

What are microbes?

Small living organisms found almost everywhere on earth, even inside volcanoes! Some are helpful to humans, some are harmful but most are harmless. There are 3 main types:

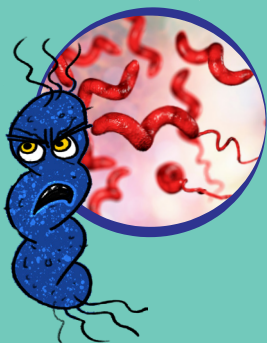


1 Bacteria

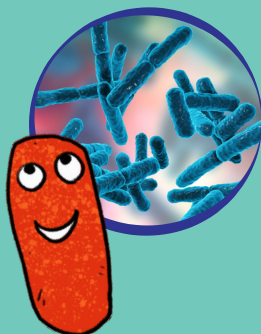
Bacteria are single-celled organisms that can multiply rapidly, doubling every 20 minutes. As they grow, they can release toxins that cause disease. Some bacteria are harmful. Other bacteria are useful, such as *Lactobacillus* in the food industry.

DID YOU KNOW?
E.coli can help break down food in our guts. But some strains can cause harm through food poisoning.

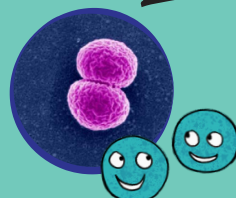
Spirals



Rods



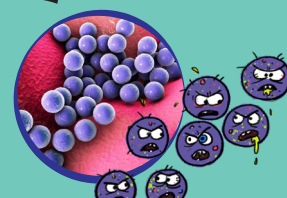
Balls



Pairs
(Diplococci)



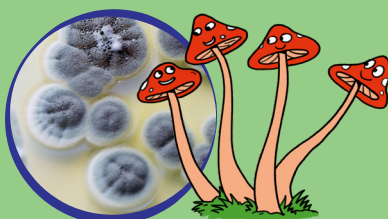
Chains
(Streptococci)



Clusters
(Staphylococci)

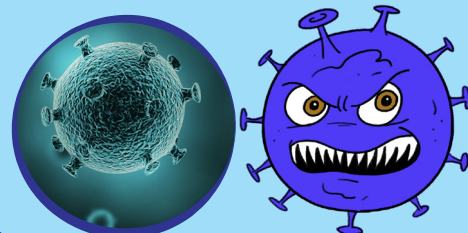
2 Fungi

Fungi are the largest microbes. They exist in air, plants and water. Some are deadly, others are useful. *Penicillium* produces the antibiotic penicillin, used to treat bacterial infections.



3 Viruses

Viruses are the smallest microbes. They need a 'host' cell to live in. They can even live in bacteria! Most viruses make us sick. Common types include flu, chicken pox and coronavirus. They are spread easily between people.



DID YOU KNOW?

Our guts host 1-2 kg of bacteria, to help digest food.

DID YOU KNOW?

Yeast is a type of fungus and is used in bread-making. To grow, yeast needs moisture, food and some warmth. As yeast ferments, it gives off gas bubbles which make the bread expand. Microbes really are a diverse lot!