

The World Health Organisation (WHO) describes health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The presence of one disease can lead to a higher susceptibility to other diseases.

<b>Damage to immune system</b>	Makes it easier for other pathogens to cause disease.
<b>Damage to body defences</b>	Barriers and defences are damaged. Pathogens can enter the body.
<b>Damage to organ systems</b>	Organ systems don't work as effectively leading to other diseases.

**Communicable and non communicable diseases**

<b>Communicable</b>	<b>Non-communicable</b>
Caused by pathogens. They can be passed from person to person.	Caused by a fault in genes or by the way we live (lifestyle)

**Health**

**EDEXCEL GCSE HEALTH DISEASE AND MEDICINE part 1**

Pathogens may infect plants or animals and can be spread by direct contact, water or air

<b>Detection and identification of plant diseases (bio HT only)</b>	<b>Detection</b>	<b>Identification</b>  Reference using gardening manual or website, laboratory test for pathogens, diagnostic testing.
	<i>Stunted growth</i>	
	<i>Spots on leaves</i>	
	<i>Area of decay</i>	
	<i>growths</i>	
	<i>Malformed stem/leaves</i>	
	<i>Discolouration</i>	
<i>Presence of pests</i>		

Plants have several ways of defending themselves from pathogens and animals (Biology only)

<b>Physical</b>	<b>Mechanical</b>
Thick waxy layers, cell walls stop pathogen entry	Thorns, curling up leaves to prevent being eaten
<b>Chemical</b>	
Antibacterial and toxins made by plant	

Pathogen	Disease	Symptoms	Method of transmission	Control of spread
Bacteria	<i>cholera</i>	Causes diarrhoea.	Contaminated water	Vaccination, water treatment to remove bacteria.
Bacteria	<i>tuberculosis</i>	Causes lung damage.	Air borne water droplets from coughing.	Isolation of infected person, vaccination.
Fungi	<i>Chalara ash dieback</i>	Leaf loss and bark lesions.	Spores in the air.	Remove/destroy infected trees.
Protists	<i>Malaria</i>	Recurrent fever. Damage to blood and liver.	By an animal vector (mosquitoes).	Prevent breeding of mosquitoes. Use of nets to prevent bites.
Bacteria	<i>Stomach ulcers (Bio only)</i>	Pain in abdomen, damage to stomach lining.	Oral transmission.	60% already carry the bacteria.
Virus	<i>Ebola (Bio only)</i>	Internal bleeding and fever.	Contact with bodily fluids of an infected person.	Isolation of infected person. Vaccination.
Virus	<i>HIV</i>	Initially flu like systems, serious damage to immune system.	Sexual contact and exchange of body fluids.	Anti-retroviral drugs and use of condoms.
Bacteria	<i>Chlamydia</i>	Unusual discharge from genitals or anus, pain when urinating.	Unprotected sex.	Using condoms during sex.

Bacteria may produce toxins that damage tissues and make us feel ill

Viruses	Bacteria (prokaryotes)	Protists (eukaryotes)	Fungi (eukaryotes)
<i>e.g. cold, influenza, measles, HIV, tobacco mosaic virus</i>	<i>e.g. tuberculosis (TB), Salmonella, Gonorrhoea</i>	<i>e.g. dysentery, sleeping sickness, malaria</i>	<i>e.g. athlete's foot, thrush, rose black spot</i>
DNA or RNA surrounded by a protein coat	No membrane bound organelles (no chloroplasts, mitochondria or nucleus). Cell wall. Single celled organisms	Membrane bound organelles. Usually single celled.	Membrane bound organelles, cell wall made of chitin. Single celled or multi-cellular

Pathogens are microorganisms that cause infectious disease

**Pathogens**

**Communicable diseases**

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