



# The Science of Probiotics

**Yakult®**

## What is Gut Microbiota?

- Gut microbiota also called “intestinal flora” refers to the entire ‘population’ of microorganisms living in our digestive system, which includes both ‘good’ and ‘bad’ bacteria.
- A balanced intestinal flora, where the number of good bacteria is higher than the number of harmful ones, is necessary in order for us to remain healthy.
- Factors which upset the balance of intestinal flora;

### Age

Changes occur in the intestinal flora with aging. This is characterized by the decrease of bifidobacteria and the increase of *Clostridium perfringens*.



#### Infant

Bifidobacteria accounts for almost all bacteria.



#### Elderly

The rate of bifidobacteria among entire bacteria count decreases to only several %.

### Medicine (antibiotics)

Antibiotics are non-selective, it will kill both good and harmful bacteria when administered.



### Unbalanced diet

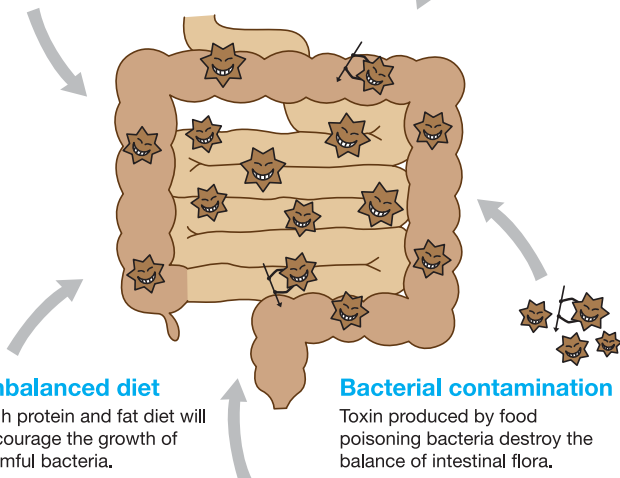
High protein and fat diet will encourage the growth of harmful bacteria.

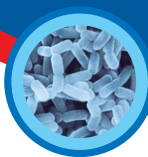
### Bacterial contamination

Toxin produced by food poisoning bacteria destroys the balance of intestinal flora.

### Stress and overwork

Research on astronauts returning from a mission shows a decrease in good bacteria.

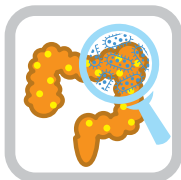




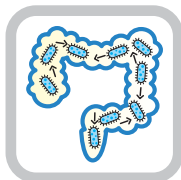
## What are Probiotics?

Probiotics are live, good bacteria that when consumed in high numbers are scientifically proven to positively affect our health by improving the balance of our intestinal flora.

Probiotics must be able to meet the following criteria:



Able to multiply in our intestines.



Able to reach the intestine alive.



Proven scientifically to have positive effect on our health.

## What is Yakult?

Yakult is a high quality probiotics in the form of cultured milk drink. Yakult contains the probiotics bacteria *Lactobacillus casei* Shirota Strain (also known as the Shirota Strain).



Dr. Minoru Shirota  
Founder of Yakult

The first bottle of Yakult was born in 1935



2004



2009

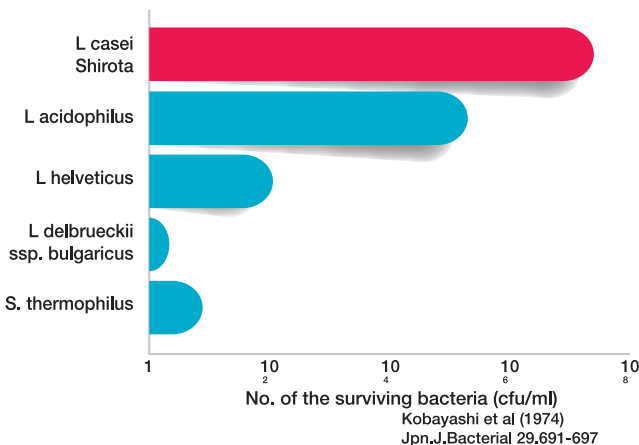


Yakult in Malaysia.

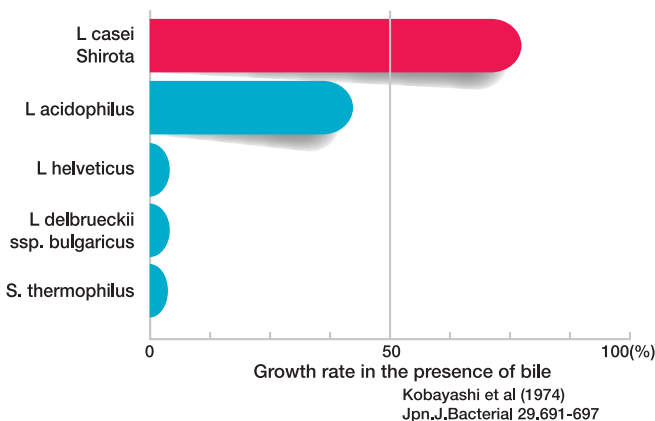
## Why Shirota Strain?

The Shirota Strain is 'Strong' - it is highly acid resistant. It is able to survive the journey from our mouth through the stomach & arrive in the intestine to promote good health.

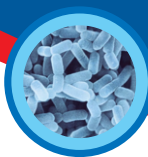
### Resistance of Shirota strain to artificial gastric juice



### Resistance of Shirota strain to bile

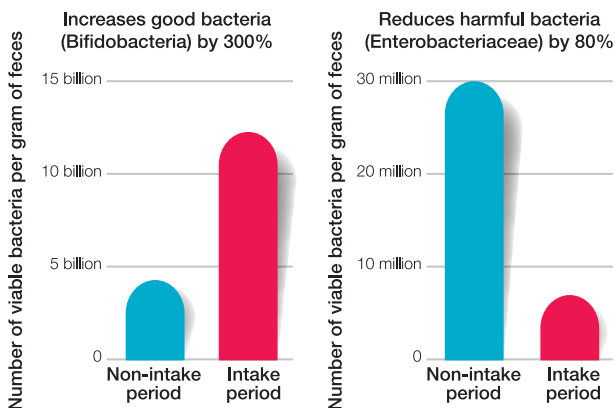


**Note:** Reference 1) Yuki, N., et al. (1999)



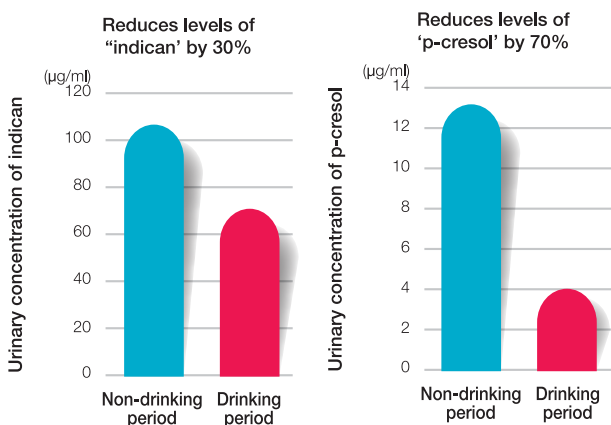
## Health benefits of Shirota Strain

### 1) Maintains balance of intestinal flora



Source: Tanaka R., et al. (1994)

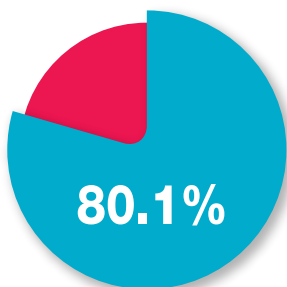
### 2) Reduces toxins in the intestines



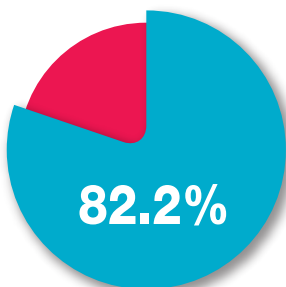
Source: Tanaka R., et al. (1981)

## 3) Improves bowel movement

### Effects of Shirota strain on intestinal disturbances



Improvement of diarrhea  
80.1%



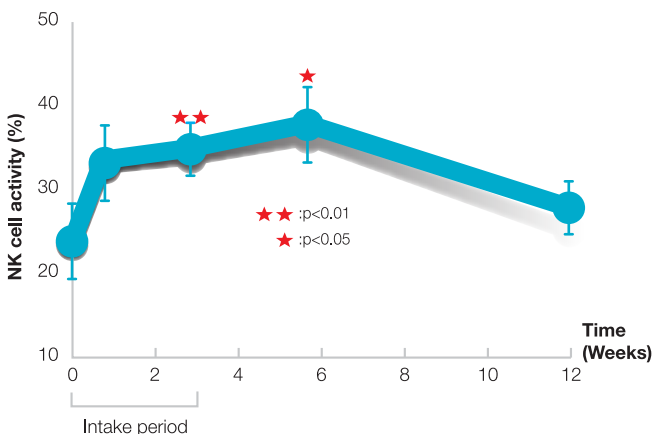
Improvement of constipation  
82.2%

Source: Study in 24 hospitals in Japan (1992)

## 4) Boosts the immune system

### Drinking Yakult increases NK cell (immune cell) activity that has been reduced

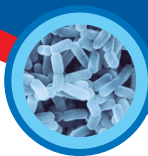
#### Changes in NK cell activity as a result of intake of Shirota strain



Source: Nagao, F., et al (2000)

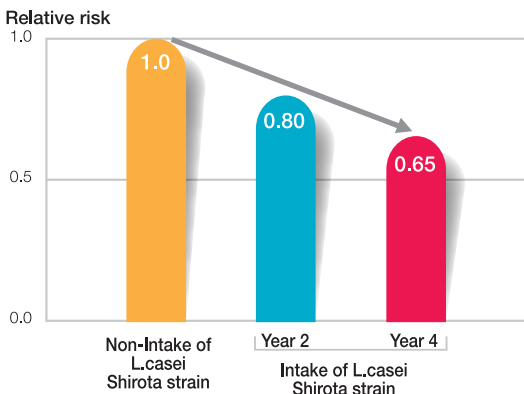
#### Note:

The lower the NK cell activity, the more likely a person is to develop cancer.  
Source: Imai, K., et al. (2000) – study conducted over period of 11 years in a total of 3,500 people.



## 5) Reduction of the risk of cancer

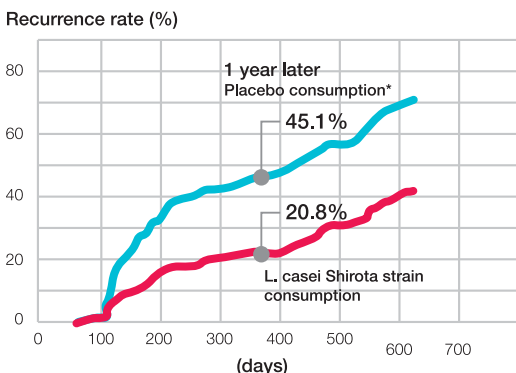
### Reduction of the risk of colon and rectum cancer by continuous intake of L.casei Shirota strain



- \* Level of risk when the incidence of polyps prone to become cancerous for those who did not drink beverage containing L.casei Shirota strain is set at 1.
- \* Suppression the development of polyps prone to become cancerous.

Source: Ishikawa H, et al. (2005)

### Suppression of recurrence of superficial bladder cancer by consumption of L. casei Shirota strain



- \* Placebo has the same taste and appearance but without active ingredients.
- \* Reduces the recurrence rate to less than half.

Source: Aso Y, et al (1995)



## Cultured Milk Drink Yakult Ace

### Nutrition Information

Serving size: 80ml

	Per serving	Per 100ml
<b>Energy</b>	48 kcal	60 kcal
<b>Protein</b>	1.0 g	1.3 g
<b>Fat</b>	0 g	0 g
<b>Carbohydrates</b>	11.2 g	14.0 g
- Total sugar	11.2 g	14.0 g
<b>Vitamin D</b>	1.0 µg	1.3 µg

\*High in Vitamin D.



## Cultured Milk Drink Yakult Ace Light

### Nutrition Information

Serving size: 80ml

	Per serving	Per 100ml
<b>Energy</b>	45 kcal	56 kcal
<b>Protein</b>	1.0 g	1.3 g
<b>Fat</b>	0 g	0 g
<b>Dietary fibre</b>	1.4 g	1.8 g
<b>Sodium</b>	12 mg	15 mg
<b>Cholesterol</b>	0 mg	0 mg
<b>Carbohydrates</b>	9.5 g	11.9 g
<b>Total sugar</b>	5.0 g	6.3 g
- Sucrose	3.2 g	4.0 g
- Lactose	1.6 g	2.0 g
- Glucose	0.2 g	0.3 g

\*55% less sugar compared with Yakult Ace.

# The Science of Probiotics

## Why Yakult?

### 1) Trusted Brand



Halal



HACCP



Veterinary  
Inspected



Shiota Strain officially recognized as Probiotic bacteria under Food Act & Regulations, Ministry of Health (MOH).



Official Probiotic Drink of  
National Sports Institute (ISN)



Official Probiotic Drink of  
Malaysian Deaf Sports Association  
(MSDeaf)



#### FOSHU logo

Yakult in Japan is acknowledged as a "Food for Specified Health Uses" (FOSHU) by the Ministry of Health, Labour and Welfare, Japan.



Available in 40 countries and territories worldwide and 40 million people drink Yakult everyday for good health.

### 2) High Quality



- More than 30 billion live Shiota Strain per bottle
- No colourings / preservatives / conditioners / stabilizers
- Scientifically proven health benefits



## Yakult Factory in Seremban, Negeri Sembilan.



### Yakult® Factory

No. 276, Jalan Haruan 1, Oakland Industrial Park,  
70300 Seremban, Negeri Sembilan Darul Khusus.

Tel: 06-601 2020

Fax: 06-601 3939

## Factory Tour Available Bookings are Essential



### OPENING DAYS

Monday to Friday  
& Selected Saturdays



### TIME

8.30am - 3.30pm  
(1½ hours per session)



### COST

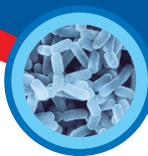
Free of  
Charge



### CAPACITY

Maximum 120 pax  
per session

## Frequently Asked Questions



### 1) Who can drink?

**Answer:** Yakult is recommended for all age groups including babies who have started to wean and pregnant women.

### 2) How many bottles should I drink?

**Answer:** For babies who have started to wean, you can introduce 1 teaspoon of Yakult diluted with water. For children, adults and elderly, we recommend at least one bottle a day. Although its safe to take more, but Yakult isn't meant to be a thirst quencher. What's important is to drink Yakult regularly everyday for long term health benefits.

### 3) When is the best time to drink?

**Answer:** Whenever you like! Tests have proven that the Shirota Strain can reach the intestine alive in high numbers, no matter whether you drink Yakult in the morning or at night, before or after meal.

### 4) How is Yakult different from Yoghurt?

**Answer:** Yakult contains at least 30 billion unique probiotic Shirota Strain which has been scientifically proven to deliver health benefits. It meets the requirements in Food Act & Regulations to be labelled as Probiotic. Yoghurt do not usually contain probiotics. Check the label for the word Probiotics.

### 5) How long can Yakult last after you take it out from the fridge?

**Answer:** It is not a problem to keep Yakult at room temperature for a while, even up to 4 - 8 hours.

### 6) Sometimes there are sediments at the bottom of the bottle, what are they?

**Answer:** They are the natural settling of skimmed milk solids. This happens occasionally as we do not add any food stabilizers in Yakult. So, shake before you drink!

# Trusted Global Brand

Today, Yakult is available in 40 countries and territories worldwide and 40 million people drink Yakult everyday for good health.



## Europe

- Austria
- Belgium
- Denmark
- France
- Germany
- Ireland
- Italy
- Luxembourg
- Netherlands
- Spain
- Switzerland
- United Kingdom
- Republic of Malta

## Asia Pacific

- Australia
- Brunei
- China (Beijing, Guangzhou, Shanghai)
- Hong Kong
- India
- Indonesia
- Japan
- Korea
- Malaysia
- Myanmar
- Philippines
- Singapore
- Taiwan
- Thailand
- New Zealand
- Vietnam

## Americas

- Belize
- Brazil
- Canada
- Mexico
- Uruguay
- United States of America

## Middle East:

- Oman
- Qatar
- Bahrain
- Kuwait
- United Arab Emirates (UAE)

# Yakult®

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