

You  
are  
What  
you  
eat

# LISTEN TO YOUR GUT

Volume 3



# Yakult

# Do microorganisms represent a Friend or an Enemy?

Humans are scared of microorganisms because they are believed to cause illness. However, microorganisms are an essential part of the manufacture of fermented food products like bread, yogurt, cheese, wine and beer.

Therefore, some microorganisms are our friends while others are our enemy.



## Beneficial and Harmful Effects of Microorganisms

### Beneficial effects

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- Used for making fermented food products like bread, cheese, yogurt, wine and beer
- Aids digestion and helps synthesize vitamins
- Suppresses the growth of harmful bacteria

### Harmful effects

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- Spoils food
- Causes infectious diseases like cold, cough, cholera and tuberculosis
- Causes food poisoning
- Produces harmful substances such as carcinogens

*Our association with microorganisms has always been considered harmful, however it is important to have a friendly association with probiotic bacteria as they are essential for health.*

# INDIA'S HERITAGE OF FERMENTED FOODS

India's tradition of consuming fermented foods goes back to the ages of Ramayana and Mahabharata.

These foods are fermented by lactic acid bacteria, they are present in abundance in these foods.

Fermented foods (curd, lassi, pickles, idli, dosa, bhatura) are consumed for their nutritional benefits and taste but cannot be called probiotics.



**LASSI**



**CURD**



**PICKLE**

**Probiotic bacteria are lactic acid bacteria with a difference – they impart a scientifically proven health benefit.**

*Foods like bananas, onions, oats and honey are called prebiotics.  
They support the growth of probiotic bacteria in our body.*

# KNOW more ABOUT PROBIOTICS

“Probiotics are beneficial bacteria that are said to aid the body in improving overall health and maintaining it.”

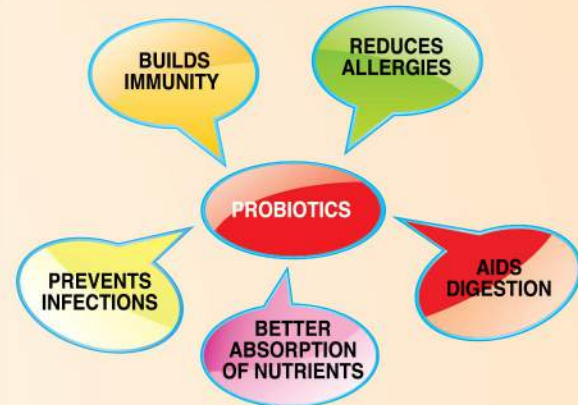


## What makes a PROBIOTIC

- They are friendly bacteria that reach the intestine alive in large numbers
- They impart proven health benefits
- They are normally consumed as food
- They have to be consumed regularly to get the health benefit

PROBIOTIC  
IS A GREEK WORD  
WHICH MEANS  
**‘for life’**

## Key benefits of PROBIOTICS



*WHO/ FAO - Probiotics are live microorganisms which when consumed in adequate amounts confer a health benefit to the host.*

## Are Probiotics Like Medicines ?

In the past probiotics were available in the form of medicines but now they are also available as food products.

- When we fall sick, we take antibiotics to treat diseases. On the other hand probiotic foods are consumed to maintain health and prevent diseases.
- Antibiotics destroy both harmful disease causing bacteria and beneficial bacteria and disturb their balance in the intestine. Probiotics restore the balance by increasing the number of beneficial bacteria.



*Our intestine is home to 100 trillion good and bad bacteria.  
When the balance of these bacteria is disturbed we fall sick.*

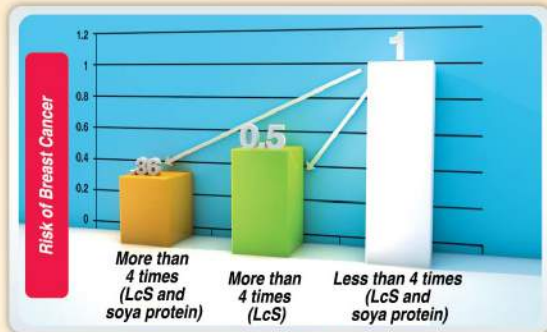
# SCIENTIFIC EVIDENCE

Latest research has shown that regular consumption of probiotics can help reduce the risk of constipation, diarrhoea and breast cancer.

## STUDY:1

A study done in Japan on 968 women (40-55 years) showed that regular consumption of soy products and *Lactobacillus casei* strain Shirota can reduce the risk of breast cancer.

[Toi et al (2013) Curr Nutr Food Sci]

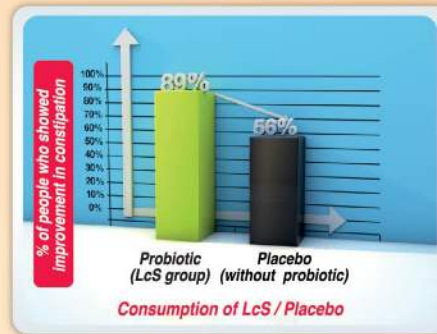


Consumption of LcS & Soya protein  
Reduction of risk of Breast Cancer by *Lactobacillus casei* strain Shirota

## STUDY:2

A study in Germany on 70 people who had severe constipation showed that regular intake of *Lactobacillus casei* strain Shirota improved the symptoms of constipation from the second week of probiotic consumption.

[Koebnick et al (2003) Can J Gastroenterol]



Consumption of *Lactobacillus casei* strain Shirota (LcS) reduces constipation

## STUDY:3

A large community based study conducted at NICED in Kolkata showed that regular intake of *Lactobacillus casei* strain Shirota prevented the incidence of diarrhoea in children.

[Sur et al (2011) Epidemiol Infect]

