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Infectious Diseases.

An infectious disease is a disease that can be transmitted or passed from one person to another. Not all diseases are infectious.

Q1. Name two diseases that are not infectious. Heart Malaria and heart disease.

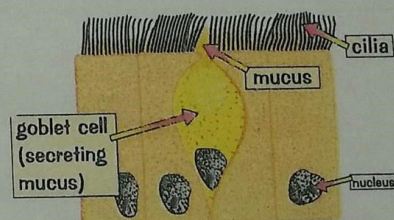
Infectious diseases are caused by microorganisms called pathogens and include bacteria, protozoa, fungi and all viruses. Pathogens can be spread in many different ways:

Water	Some pathogens can be picked up by drinking or bathing in <u>dirty water</u> . E.g. <u>Cholera</u> is a <u>bacterial infection</u> that causes <u>diarrhoea</u> and <u>dehydration</u> . It's spread when <u>drinking water</u> is <u>contaminated</u> with the diarrhoea of other sufferers.
Food	Other pathogens are picked up by <u>eating contaminated food</u> . E.g. <u>Salmonella</u> bacteria cause <u>food poisoning</u> and are found in food that has been <u>kept too long</u> or <u>not cooked properly</u> .
Air	Airborne pathogens are carried in the air in <u>droplets</u> produced when you <u>cough</u> or <u>sneeze</u> — so other people can <u>breathe them in</u> . E.g. the <u>influenza virus</u> that causes <u>flu</u> is spread this way.
Contact	Some pathogens can be picked up by <u>touching</u> contaminated surfaces, including the <u>skin</u> . E.g. <u>athlete's foot</u> is a <u>fungus</u> which makes skin itch and flake off. It's most commonly spread by touching the same things as an infected person, e.g. <u>shower floors</u> and <u>towels</u> .
Body fluids	Some pathogens are spread by <u>body fluids</u> such as <u>blood</u> (e.g. by <u>sharing needles</u> to inject drugs), <u>breast milk</u> (through breast feeding) and <u>semen</u> (through sex). E.g. the <u>HIV virus</u> that causes <u>AIDS</u> (a disease which stops the <u>immune system</u> from working properly) is spread by body fluids.
Animal vectors	<u>Vectors</u> are animals that <u>spread disease</u> . Examples of vectors include: • <u>Anopheles mosquito</u> — it carries the <u>protozoan</u> that causes <u>malaria</u> (a disease that can damage the brain and kidneys or even be fatal). It spreads the disease by <u>biting</u> other organisms. • <u>House fly</u> — it carries the <u>bacterium</u> that causes <u>dysentery</u> (a disease that causes severe <u>diarrhoea</u>). It spreads the disease by carrying the bacteria onto food.

Barriers against pathogens

Physical barriers

1. The skin — undamaged skin is a barrier against pathogens. If the skin is damaged, blood quickly clots to seal cuts and keep the microorganisms out.
2. The respiratory system — the respiratory tract (nasal passage, trachea and lungs) are lined with cilia cells that make mucus. The mucus traps dust and bacteria before they reach the lungs and the cilia hairs push the mucus away from the lungs.



Chemical barriers

1. The eyes — produce a chemical in tears called lysozyme which kills bacteria on the surface of the eye.
2. The stomach — hydrochloric acid in the stomach kills most pathogens, found on the food you eat.

Antibacterial products are called **antiseptics** or **antibiotics**.

Antiseptics