

What are microbes?

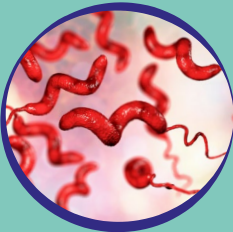
Small living organisms found almost everywhere on earth, even inside volcanoes! Some are helpful to humans, some are harmful but most are harmless. There are 3 main types:

1 Bacteria

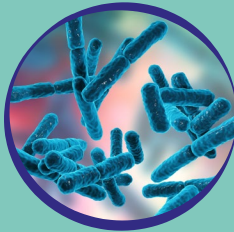
Bacteria are single-celled organisms that can multiply rapidly, doubling every 20 minutes. As they grow, they can release toxins that cause disease. Some bacteria are harmful. Other bacteria are useful, such as *Lactobacillus* in the food industry.

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

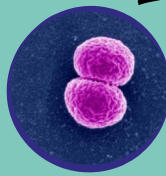
Spirals



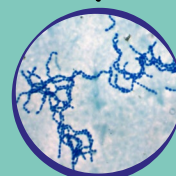
Rods



Balls



Pairs
(*Diplococci*)



Chains
(*Streptococci*)



Clusters
(*Staphylococci*)

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!

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.

