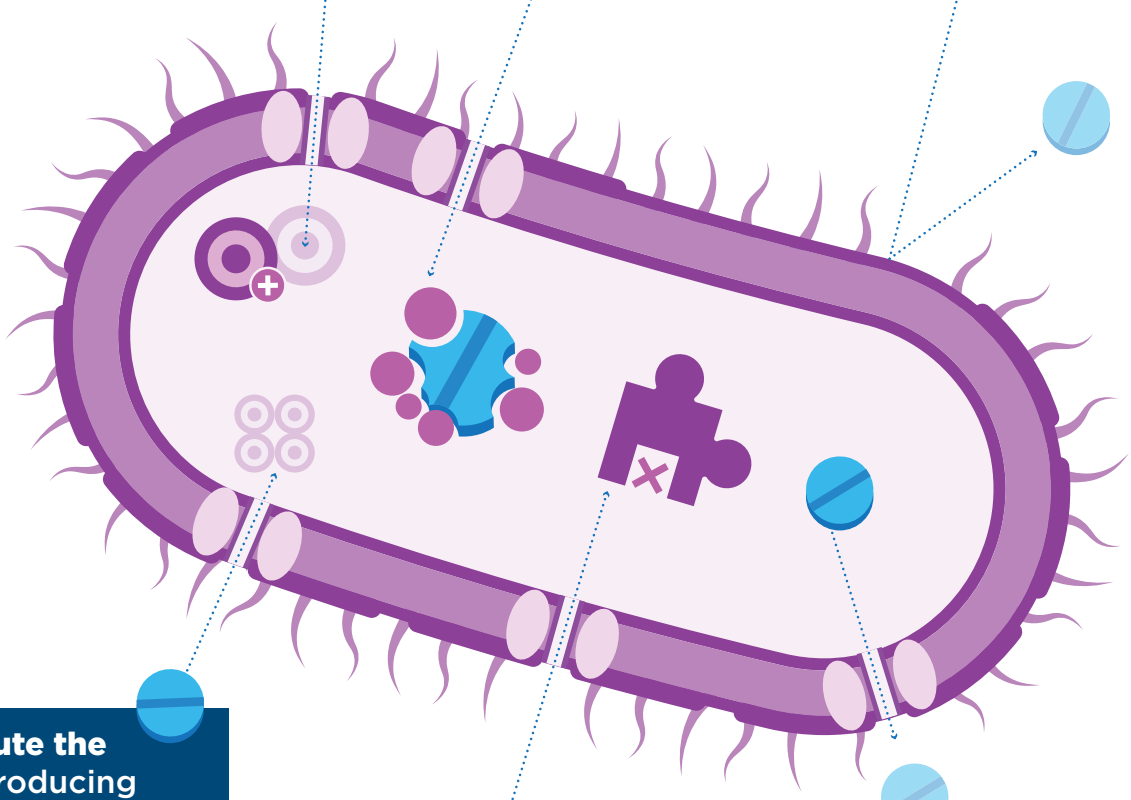
How Bacteria and Fungi Fight Back Against Antibiotics and Antifungals

Antibiotics and antifungals fight germs (bacteria and fungi). But germs can fight back and find new ways to survive. Their defense strategies are called resistance mechanisms. Only germs, not people, become resistant to antibiotic and antifungal drugs.

Germs develop new cell processes that avoid using the drug's target.

Bacteria can change or destroy the antibiotics with enzymes, or proteins that break down the drug.

Germs restrict entry by changing the entryways or limiting the number of entryways.



Germs dilute the drug by producing more targets than the drugs can bind.

Germs change the drug's target so the drug can no longer fit and do its job.

Germs get rid of drugs by using pumps.

For more information on antimicrobial resistance, visit: https://bit.ly/4di6DHm

CDC

Revised November 2024