

The background is a vibrant red color. Scattered throughout are various stylized illustrations of microorganisms. In the top left, there are several yellow, worm-like bacteria with pink outlines and small yellow dots inside. To their right is a large, red, spiky virus-like particle. Below these are several small, dark blue oval shapes. In the bottom left, there are blue, rod-shaped bacteria. In the bottom right, there is a chain of pink, oval-shaped bacteria with dark brown centers. The title text is centered in the middle of the image.

The Little Book of Bacteria

Yakult

We're BIG fans of bacteria – and you should be too!

Without bacteria there would be no life on Earth. In fact, they were the first living things on the planet – and, with around four billion years under their belts, they're some of the oldest known life forms.

Today, bacteria are one of the world's most abundant organisms. You'll find them all over - in the air, soil, water, food and your body.

Bacterium

= singular i.e. one bacterium

Bacteria

= plural i.e. two or more



How did we discover bacteria?

By accident! For millions of years bacteria went about their business completely unseen. Then, in the late 17th century they were 'discovered' by Dutch cloth merchant Antonie van Leeuwenhoek after developing a microscope capable of magnifying objects over 200 times.

Yakult

Did you know?

- In the right conditions, bacteria can reproduce every 20 minutes!
- In just one night a single bacterium could produce one billion new bacteria.
- We have at least as many bacterial cells as we do human cells.
- There are more bacteria in your large intestines than there are humans on this planet.
- A teaspoon of soil contains more than 100 million live bacteria.
- Bacteria have been on Earth for over 3 billion years, long before humans and dinosaurs.

Bacteria are tiny, single-celled organisms



Found everywhere on Earth, including in and on the human body. While some bacteria can cause disease, many are harmless and some are even considered beneficial.

Yakult

Types of Bacteria

There are millions of different types of bacteria. Some look like sausages, some like footballs, others like a string of beads. Bacteria can sometimes be classed as good, bad or neutral depending on their role they play in our lives and on Earth.



Good bacteria: Many bacteria, like those in the digestive system, play a role in key processes such as digestion, nutrient absorption, and protecting us against harmful bacteria.



Harmful bacteria: Some bacteria can cause infection and disease. It is important to limit the spread of harmful bacteria.



Neutral bacteria: Many bacteria are considered 'neutral' and have no apparent positive or negative effect on organisms.

Did you know?

Bacteria are super fast – they can travel 100x their body length in one second.



Yakult



Key Characteristics

Bacteria cells are all....

Unicellular

Bacteria are made up of just one cell.

Prokaryotic

Bacteria cells do not have a nucleus or other membrane-bound organelles.

Microscopic

Bacteria are very small and can only be seen with a microscope.

Ubiquitous

Bacteria can be very resilient and are found almost everywhere, including very harsh conditions such as glaciers or deep within the Earth.

Diverse

There are millions of different types of bacteria.

Reproduce rapidly

Bacteria can reproduce quickly through a process called binary fission.



To survive, most bacteria like warm, damp places where there's lots to eat, like in and on our bodies.

Each person has about **38,000,000,000,000** bacteria living on and inside them. They live between toes, in mouths, up noses and under fingernails.

But, most bacteria live inside our bodies – in the digestive system or gut – a long tube which runs all the way from the mouth to the bottom.

Where can I find bacteria on my body?

- **Skin:** Good bacteria on our skin act as a protective barrier against harmful pathogens.
- **Mouth:** Good bacteria work against bad bacteria (which can cause smelly breath and tooth decay).
- **Gut:** Good gut bacteria help digestion run smoothly and support immunity.



Yakult

Get to know your Gut

The digestive system, or **gut**, is **one long tube** that starts at the **mouth** and ends at the **bottom**. It has lots of twists and turns.

This complex collection of organs works together to make sure you're getting the nutrients, vitamins and minerals you need.

Your gut keeps your whole body running smoothly. It's easy to take it for granted, but it's home to the largest part of your immune system.

The community of trillions of bacteria living in our gut is called the **gut microbiota** and it has an important role to play to keep us healthy.



Yakult

What is the role of your gut bacteria?

- **Immune system support:** Your gut and your immune system are closely linked. Over 70% of your immune system is located in the gut.
- **Fermentation of fibres:** Gut bacteria break down plant fibres from foods like fruits and veggies to create important compounds.
- **Vitamin synthesis:** Did you know our gut can produce vitamins? Whilst we can get them from the food we eat, our gut can make vitamin K and B vitamins to support our health.
- **Nutrient absorption:** Gut bacteria help our body break down food to produce and absorb important vitamins and minerals. So your body gets what it needs to function properly.
- **Control of undesirable bacteria:** Bacteria can be pretty selfish and don't like to share. So by taking up space, the friendly bacteria prevent harmful bacteria from growing.



Yakult

Did you know?

There are estimated **38 trillion** microbial cells in our body, which include bacteria, viruses and fungi. This is more than the 30 trillion human cells. However, these microbes only make up 1 to 3% of our body mass due to their small size.

.....

To support the bacteria in the gut, it's important to...

S

leep well

Rest helps your gut bacteria and you feel your best

M

ove your body

Walking, dancing, and playing keep your gut bacteria happy

i

ntake rainbow foods

Fruits, veggies, wholegrains, legumes in all different colours

L

iquids for hydration

Water helps everything run smoothly

E

ase stress

Relax and practice calm habits

Yakult

Bacteria and Food

Despite their simple structure, bacteria are incredibly diverse and adaptable.

Some bacteria are used in the production and preservation of certain foods like:

Yoghurt

Lactobacillus bacteria ferment lactose (milk sugar), producing lactic acid, which thickens the milk and gives yogurt its characteristic tangy taste and texture.

Cheese

Bacteria break down milk proteins and fats, contributing to the unique textures and flavours of different cheeses.

Fermented Foods

Bacteria are also involved in the production of foods like sauerkraut, kimchi, and sourdough bread.



Yakult



Did you know?

Less than 1% of bacteria can make us ill. Most bacteria are actually pretty friendly.

BUT, bad bacteria can also get into food, and that's bad news. They can cause food to spoil (go off) and some can even cause food poisoning.

To help limit the spread of bad bacteria it's important to wash your hands before preparing food, check food before you eat it, store food correctly and keep things clean.



Yakult

Put your knowledge to the test!

Answer the questions and find the words in
the word search.

1. Bacteria are small. What instrument can be used to see them?
2. Where can we find most of the bacteria in our bodies?
3. Some bacteria are bad. What can they cause if spread?
4. Bacteria are very resilient. What kinds of environments can they survive in?
5. Which prehistoric animals are bacteria older than?



1. Microscope, 2. Gut, 3. Disease, 4. Hostile, 5. Dinosaur

For more information

visit our website:

www.yakult.co.uk

or email:

info@yakult.co.uk

The Yakult logo is displayed within a white rounded rectangular button. The word "Yakult" is written in a bold, black, sans-serif typeface. The letter "Y" is notably larger and more stylized than the other letters, which are in a standard weight. The entire logo is centered horizontally within the button.

Yakult

© 2025 Copyright Yakult UK Limited