

Updated September 2018

# It Starts from The Gut

*Proven Efficacy of VITAGEN:  
An Evidence-Based Research*

Research  
conducted by



UNIVERSITI  
KEBANGSAAN  
MALAYSIA  
*The National University  
of Malaysia*

Research  
grant from

**Vitagene<sup>®</sup>**

# Message

The current state of digestive health among Malaysians is worrying. Looking at the Health Facts 2016 released by the Ministry of Health, it was revealed that diseases of the digestive system were the 4<sup>th</sup> principal cause of hospitalisation in private hospitals, 7<sup>th</sup> principal cause of hospitalisation in government hospitals, and 6<sup>th</sup> principal cause of death recorded in both government and private hospitals.

These figures illustrate just how important digestive health really is, yet all too often we neglect it. A healthy lifestyle forms the basis of good digestive health, and a healthy gut will mean a healthy (and happy) you.

In this booklet, we look at how good bacteria, or probiotic cultures, can positively affect your digestive health, thus leading to a healthier and happier you. We hope you will gain a better understanding of the importance of probiotics and how it can positively influence the state of your digestive health. Lastly, remember that one should not rely solely on probiotics for good digestive health as there are other factors that can affect it as well.



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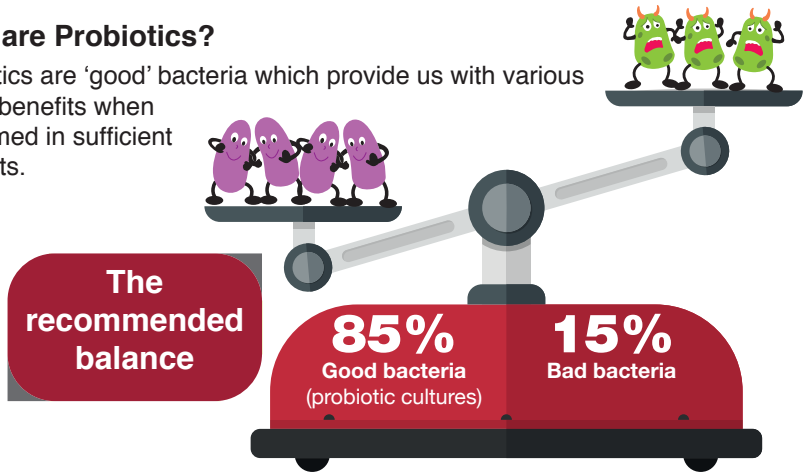
# Gut Microbiome

This fancy name refers to the entire collection of microorganisms such as bacteria, yeasts, fungi, viruses and protozoans that live in our gut – in our small intestines and colon.

But don't worry! Not all microorganisms are bad and cause diseases or inflammation. In fact, most microorganisms in our gut microbiome are beneficial in some way. For example, there are 'good' bacteria in our gut. Read on to learn more!

## What are Probiotics?

Probiotics are 'good' bacteria which provide us with various health benefits when consumed in sufficient amounts.



**100 trillion**

The number of microorganism population in the human body

## The Gut Microbiome Numbers!

**>1000 species**

The number of microorganism species in the gut microbiome

**10-to-1**

The number of microorganisms in the gut to the number of human cells

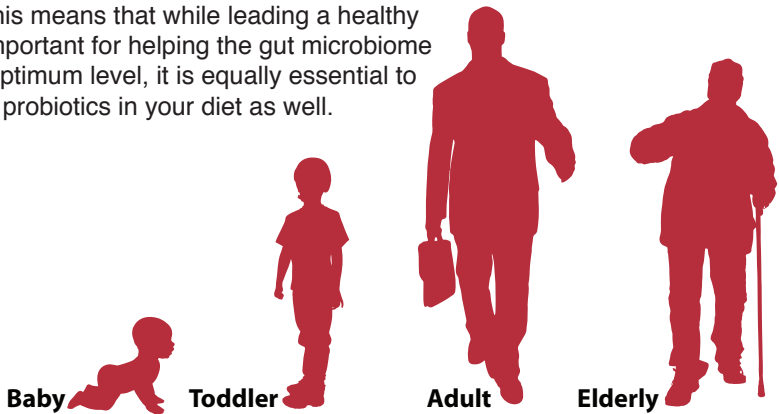
**2kg**

The weight of the gut microbiome in our body

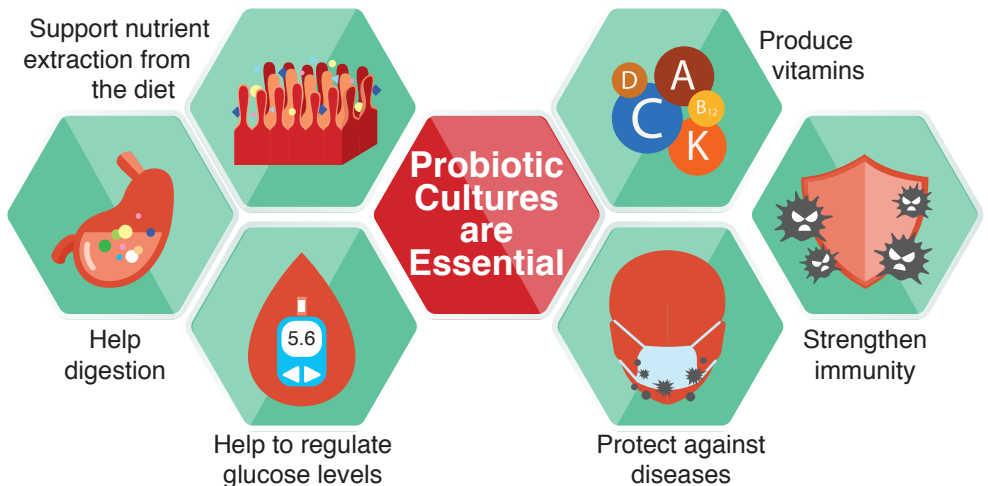
# The Many Types of Microorganisms

There are thousands of different species of bacteria, viruses, yeasts, and fungi that thrive in the gut microbiome. The gut microbiome grows and evolves from birth up to the limit of our life. For instance, infants have a higher ratio of *Bifidobacterium* compared to adults.

Other factors that affect the gut microbiome include diet, lifestyle, geographical location, and the use of medication such as antibiotics or medication for chronic diseases. This means that while leading a healthy lifestyle is important for helping the gut microbiome to be at its optimum level, it is equally essential to also include probiotics in your diet as well.

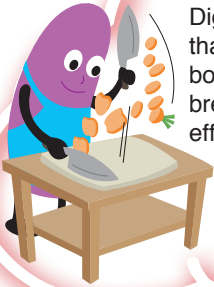


**Baby**      **Toddler**      **Adult**      **Elderly**

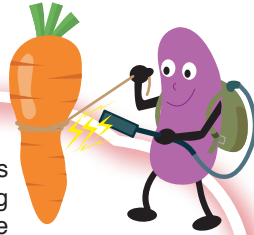


# Probiotics & Digestive Health

Probiotic cultures play various roles in the human body.



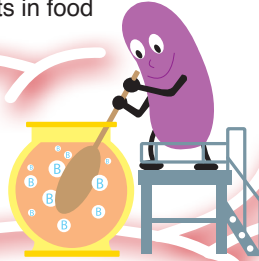
Digest food that our bodies cannot break down efficiently



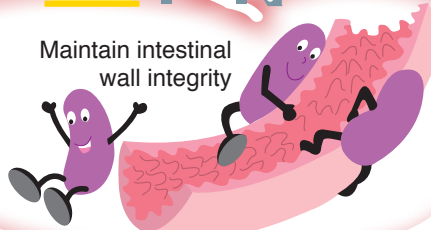
Increase the body's metabolism by extracting more energy from the nutrients in food



Eliminate toxins



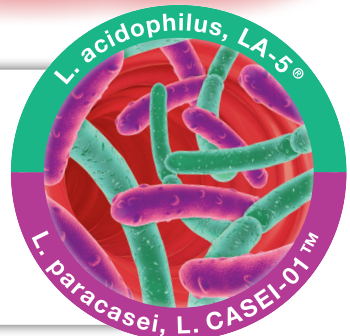
Produce B group vitamins



Maintain intestinal wall integrity

## Did you know?

*Lactobacillus acidophilus* and *Lactobacillus paracasei* are the two live probiotic cultures that are found in a bottle of VITAGEN. These probiotic cultures have positive benefits not just for digestive health, but also for your overall health and wellbeing.



# Local Landmark Research



In 2017, a landmark Clinical Research by Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM) on Malaysians was held over a period of one and a half years. The research included healthy adults and those with irritable bowel syndrome (IBS) and constipation.



## The Research Process

Research subjects:  
Healthy adults &  
IBS patients



Pre-test survey & stool samples



Eat a special pill  
to measure food  
digestion time



3 bottles of  
VITAGEN daily



Post-test survey & stool samples

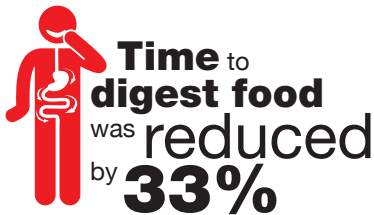
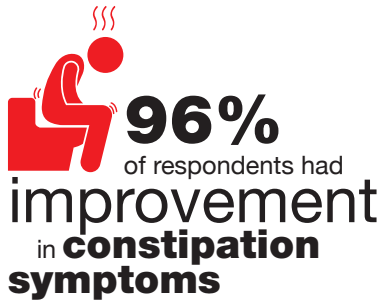
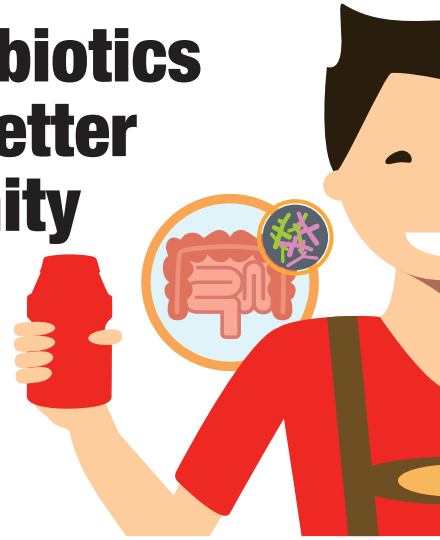


Results

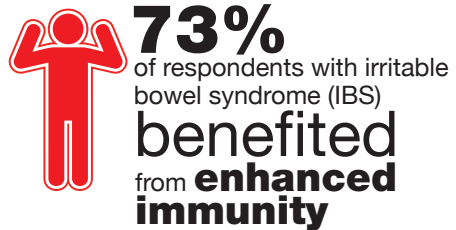


# The Efficacy of Probiotics in **Vitagen**<sup>®</sup> for Better Digestion & Immunity

The efficacy of *Lactobacillus acidophilus* and *Lactobacillus paracasei* strains in VITAGEN has a positive impact on gut health and immune system. Results are based on clinical research performed at the Gastroenterology Unit, Department of Medicine, Hospital Canselor Tuanku Muhriz, Pusat Perubatan Universiti Kebangsaan Malaysia\*.



The time food enters the mouth until it was passed out as stool was reduced by 5-15 hours (from 20-45 hours).



Consuming VITAGEN helps the body produce less pro-inflammatory chemicals. This reduces inflammation and enhances the immune system.



Stools passed out were soft and smooth, not hard and lumpy or watery.

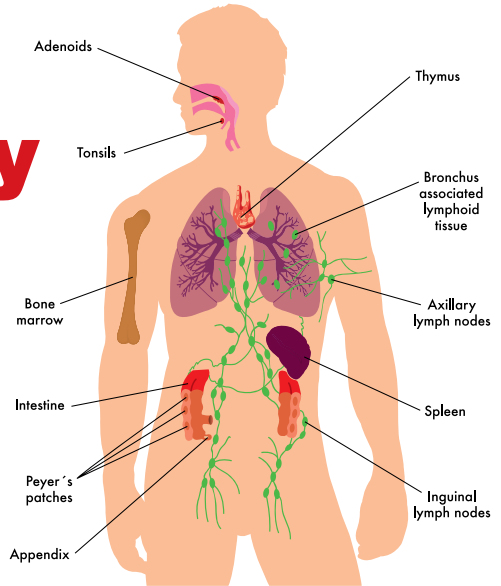
\*Based on 2017 research conducted by Gastroenterology & Hepatology Unit, Pusat Perubatan Universiti Kebangsaan Malaysia on 165 healthy adults, and adults with IBS from Klang Valley. Results were based on consumption of 3 bottles of VITAGEN a day.

Reference: Mokhtar N, Jaafar NM, Chan S, et al | IDDF2018-ABS-0203 Modulation of intestinal dysbiosis in patients with constipation-predominant irritable bowel syndrome using lactobacillus-containing cultured milk drink Gut 2018;67:A70. [https://gut.bmj.com/content/67/Suppl\\_2/A70.2](https://gut.bmj.com/content/67/Suppl_2/A70.2)

# Probiotics & Immunity

## What is Immunity?

Also called your immune system, immunity consists of a collection of organs and cells that function to protect your body from disease-causing microorganisms or other foreign substances.



Organs of the Immune System

# Probiotics Protect!

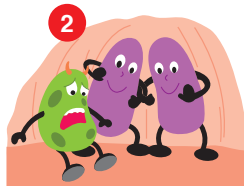
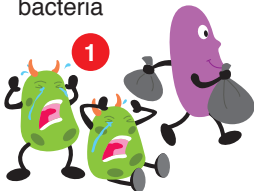
Probiotic cultures are key components of your body's immunity. About 70-80% of the immune system is found in the gut. There is plenty of scientific evidence that probiotics help to maintain a healthy and balanced gut microbiome, and as a result, enhances the immune system. It is also believed to play a role in preventing or minimising allergies and the common cold. A study\* on infants with an imbalanced gut microbiome was found to be at higher risk of developing allergies such as eczema or a recurrent wheeze. In New Zealand, another study\*\* conducted on professional rugby players showed 80% of the placebo group experienced a single episode of the common cold or stomach upset compared to 53% of those in the probiotic group.

\* Penders J, Thijs C, van den Brandt PA, et al. (2007). Gut microbiota composition and development of atopic manifestations in infancy: the KOALA Birth Cohort Study. *Gut* 2007, 56(5), 661-667.

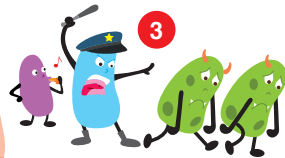
\*\* Haywood, B. A., et al. (2014). Probiotic supplementation reduces the duration and incidence of infections but not severity in elite rugby union players. *Journal of Science and Medicine in Sport*, 17(4), 356-360.

## How do probiotics help defend against 'bad' bacteria?

Probiotics compete for nutrients and take it away from bad bacteria



Probiotics form a barrier on the intestinal walls, protecting against bad bacteria



Probiotics signal immune cells to target bad bacteria



Immune cells directly attack bad bacteria and eliminate them



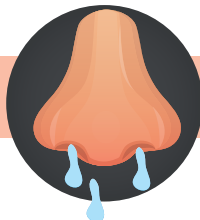
# Probiotic Roles in Immunity



Regulates/  
modulates immune  
responses

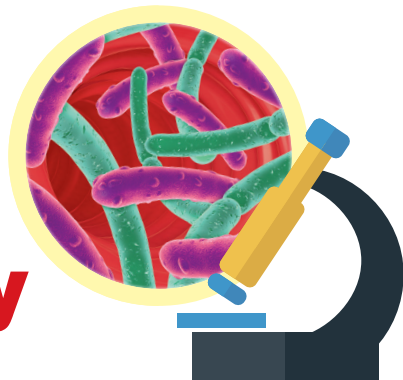


Keeps the gut healthy  
(by protecting the  
intestinal walls)



May help reduce  
infections and  
common colds

## Research on Probiotics & Circulating Inflammatory Cytokines



The research conducted by Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM) explored how the two probiotics *Lactobacillus acidophilus* and *Lactobacillus paracasei* in VITAGEN can influence the immune system. The research measured three types of chemicals released by immune cells and high levels of these chemicals in our body indicate high levels of inflammation which is unhealthy.



Tumour necrosis  
factor-alpha (TNF- $\alpha$ )



Interleukin-8 (IL-8)

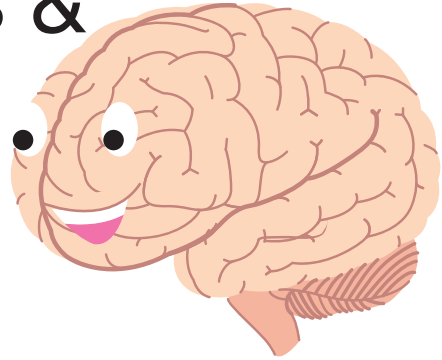
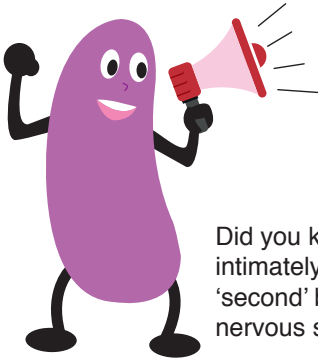


Interleukin-6 (IL-6)

The research results\* proved that the cultured milk drink VITAGEN can positively influence the immune system of healthy subjects and subjects with irritable bowel syndrome (IBS). 73% of research subjects with IBS showed reduced levels of pro-inflammatory chemicals released by the immune cells.

\*Results were based on consumption of 3 bottles of VITAGEN a day.

# Probiotics & The Brain



Did you know that the gut and the brain are intimately linked? The concept of the gut as a 'second' brain is due to the existence of the enteric nervous system (or ENS) that is located in the gut.

The ENS is called the 'second' brain because of its size, complexity and similarity with the brain as it houses about 100 million nerve cells! The close link between the brain and the ENS is called the gut-brain connection.

This makes digestive health an important factor to consider when it comes to your mental wellbeing. Think of the times you have experienced an upset tummy because of stress, or when you ate something that caused tummy discomfort and made you feel miserable all day. These are just simple examples that illustrate the inter-relationship between your brain and your gut.



# Improving Our Moods

On-going research worldwide continue to unravel more information on how probiotics can lead to reduced stress or anxiety levels. Early studies show that certain probiotics do have positive effects on mental health (such as moods, anxiety, stress) but have yet to determine how efficient they are, and have yet to identify the best strains or combination of strains.



Have sufficient sleep daily



Eat the right food regularly and healthily



Drink at least 8 glasses of water daily



Be physically active daily

Factors affecting mental wellbeing

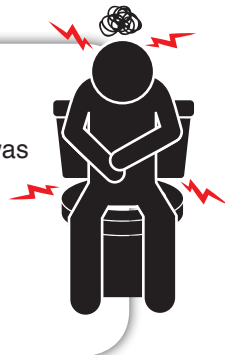


Consume sufficient probiotics

## Did you know?

In 2011, a study\* on patients with chronic constipation found a link between mental disorders and chronic functional constipation. The prevalence of mood and anxiety disorders in constipated patients was much higher than the general population. Anxiety and depression rates were found to be at 34.6% and 23.5% respectively in patients with chronic constipation, whereas rates in the general population were at 4.35%, and 8.31% respectively.

\* Hosseinzadeh, S. T., Poorsaadati, S., Radkani, B., & Forooutan, M. (2011). Psychological disorders in patients with chronic constipation. *Gastroenterology and Hepatology From Bed to Bench*, 4(3), 159–163.



# Where Can I Get Probiotics?

There are some foods that are rich in probiotic cultures. In order to get the most out of probiotics, the bacteria should ideally still be alive and active. The most common food that are rich in probiotics can be found in fermented food such as:



Cultured milk drink like VITAGEN



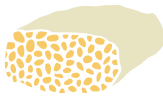
Kimchi



Tapai



Cheese



Raw tempeh



Kefir

If you are shopping for food that have added probiotics, be sure to pick those that are labelled **“live probiotic cultures”** for maximum probiotic and health benefits.

# What Are Prebiotics?

Just like how we need food to live, probiotics also need food to survive. Prebiotics are food for probiotics. In our daily diet, we are eating prebiotics without realising it, as it is found in dietary fibres.

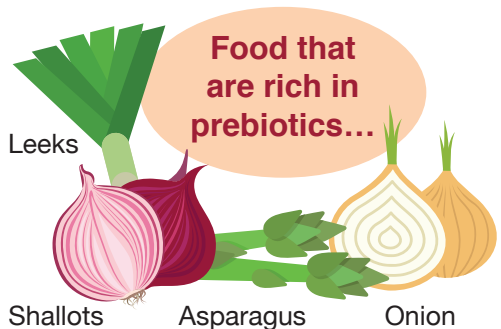
Certain dietary fibres cannot be digested by the body, but are consumed by the probiotic cultures in the gut. This is yet another reason to consume more dietary fibre in your diet.



Banana

Garlic

VITAGEN  
Collagen  
Less  
Sugar



Leeks

**Food that are rich in prebiotics...**

Shallots

Asparagus

Onion

# In a Nutshell

Probiotics are linked to many health benefits.



**Mental Clarity**

**Positive Mood**

**Improve Digestive Health**

**Strengthen Immunity**

Drink VITAGEN regularly for better gut health and a healthier you!

Also, don't forget to eat healthily, get enough sleep and exercise daily!



# Final Research Results Announced!



During the launch of the World Digestive Health Day 2017, PPUKM and VITAGEN announced positive research results. Drinking three bottles of VITAGEN a day led to significant improvements in intestinal transit time and IBS symptoms. The research concluded in 2018, when it was announced that VITAGEN is proven to enhance the immune system.

Principle Investigator and Consultant Physician & Gastroenterologist, Associate Professor Dr Raja Affendi Raja Ali, further elaborated the results of the study for both years. The final results were also presented at the International Digestive Disease Forum in Hong Kong in June 2018.



# DELICIOUSLY NOURISHING

VITAGEN  
REGULAR



VITAGEN  
LESS SUGAR



VITAGEN COLLAGEN  
LESS SUGAR



VITAGEN Regular is made with wholesome milk and real fruit juice with no preservatives. Each bottle contains billions of live probiotic cultures to help improve the digestive system, strengthen the immune system and promote overall gut health.

With lower sugar content, VITAGEN Less Sugar offers the same benefits that come with taking live probiotic cultures. It's the perfect choice for those who love VITAGEN but are looking to reduce their sugar intake.

Packed with 500mg of marine collagen peptides in each bottle, VITAGEN Collagen Less Sugar works by tightening your skin's elasticity, keeping it youthful and supple. Aside from nourishing your skin, it also contains billions of live probiotic cultures as well as prebiotic fibre to keep your digestive system healthy, resulting in more radiant-looking skin.

# Vitagen®

BE GOOD TO YOUR GUT

# OUR IMMUNITY STARTS FROM OUR GUT

Facts don't lie - 70% of our immunity lies within the gut.

Our gut does more than just help with our digestive process. It also plays a vital role in both our physical and emotional health. Formulated with two strains of live probiotic cultures, VITAGEN has been trusted and proven for over 40 years for better digestion and a stronger immune system.



\*HCL helps consumers to identify healthier product within the same category



NO. 1 CULTURED MILK DRINK IN MALAYSIA\*

\*Based on Nielsen Retail Index Service in Cultured Milk Drinks segment for 12 months ending December 2017 in Modern Trade for Total Peninsular Malaysia (Copyright © 2017, The Nielsen Company (M) Sdn Bhd)

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