

Active Guard

A Probiotics for your whole family...
适合您一家人的良菌补给品...



**Waking up the First line defence of your gastrointestinal health!
唤醒失守您肠道健康已久的第一道防线!**

Active Guard

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1 Intestinal Flora- Our Bacteria Friends

Inside every human body there are more than 100 trillion living bacteria. So tiny... yet they make a huge impact on our lives. Most live inside our digestive system, in which our intestines are major home to most of these bacteria, which known as the intestinal flora.

Besides this very large numbers of bacteria, there is also a very large diversity of bacteria. It has been estimated that more than 400 different species of bacteria, collectively weighing approximately 3.5 pounds, with a population outnumbering even the number of cells in human body.

Many of these bacteria inside us are harmless, and in fact some are even essential for our health and normal human growth and development. However, the beneficial bacteria can only do their job effectively if they are present in sufficient numbers and in right ratio to those that bring harm.

2 Maintaining the balance- The Key to Health

In human body, even the healthiest intestines will include some bacteria, yeast or fungus that has the potential to harm. It is therefore important that the balance of microbes be maintained to favour the beneficial bacteria over the potentially harmful ones.

But, today's hustle and bustle modern lifestyles are threatening our health silently. Rushed, irregular or unbalanced meals, excessive alcohol, excessive dietary fat and protein, stress, travelling, antibiotics and even aging can change the balance and favour the implantation and development of putrefactive and infectious bacteria.

Supplementing a good probiotics like Active Guard everyday helps to maintain the balance, as Active Guard is rich with 17 different strains of beneficial bacteria. These encapsulated strains of bacteria can survive the digestive process and help the beneficial bacteria in our intestine keep the upper hand.

3 What is Probiotics and what do they do?

Probiotics is supplements that contain friendly live bacteria that are extremely beneficial to our health. The most important action of probiotics is the reinforcement of the billions of good bacteria/ population that live within our body, in order to create the intestinal microbial balance. Among the probiotics, *Lactobacilli* and *Bifidobacteria* are the most influential ones and commonly given generally-recognised-as-safe (GRAS) status.

Probiotics supplements have now been embraced and accepted as agents that can bring significant health benefits such as:

- ✚ Transform glucose into lactic acid, creating a favourable environment for the desirable microbial balance.
- ✚ Limits the action and development of putrefactive microbes and pathogenic bacteria.
- ✚ Coats the intestinal mucosa and protects it against the invasion of harmful microorganisms.
- ✚ Activate immune cells and produce certain antibiotics that suppress harmful bacteria and protect the digestive system.
- ✚ Produce bacteriocin to control the resistant and harmful bacteria and eliminate the harmful yeast such as *Candida albicans*.
- ✚ Hydrolyses lactose and eliminates the intolerance of the digestive system toward this sugar.
- ✚ Contribute to intestinal peristalsis and accelerates the evacuation of wastes to prevent constipation
- ✚ Strengthen digestion systems and enhance absorption of nutrients such as Calcium to prevent osteoporosis.
- ✚ Normalise negative bowel syndromes such as bad breath, constipation, impaired peristalsis and detoxification to prevent carcinogens that are releases back into the body systems.
- ✚ Produce B-vitamins and helps to enhance nutrients utilization by our body.
- ✚ Breakdown carcinogen materials and are quickly being discharged out of body.
- ✚ Prevent modern illnesses such as harmful cholesterol that relates to cardiovascular diseases
- ✚ Normalise salt and sugar level in the body.
- ✚ Prevent the effect of free radical like aging, etc.
- ✚ Enhance the body to produce interferon that has antiviral properties.

4. How do choose the right Probiotics?

Just as not all strains of bacteria are the same, in a similar way, not all probiotics are the same. The effectiveness of a probiotics supplement depends on what it contains, how it is prepared and processed and how it is packaged.

After all, the desirable properties of a good probiotics must be able to fulfil the following criteria:

- a) Health and clinical properties
 1. Resistance to acid and bile
 2. Adherence to human intestinal cell
 3. Colonisation of the human guts
 4. Production of anti-microbial substances
 5. Probiotics strains with clinically validated health effects

- b) Stability and technical properties
 1. Ability to maintain verified viability
 2. Good acidity profile
 3. Maintenance of colonizing properties throughout processing and storage
 4. Accurate strains identification and combination
 5. Stability and no molecular and/ or structural damage following preparation method

Friendly bacteria are grown in what is called “culturing medium”. As the bacteria grow, they transform the culturing medium into a totally different substance called the supernatant. A very important component of good probiotics, the supernatant is filled with a variety of beneficial metabolic by-products including antimicrobial compounds, vitamins, enzymes, cellular building blocks, antioxidants and immunostimulants. A good probiotic must retain all the friendly bacteria and supernatant throughout the full-culture production.

5. The Production of Active Guard- The importance of fermentation to produce the unique combination

Over 70 species of natural plants, fruits and herbs are used for the production of Active Guard. All these materials are chosen very carefully since it is believed that the quality of the end product critically depends on materials themselves. During the manufacturing process of Active Guard, all materials are used and fermented based on brown sugar and spring water from Okinawa that is famous for its authentic preparation and health benefits.

Besides the selection of materials, manufacturing tools like grinding tools are also taken into account in order to produce high quality products. All materials will be ground using an old stone mill technique so that the health beneficial ingredients such as enzymes and certain nutrients in the materials would not be destroyed by the heat of modern grinding machine.

During the process of long fermentation and ripening of the materials, sugar rate and acid rate will be regulated until all the ingredients are dissolved into small molecules by the lactic acid bacteria, yeast and so. As the nutrients are changed into small molecules they will be absorbed from the intestinal tract smoothly.

Simultaneously, these bacteria produce various kinds of organic acids such as acetic, lactic, citric acid and natural antibiotics like acidolin, bifidin, etc, which are effective in improving our intestinal conditions and prevent the colonisation of harmful bacteria in our bodies.

Among the 70 types of natural ingredients, the followings are several examples from the superior selection that have been determined to be effective in promoting our health:

✚ Agaricus Blazei Murill

- ✚ Has been recognised with properties of anti-carcinogen and anti-tumour
- ✚ Stimulate immunity

✚ Root of Combu

- ✚ Beneficial for blood pressure related syndromes

✚ Fucus

- ✚ Beneficial for blood glucose related syndrome
- ✚ Rare dietary phytochemicals such as zinc and magnesium

✚ Nihon-Yama-Ninjin

- ✚ Beneficial for blood pressure related syndrome
- ✚ Beneficial for allergy related syndrome

✚ Ke-Ru

- ✚ High fiber helps to overcome constipation and negative bowel syndrome
- ✚ Beneficial for blood sugar related syndrome
- ✚ Alkaline and complete nutrition type of green food

And others...

***No preservatives, additives, artificial colouring or flavouring are used in the fermentation process**

6. The content of Active Guard- The source of life

Active Guard capsule contains 17 strains of friendly bacteria. Each capsule consists of over 60 millions live and viable friendly bacteria at the time encapsulation. The characteristics of each kind of friendly bacteria are summarised as below.

Bacteria Strain	Characteristics
<i>Lactobacillus acidophilus</i>	Thermophile lactic acid bacteria. Produce acid, antibacterial material and vitamin B12. Improve intestines bacteria flora. Conjugation of bile acids. Effects of reducing blood pressure and anti-tumour properties.
<i>Lactobacillus amylovorus</i>	Though produce acid slowly but strong. Produce L-lactic acid and antibacterial material. Effects of cholesterol reduction and anti-cancer.
<i>Lactobacillus casei</i>	Produce L-lactic acid and antibacterial material. Salt tolerance. Effects of anti-tumour and immunity activation.
<i>Lactobacillus plantarum</i> <i>Lactobacillus fermentum</i>	Originate from plant, osmotic pressure tolerance. Facultative hetero fermentable, use many kinds of sugar. Produce anti-bacterial material.
<i>Lactobacillus brevis</i> <i>Lactobacillus buchneri</i>	Originate from plant, osmotic pressure tolerance. Produce anti-bacterial material.
<i>Lactobacillus kefiranofaciens</i>	Produce L-lactic acid and antibacterial material. Salt and alcohol tolerance. Anti-cancer effect.
<i>Lactobacillus acetotolerans</i>	Produce L-lactic acid and antibacterial material. Salt tolerance. Effects of reducing blood pressure and anti-cancer properties.
<i>Lactobacillus bulgaricus</i>	Reduce enteric upset. Produce L-lactic acid and antibacterial material. Effect of cholesterol reduction and immunoregulation.
<i>Lactobacillus damnosus</i>	Produce L-lactic acid and antibacterial material.
<i>Pediococcus urinaeequi</i> <i>Pediococcus acidilactici</i> <i>Pediococcus pentosaceus</i> <i>Pediococcus halophilus</i>	Applied to meat fermentable food. Produce lactic acid and antibacterial material. Salt tolerance.
<i>Leuconostoc mesenteroides</i>	Facultative hetero fermentable and is widely spread among fermentable foods. Salt and glucose tolerance.
<i>Lactococcus lactis</i>	Produce Viscosity polysaccharides. Effects of antioxidant, blood pressure and cholesterol reduction.

In addition to the 17 strains of pre-selected super strength lactic acid bacteria, Active Guard contains 18 types of amino acids including all 8 essential ones. Amino acids are the building blocks of the body. Besides building cells and repairing tissue, they form antibodies to combat invading bacteria and viruses; they are part of the enzyme and hormonal system; they build nucleoproteins (RNA and DNA); they carry oxygen throughout the body as well as participate in muscle activity.

The last but not least, Active Guard also contains a variety of human needed vitamins and minerals that are essential in maintaining and promoting human health and longevity.

Each of the mentioned ingredients in Active Guard is readily absorbed and used for various functions of human body. When the colon contains a ratio of 85 percent good bacteria to 15 percent bad bacteria, the nutrients contained in foods, vitamins, minerals, amino acids and other dietary supplements consumed by a human being are properly absorbed and utilized by the body. This enhances proper cellular functions and strengthens the body's natural immune system.

7. How does Active Guard work?

Nutrition is defined as the supply of essential elements e.g. amino acids, fatty acids, minerals, water, fiber and vitamins to support growth, maintenance and repair of the body. Friendly bacteria are an essential component of the food chain and the ultimate concept in nutrition.

Historically we humans were constantly exposed to it in nature from the moment of birth and established the micro flora and fauna in the body. While we provides living space in the intestines for the friendly bacteria, in return, they assist us in digestion and absorption of nutrients, manufacture B group vitamins, help detoxification, and act as a guard by competing for space with undesirable microorganisms. In addition, they also strengthen our immune system.

The technology revolution has eliminated these friendly bacteria from food and modern man has to combat chemicals in food, air and water, stress, smoking and frequent use of antibiotics. The emergence of drug resistant bacteria has proven to be a disastrous cocktail in altering, for the worst, the complex balance of the micro-ecology of the gut.

The friendly bacteria in Active Guard capsules provide elements necessary to restore the internal balance of the intestinal system and encourage the body to function in the best possible and most natural way. Importantly, the action of friendly bacteria complement the beneficial effects of other elements like correct exercise, a balanced and organic diet, clean air, adequate hydration, inner tranquillity, good rest, creativity and so on.

8. Benefits of using Active Guard Probiotic for human wellness

The benefits of using Active Guard Probiotics include, but are not limited to, the following:

- ✚ Treat and control fungal infections, including eradicating *Candida albicans*, through the anti-fungal effect of lactic acid bacteria strains in Active Guard
- ✚ Bring the balance of friendly flora in the digestive system back to at least 80% of good bacteria
- ✚ Assist in the digestion of food consumed and its subsequent absorption
- ✚ Boost the immune system of our bodies by inducing the production of immune cells, and interferon.
- ✚ Bring the digestive function back to good order, help to ease the stress on and cleanse the organs associated with digestion such as the liver, kidney, pancreas, spleen, etc.
- ✚ Support the treatment of crohns and colitis
- ✚ Protect the intestinal cells from the effects of infection by interoinvasive *Escherichia coli* (EIEC)
- ✚ Improve oxygen intake to the red cell platelets and thus improve the stamina and endurance of athletes
- ✚ Convert botanical lignans (SDG) in the bowel to mammalian lignans (ED and EL) to enable the body to absorb these powerful and amazingly beneficial substances, which have been recognised and acknowledged as effective in treating and preventing breast, bowel, colon and prostate cancer
- ✚ In conjunction with OSN Active Greens, significantly boost the healing powers of the skin. This is vital to Type-2 diabetic patients where healing properties of the skin have been impaired so that loss of limbs due to serious infection may be avoided
- ✚ Help treat psoriasis, a condition that is being recognised to be caused by a poor or inadequate immune system
- ✚ Help treat asthma and mother who use probiotics during pregnancy may ensure that the new born baby do not develop asthmatic symptoms
- ✚ Prevent colds and nasal congestions through elimination of excessive bad and harmful bacteria in the nasal passages
- ✚ Ease and relief heartburn, acid reflux and most other digestive disorders such as excessive intestinal gas, etc.

9. Comparison of different forms of Probiotics

Comparison chart of different forms of probiotics with Active Guard:

Liquid Culture	Freeze Dried Powder	Fermented Paste Capsule
Example: Yoghurt, etc.	Example: Tablet or powder form	Example: Active Guard
Morphological changes due to external conditions	Method changes cell structure completely due to very low pressure used in the technique	No changes- retains original form of cells
Only some cells are actively multiplying due to external changes in conditions	Cells are completely inactivate and in a state of hibernation	All cells are active and in original physical or biological condition
Subject to osmotic pressure changes	No effect	No effect
Uncertain and short shelf life	Long shelf live	Up to 5 years
Viable population unstable	Unstable- cell wall damage due to freeze drying	Stable- no freeze dryng
Survival uncertain	Uncertain	Certain
Temperature sensitive to small changes	Sensitive to large temperature changes	Sensitive to large temperature changes
Storage required refrigeration and large space	Special storage conditions required	Can tolerate room temperature and occupies less space
Percentage of population revived in human body is uncertain	Percentage of population revived in the human body is uncertain- due to cell wall damage	Percentage of population revived in the human body is very certain an assured
Efficacy depends on the number of bacteria revived in the body	Efficacy depends on the form and number revived in the body	Efficacy is certain and assured based on the definite population present in capsule- 100% alive in the body

10. The superiority of Active Guard probiotics

Let alone the most unique preparation method that makes Active Guard the most outstanding probiotic available, the following features have also made it unbeatable and superior to its competitive counterparts on the market shelves.

- ✚ The blend of 17 strains of superior active lactic acid bacteria, especially the “*Lactococcus*” strain, the special strain that capable of producing polysaccharides – “the miracle immune-activator”.
- ✚ With polysaccharides – a miracle immune-activator, which can inactivate the pathogen’s toxins and as well as activating the T-lymphocytes to eliminate the bacterial toxins.
- ✚ The soft gel is able to deliver the beneficial active cultures directly to the intestines without being damaged by stomach acid.
- ✚ The uniqueness of natural fermentation process which is blending 17 strains of superior beneficial cultures with 100% natural and special selected nutritious ingredients.
- ✚ Perilla oil which is rich in alpha-linolenic acid, an essential fatty acid, is being used when encapsulation of the soft gel is done.
- ✚ The nutrients are predigested by the beneficial bacteria through the natural fermentation process and as a result they can be easily absorbed and utilised by our body.
- ✚ The natural process of “detoxify-recondition-revitalise” by the lactic acid bacteria contained in Active Guard is performed without harming the colon lining and it is safe and effective.
- ✚ The fermentation factory of Active Guard along with the natural and nutritious ingredient is situated in an unpolluted Okayama mountainous area that is 300m above the sea level.
- ✚ Water from the mountain springs is used - unique properties of this spring water.

11. The Goodness of Probiotics- The role in prevention and treatment of diseases

PROBIOTICS AS IMMUNONUTRITION

Lactic acid bacteria such as *Lactobacillus plantarum* possesses the ability adhere to and colonize intestinal mucosa. In combination of external supply of probiotic fiber, it can be regarded as reconditioning of the gastrointestinal mucosa and is called ecoimmunonutrition.

Nutrition 1997 Jul-Aug

PROBIOTICS AND CONSTIPATION

Unhealthy meals and irregular exercise can result in constipation. The longer the waste material remains in our body, the greater the chances we expose to harmful carcinogens. Studies showed that supplementing with probiotics have beneficial effects on constipation. These friendly bacteria are helpful for their ability in lowering colonic pH and thus induce efficient process of peristalsis. This will help to normalize intestinal transit and therefore effectively relive constipation.

Mindell E., Probiotics: Nature's Internal Healers, 1998

PROBIOTICS AND GASTRITIS

Spicy foods and stress used to be the blamed for causing gastritis. But evidence has now discovered the shocking truth: the culprit - bacterium *Helicobacter pylori* that can survive stomach acid without difficulty. On the other hand, there is also conclusive scientific evidence to show that probiotics can inhibit the growth of such harmful pathogen and alleviate intestinal infections in human. Probiotics is described as the first line of defence against all sorts of invasions.

Dash S.K. et al, Health Benefits of Probiotics, 1999

PROBIOTICS AND LACTOSE INTOLERANCE

It is well documented that the wise use of probiotics can benefit lactose-intolerant individuals. These friendly bacteria produce lactase to help digest lactose in the small intestines. This will reduce undigested lactose fermenting in the intestinal tract, thus help minimize the discomfort of bloating, abdominal cramps and diarrhea associated with lactose intolerance.

George W, Protecting Your Health with Probiotics The Friendly Bacteria

PROBIOTICS IN CHILDREN'S HEALTH

Jose Saavedra, MD, of John Hopkins Medical Center had demonstrated the potential uses of probiotics in the treatment and prevention of diarrhea in children. In a number of studies, Lactobacillus has been shown to decrease the duration and severity of acute episodes of acute diarrhea, especially in cases caused by Rotavirus. Furthermore, existing study was showing probiotics could also be used in antibiotic-induced diarrhea.

J Paediatrics 1999; 143:15-20; Lancet 1994; 344:1046-1049

Infants with atopic dermatitis and milk allergy had a significant improvement in the severity of the eczema after the supplementation of probiotics. Children who were taking probiotics also showed a significant reduction in respiratory infections, including sinusitis, bronchitis and pneumonia.

J Allergy Clinical Immunology 1997; 99:179-185

PROBIOTICS AND BLOOD LIPID AND CHOLESTEROL

Dietary oligofructosaccharides (prebiotics that selectively stimulate the growth of specific bacteria and elicit a probiotics effect) could suppress the synthesis of hepatic triglycerides (blood lipid), resulting in marked reductions in triglycerides.

British J Nutrition 1998

Researchers have discovered that probiotics can be used to reduce serum cholesterol to a lesser extent levels. In simple words, various studies showed this reduction could be a result of two ways the friendly bacteria react with the elevated cholesterol in the blood: the first is by breaking it down for easy removal and the second is by directly absorbing it.

Dash S.K. et al, Health Benefits of Probiotics, 1999

PROBIOTICS AND COLON CANCER

Growing evidence suggests the use of prebiotics (such as oligofructose and insulin in this case) had selectively stimulated the growth of friendly bacteria and these inhibited the formation of preneoplastic (precancerous) lesions in the colon. The inhibition of colon carcinogenesis was associated with a decrease in colonic mucosal proliferation and tumour formation.

British J Nutrition 1998

PROBIOTICS AND CANDIDA INFECTION

Candida does exist in everyone's body. Under normal circumstances, *Candida* is kept in check by sufficient levels of good bacteria and they live in a harmonious, delicate balance within different parts of our body. However, *Candida* can run unchecked and become an irritating new affliction when this ecosystem is off balance. By then, probiotics can help preserve, enhance and replenish the indigenous beneficial bacteria to prevent and treat candidiasis or other chronic yeast infections.

Dash S.K. et al, Health Benefits of Probiotics, 1999

PROBIOTICS AND URINARY TRACT INFECTION

According to Reid G from Lawson Research Institute, there are 5 strategies in prevention of recurrent urinary tract infection (UTI). These include natural peptides, functional foods, vaccines, good hygiene maintenance as well as probiotics. The use of probiotics to restore the normal vaginal flora and provide a competitive bacterial barrier to pathogens can be used as an alternative preventive approach.

World J Urology 1999 Dec

PROBIOTICS AND PREVENTION OF VAGINAL INFECTIONS

Probiotics like lactobacilli are believed to control the vaginal microflora by different mechanism such as production of antagonistic substances like lactic acid, bacteriocins and hydrogen peroxides in the vaginal tract. This will prevent vaginal yeast from being formed, which in turn prevent the vaginal infections.

Curr Microbiology 1999

PROBIOTICS AND ORAL ULCERS

Lactic acid bacteria stimulate the immune system in animals and humans, and enhances resistance to infections, tumours, phagocytosis and Immunoglobulin A productions. A study had been conducted locally and the results showed that the process in oral health among the patients with mouth ulcers had been gratifying. This has brought about the conclusion that probiotic is beneficial in the treatment of the oral apthous ulcer.

Prof. Dato' Dr Hashim Yaacob, Dean of Dental Faculty, UM

PROBIOTICS AND BONE HEALTH

There was study showing that supplementation of probiotics would play a role in maintaining healthy bone. Such study concluded that the bone mineral content (BMC) measurements showed higher volume in the group supplemented with probiotics if compared to its counterpart group in both sexes. The friendly bacteria make nutrients readily absorbable, dissolve and synthesize effectively to promote the bone deposition to tissue cells.

Bulletin of Kurashiki University of Science and the Arts

EFFECT BEYOND THE GUT

Probiotics not only stimulate the humoral immune response (normal defence mechanism), but also induce macrophage activity and phagocytosis (natural process to clear any foreign organism from the body). It can alleviate intestinal inflammation such as inflammatory bowel disease and narcotising enterocolitis.

Sherwood Gorbach, MD, of Tufts University School of Medicine

In addition to that, there is also evidence and studies showing that probiotics can induce mucin proteins (special protein that is secreted by the gut) that provide protection from infections caused by bacteria and viruses.

David Mack, MD, Nebraska Medical Center, Omaha

And now see what the professional people say...

“Medical science now knows that when the ecology of the human gastrointestinal tract becomes disrupted, beneficial microorganisms can no longer flourish in numbers necessary for proper balance, supplement with probiotic will benefit...”

Devin A. Mikies M.D.

“Probiotics can definitely change your bacterial balance for the better. This stuff is good for you. At the very least, it isn’t bad for you.”

Professor Glenn Gibson

Head of Microbiology at Reading University, England

“Probiotics... contribute so much to the health and balance of GI tract, thus benefiting us by protecting against disease and improving nutrition.”

Jeremija Lj. Rasic PhD

“You can have a thousand different types of nutritional deficiencies or toxic states as a result of flora imbalance... stand to benefit from probiotic supplementation.”

Thomas L. Stone M.D.

“Probiotics are beginning to join mainstream medicine in hospitals where their use is extending into the care of critically ill patient...”

Catherine Clollins

Chief dietician, St. George’s Hospital London

“Probiotics is the missing link in our diet.”

Dr Nathan, G., PhD Microbiology, N.Z.

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