



## Fact Sheet

### FastTract Probiotic Superfood

As far back as records take us, man has used the art of fermenting foods to improve the storage time and beneficial properties of foods.

Foods with short storage time, particularly the milk from camels, buffalo, goats, sheep and cows were fermented naturally to produce an acidic tasting food drink.

History suggests that some of the first yogurts were produced in goatskin bags, draped over the backs of camels in the hot deserts of North Africa. Temperatures reaching 40 C or 110 F were ideal for lactic acid producing bacteria to go to work. Since this period many races have fermented many types of foods in the need for developing new tastes and improving shelf life.

Fermented foods have a long history of nutritional and therapeutic benefits with many of the long-lived cultures around the world using some form of fermented foods to achieve longevity and maintain good health.

The famous Hunzas of Kashmir and the Georgians of the former Soviet Union, have been highlighted by their amazing history of longevity include fermented foods as a significant part of their diet.

Males of over 100 years participating in horse events such as polo, and women working in the farm fields at over 100 years, are not uncommon. Fermented foods such as yoghurt, fermented cheese, miso, tempeh and sauerkraut (fermented cabbage), provide beneficial bacteria to the digestive system, as long as they haven't been pasteurised.

There is a growing weight of scientific evidence that demonstrates fermented foods play a significant role in human health.

### ***Health & Well-being in the Balance***

It is generally accepted that the bacterial community resident in the human intestinal tract has a major impact on gastrointestinal function and thereby on human health and well-being.

Chronic diseases associated to modern lifestyle habits are usually related to immune system malfunction. By increasing the population of the beneficial lactobacillus bacteria, the health of the digestive system can be improved. A healthy intestinal tract should contain at least 85 percent of these 'friendly' bacteria to prevent over-colonisation of pathogenic, disease-causing micro-organisms.

Studies have also shown that maternal and neonatal diet may have long-lasting effects in the development of chronic adulthood diseases, such as insulin resistance, type 2 diabetes, obesity, dyslipidaemia, hypertension, and cardiovascular disease and have implicated the benefits of probiotics in the prevention of these diseases.



### **Interesting Human / Microorganism Facts**

*Microorganisms account for about 1 kilo of weight in our colon.*

*Bacteria make up around 60% of the dry mass of faeces.*

*The human body consisting of about 100 trillion cells, carries about ten times as many microorganisms in the intestines.*

## **Medical Benefits of Probiotics**

### **Medical research shows that probiotics:**

- Improve digestion
- Increase nutrient assimilation
- Strengthen the immune system
- Increase resistance to yeast infections
- Manufacture B complex vitamins (biotin and vitamin K)
- Relieve symptoms of irritable bowel syndrome (IBS);
- Detoxify toxins and chemicals in gut
- Maintain correct pH balance in vaginal ecosystem
- Reduce high blood pressure
- Reduce cholesterol in the blood
- Produce cancer or tumour suppressing compounds
- Improve Autism and ADHD in children
- Protect liver function
- Decrease toxic overload from pathogenic bacteria
- May reduce risk of bowel cancer
- Assist elimination and detoxification
- Improve gastrointestinal wind
- Reduce symptoms of lactose intolerance
- Decrease the prevalence of allergies

However, to attain the health benefits attributed to Lactobacilli fermented foods, live active bacteria need to be consumed on a regular basis.

## **Dysbiosis Explained**

### **Dysbiosis (when the bad guys outnumber the good guys)**

Beneficial bacteria are essential for digestion and assimilation of nutrients and maintenance of the lining of the intestinal tract.

When the balance of bacteria is disrupted and harmful bacteria outnumber beneficial bacteria, this is called dysbiosis.

Dysbiosis is associated with increased gut permeability (leaky gut) and manifests in symptoms such as flatulence, bloating, diarrhoea or constipation, vomiting, reflux and colic (in infants).



## ***Dysbiosis Warning Signs***

Warning signs of dysbiosis (bacterial imbalance) may include:

- Allergies and food sensitivities
- Frequent colds, flu or infections
- Difficulty losing weight, sugar/carbohydrate craving
- Frequent fatigue, poor concentration
- Frequent constipation or diarrhoea
- Faulty digestion, acid reflux and other gut disorders
- Sleeping poorly, night sweats
- Painful joint inflammation, stiffness
- Bad breath, gum disease and dental problems
- Chronic yeast problems
- Acne, eczema, skin and foot fungus
- Extreme menstrual or menopausal symptoms

## ***Dysbiosis Causes***

Causes of dysbiosis (things that kills good bacteria)

The number of 'good' bugs in your digestive system can be imbalanced by a wide range of factors including:

- Excessive stress (both psychological and physical)
- Exposure to radiation
- Drinking fluoridated / chlorinated water
- Poor diet (low fibre, high fat, processed foods)
- Excessive alcohol consumption
- Carbonated drinks
- Antibiotic use
- Contraceptive pills
- Steroidal & hormonal drugs

## ***4 Key Attributes of an Effective Probiotic***

Not all probiotic supplements are created equal. An effective probiotic product should contain bacteria that can:

1. Maintain its high and active count though processing and storage until consumption.
2. Tolerate the acid conditions of the stomach.
3. Tolerate bile salts.
4. Increase its own numbers in the bowel and decrease the numbers of competing bacteria.



## ***What's So Special About FastTract?***

The Lactobacilli bacteria used in FastTract are the result of 20 years research.

Our unique lactobacilli bacteria have been subjected to a large number of stressors including heat, cold, chlorine, salt, alcohol and many preservatives found in food, resulting in a “super family” of very strong Lactobacilli unlike any others found in the world today.

The unique formulation provides the complete Lactobacillus family of 13 strains combined with seven certified organic foods for 3 weeks prior to bottling.

During this three-week preparatory phase the formula is predigested by the lactobacilli in the same way it is in our own body. When consumed, the body is able to instantly assimilate the broad spectrum of nutrients.

FastTract is manufactured via a multi stage organic fermentation process using a mixed population of naturally occurring Lactobacilli bacteria and yeast.

The fermentation “pre-digests” the complex food & energy sources maximising the availability of nutrients and its energy value into an easy absorbed and utilised nutrient source. The organisms used in the fermentation may include:

### **LACTOBACILLUS FAMILY**

1. Lactobacillus acidophilus
2. Lactobacillus brevis
3. Lactobacillus bulgaricus
4. Lactobacillus casei
5. Lactobacillus caucasicus
6. Lactobacillus delbreukii
7. Lactobacillus fermenti
8. Lactobacillus helveticus
9. Lactobacillus lactis
10. Lactobacillus leichmannii
11. Lactobacillus plantarum
12. Bifidobacterium bifidum
13. Bacillus coagulans

Spores are activated in the acidic environment of the stomach and begin germinating and proliferating in the intestine.

### **YEAST STRAINS**

14. Saccharomyces boulardii
15. Saccharomyces cerevisiae

This process provides for successive fermentations such that





competition effects contribute to selection of a dominant species ensuring high numbers of active, viable lactic acid bacteria are present which is supported by laboratory test reports for each batch.

## ***Probiotics & Medical Conditions***

### ***Probiotics and Antibiotics***

Probiotic supplementation is critical for the prevention of antibiotic-induced conditions (candida, urinary tract infections, and diarrhoea). Antibiotics destroy friendly gut bacteria along with the harmful bacteria.

Thus, taking probiotics after antibiotic therapy will restore gut flora to a healthy balance.

Lactic acid producing bacteria alter the pH of the large intestine, making it inhospitable to undesirable bacteria, moulds, mould spores and yeast, particularly Candida.

### ***Probiotics and Autism***

A medical study on probiotics for autism has proven so successful that the study 'failed', according to a New Scientist report on September 9, 2006. The study, by Prof Glenn Gibson at Reading University, UK, found that autistic children vastly improved their concentration and behaviour when given probiotics, or 'friendly bacteria'.

It involved 40 autistic children, aged 4 to 8, half of whom were given the probiotic bacteria *L. Plantanum* while the other half received a dummy 'probiotic'.

It was supposed to have been a blind study, where the participants were not told who were taking the actual probiotics and who were taking placebos or dummy medicine.

As part of this probiotics for autism study, parents were asked to record their children's mood and behaviour in a diary.

The results were too obvious. Parents whose autistic children were taking the actual probiotics saw such great improvements in their children's behaviour that they knew their children were taking the real thing.

Thus, problems arose during the 'crossover' point of this probiotics for autism study, where the two groups were supposed to switch medicines.

When it came time for the families to switch, the families who had been receiving the actual probiotics refused to change over to the placebo.





As a result the study experienced an astronomical drop-out rate that caused the study eventually to fail. Many of the parents whose children were taking the actual probiotics refused to make the switch as they wanted their autistic children to continue their improvement. One parent said it was “heartbreaking” to have to stop their child taking it.

### ***Probiotics and Ageing***

Recent studies suggest an association between inflammation status and the presence of chronic disease in the elderly. Probiotics might improve the inflammatory condition of the elderly.

Differences in the gut bacteria may be related to the progression of diseases and frailty in the elderly population. It appears possible to extend healthy aging and lifespan by manipulating the complex ecosystem of gut bacteria. Consumption of probiotics have been shown to improve the quality of life in the elderly.

### ***Probiotics and Allergies / Eczema / Dermatitis***

Gastrointestinal microflora dominated by lactic acid bacteria is crucial for the maturation and proper functioning of human immune system. There is very promising evidence to recommend the addition of probiotics for prevention and treatment of allergic diseases, especially atopic dermatitis.

Clinical improvement in allergic rhinitis and eczema has been reported too. Studies have also shown a significant risk reduction for atopic eczema in children aged 2-7 years by the administration of probiotics during pregnancy and demonstrated the efficacy of probiotics in the treatment of paediatric atopic dermatitis.

### ***Probiotics and Anxiety / Depression***

Research suggests that bacteria in the GI tract can communicate with the central nervous system. Probiotics could be proposed as a novel strategy as an adjuvant for psychiatric treatment of anxiety and depression.

### ***Probiotics and Colon Cancer***

Probiotics have the potential to impact significantly on the development, progression and treatment of colorectal cancer and may have a valuable role in cancer prevention. Studies point out the inverse relation between the consumption of probiotics and prebiotics in colon cancer diagnosis.

### ***Probiotics and Cholesterol / Hypertension***

Studies have shown that probiotics were found to improve certain metabolic disorders such as hypertension and that a diet rich in probiotics decreases total cholesterol and LDL cholesterol concentration in plasma for people with high, borderline high and normal cholesterol levels.

### ***Probiotics and Infections***

Lactobacillus acidophilus and Lactobacillus casei have demonstrated antibacterial activity of against methicillin-resistant Staphylococcus aureus (MRSA). Probiotics minimise the postoperative occurrence of infectious complications.





### ***Probiotics and Irritable Bowel Syndrome and other Gastrointestinal Diseases***

Bacterial probiotic therapy shortens the duration of acute diarrhoeal illness in children. Probiotics may offer a safe and effective method to prevent travellers diarrhoea. Probiotic may be a safe and effective option for the relief of abdominal pain and bloating for patients with irritable bowel syndrome. Probiotic treatment is effective in maintaining remission in ulcerative colitis. It is probable that probiotics may be the future best treatment also for mild-to-moderate uncomplicated attacks of acute diverticulitis.

### ***Probiotics and Leaky Gut / Food allergies***

In modern society many of the beneficial necessary bacteria have been destroyed in the majority of people's digestive tract due to food intolerances, certain drug ingestion, bacterial/viral infections, modern lifestyle and stress. By promoting proper digestion of foods, friendly bacteria aid in preventing food allergies. If digestion is poor, the activity of intestinal bacteria on undigested food may lead to excessive production of histamine, which triggers allergic symptoms.

This leads to digestive problems and leaky gut, where the gut lining becomes inflamed.

This inflammation creates gaps in the gut wall which allows macro food particles and other foreign microbes to enter the body and create an immune response, resulting in allergies, further exacerbating food intolerances and possibly triggering autoimmune diseases. Probiotics decrease intestinal permeability and improve the ability to effectively digest, process, and absorb nutrients from foods.

Probiotics have been proven to enhance immunity, improve gut infections and reduce production of toxic by-products in the bowel.

### ***Probiotics and Liver Function***

Short-term oral supplementation with probiotics was associated with restoration of the bowel flora and greater improvement in alcohol-induced liver injury.

### ***Probiotics and Obesity / Metabolic Syndrome***

New findings explain how gut bacteria can be involved in the development, or control of, obesity and associated inflammation. The numbers of certain probiotic bacteria is inversely related to fat mass development, diabetes, and/or the low levels of inflammation associated with obesity. Future treatments for obesity may involve modulation of gut bacteria using probiotics.

### ***Probiotics and Rheumatoid Arthritis***

Treatment with *Bacillus coagulans*, a probiotic bacteria, appeared to be a safe and effective for patients suffering from rheumatoid arthritis.

***See over the next few pages for 77 medical studies supporting the amazing health benefits of the ingredients in FastTract Probiotic Superfoods!***



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