* NCFM®.

Research on Qore™ Probiotic

Today there is a general consensus that probiotics have to be consumed in sufficient numbers to provide the desired health benefit. However, few dose-response studies have been performed, and a true scientific basis for one daily dose is lacking.

Qore Probiotic contains *L. acidophilus*, *B. Bifidum*, *B. longum*, and *B. lactis*. Qore's properties include the ability to inhibit, displace, and compete with pathogens. It is known to have the ability to produce a range of antimicrobial substances of which organic acids, hydrogen peroxide, and diacetyl are the most widely known.²² This is just the start of its cleaning arsenal.

It works by various means; the production of inhibitory compounds, competition with pathogens for adhesion sites or nutritional sources, inhibition of the production or action of bacterial toxins, its ability to co-aggregate with pathogens, and the stimulation of the immune system.

Qore Probiotic's ingredient blend has even shown its ability to inhibit pathogens of various sorts from adhering in the first place, but it also showed ability to dislodge and displace some very bad bugs to a large degree, like *B. vulgatus* (60.6% of adhered bacteria), *C. histolyticum* (61.1% of adhered bacteria), *C. difficile* (52.9% of adhered).²⁶



Qore™ *probiotic*

From the research in vitro, human and animal studies, it is clear that the ingredients in Qore Probiotic may improve the body's defense system by promoting and activating immune cells important for infection protection, at least partially from enhanced macrophage, lymphocyte, and PMN leukocyte responses.

Our ingredient blend has shown strong ability to adhere to different cultured human intestinal cells through several studies.^{17,18} Also, it has been shown that its adhesion property could be further enhanced with the addition of Ca²⁺(18) (calcium). This is how probiotics colonize and reproduce, giving you the benefit. Without the probiotics ability to adhere, they may not work well.

The ingredients in our formula have been shown to modulate immune response markers in a specific manner that helps prime the cell-mediated immune system outside the gut itself, with in vitro studies showing the ability to up-regulate tumor necrosis factor (TNF)- α and interferon (IF)- γ -cytokines.

Several studies have demonstrated the antagonistic activity of our ingredients against common gastrointestinal pathogens and food-borne disease microbes, including *Staphylococcus aureus*, *Escherichia coli*, *Salmonella typhimurium*, and *Candida albicans*.²¹

For probiotics to aggregate and co-aggregate suggests they have ability to interact intimately with pathogens, perhaps helping prevent or reduce their adhesion ability. The Core Probiotic ingredient blend showed autoaggregation and high co-aggregation, especially with *Clostridium histolyticum* and *Staphylococcus aureus* in vitro.²⁵

Animal studies suggest that the microbiology of the intestinal tract influences our visceral perception of sensation, for example abdominal pain or irritable bowel syndrome.³⁴ It has been shown that oral administration of the probiotic strains in Qore Probiotic generated significant analgesic activity in the gut epithelia cells. This discovery suggests that when the good bacteria are in your house in harmony, your gut is happier and more pain-free.

Lyophilized *Bifidobacteria longum* BB536 is a human bifidobacterial strain that was isolated from a healthy infant. With 40 + scientific journal publications worldwide since 1977, its clinical effects include intestinal microflora improvements, prevention of diarrhea, immuno-modulating and enhancing, and cancer risks reduction.

Qore Probiotic's bifidobacteria have been shown to boost mucosal immunoglobulins when studied, including IgM, IgG, and IgA, in cultured lymphoid and spleen cells. Qore Probiotic significantly induced total IgA and IgM synthesis by both mesenteric lymph nodes (MLN) and Peyer's patch (PP) cells. This prepares and tones the immune system, but also, no specific antibody production took place, which says the ingredient blend boosts and prepares, but does not provoke any unnecessary immune alarms.⁵⁵ Its effects were determined due to its cellular components, and not from any secreting mechanism.

**Qore™** *probiotic*

And to back it up, a randomized double blind placebo controlled by Dr. Kunihiro Suzuki of the Medical Corporation Hakujinkai Shimura Omiya Hospital giving the oral probiotic showed a powerful punch against the flu virus. The study of 27 elderly folks aged 65 or older living in nursing homes showed less people contracting influenza and developing fevers.⁴⁴

In another study, the probiotic prevented gut-derived sepsis and opportunistic infection in an immuno-compromised animal from a drug-resistant pathogen, *P. aeruginosa*. These results suggest that the effects may be due to decreasing the pathogen from adhering to the intestinal tract, and that this may play an important role with immuno-suppressed patients' conditions.³³

In 2003, Mark Schell, a microbiologist at the University of Georgia, found that *Bifidobacterium longum* has several hundred genes for breaking apart sugars found in many common human foods, including breast milk. Without the gut flora, those sugars would pass through the human digestive tract; with the flora's help, humans can reap calories and energy from them.⁵

Superior Quality

As discussed, it is important to remember that only a proven probiotic, delivered live to the site of action and benefit, can have the opportunity and potential to make any difference to your health. Qore Probiotic is the complete package. It's proven. It's a bit more expensive, but it works where others fail. Qore Probiotic has been created with the most resilient probiotic strains, with known pedigrees, and well documented health benefits. We know their scientific studies. We confirm their genera, species and specific strain, so we know they can work for you. We ensure their potency by testing, and we deliver them alive and active using the absolute finest high-technology available on the planet. We do this because at Qivana, we are committed to your good health.

Safety

Lactic acid bacteria have long been considered safe and suitable for human consumption. Moreover, no *L. acidophilus* bacteremia were identified in a 10-year survey in Finland.¹²

More specifically, *L. acidophilus* has been consumed in fermented milks and other food products for decades and is listed in the Inventory of Microorganisms With Documented History of Use in Human Food.¹³ The European Food Safety Authority has also added the species to the Qualified Presumption of Safety List.¹⁴ Since its market introduction more than 30 years ago, billions of servings of foods and supplements containing *L. acidophilus* NCFM® have been safely consumed. In addition to this long history of safe human consumption, no acquired antibiotic resistance was detected in *L. acidophilus* NCFM® during screening by the EU-funded PROSAFE project. Very few instances of infection have been associated with these bacteria and several published studies have addressed their safety.⁸⁻¹¹



Qore™ *probiotic*

The safety of Bifidobacteria has been proven and demonstrated throughout several studies when used orally and appropriately. Bifidobacteria has been safely used in clinical trials lasting up to a year. Genome sequence analysis of *Bifidobacterium longum* and molecular biological analysis of other probiotic strains confirmed so far the absence of virulence and pathogenicity factors. According to recent published research, conclusively, strains from the *Bifidobacterium* species generally represent so far no health hazards.⁶

Lactobacilli and bifidobacteria are generally regarded as safe because of their long history of use in fermented dairy products, their ubiquitous presence in the human intestine and uro-genital tract, and because they are rarely involved in disease.

Manufacturing

Qivana's Qore Probiotic is manufactured in Japan with a partner that also manufactures food grade products and pharmaceuticals. This fully automated facility utilizes the highest degree of quality, safety, and accuracy guidelines of any manufacturer anywhere in the world.

Quality Control

Quality is our strength and Qivana is committed to work with partners that maintain it at every stage of the production cycle. To that end, we ensure that they have in-house most modern testing laboratory equipped with all necessary instruments and a highly qualified technical staff. We operate in total compliance with the latest cGMP standards and utilize 3rd party experts to validate the quality of our products.

Controlling the quality of a probiotic strain is crucial, yet difficult. For a strain with documented probiotic activity, it is very important that it is not subjected to any genetic or physiological change during processing. In order to maintain the quality, purity, and consistency of each production batch of the strain, we make rigorous use of bacterial frozen seed inventories to reduce the risk of genetic drift over time and to maintain strain integrity. Our manufacturing partner also performs bacterial identification based on 16s rRNA gene sequence similarity for every produced batch of culture.

Suggested Use

Take one Trisphere daily with water on an empty stomach.



Qore™ *probiotic*

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Qore™ *probiotic*

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