Biology

Chapter health and disease

What health mean

- Being healthy does not just mean not sick
- The World Health Organisation says health is a state of complete physical mental and social will being
- this means a person can look physically fit but still be unhealthy if
- the They have mental health problems
- they have social problems

What is a disease

- A disease is when part of body is not working properly

Communicable diseases and non communicable diseases

Communicable diseases

They can spread from one person to another example malaria

Non communicable diseases

these cannot spread between people
example cancer disease

- One disease can make you more likely to get another

if you have one disease your body becomes weaker
This Means you become more easily affected to other diseases

Communicable diseases and pathogens

Pathogens are the microorganisms that cause disease such as

- Virus
- BACteria
- Fungi
- protist

Cholera

- Pathogen is vibrio cholera
- Symptoms are diarrhoea
- it is spread through contaminated water
- the prevention is to use clean water supply

Tuberculosis

- Pathogen name is mycobacterium Tuberculosis
- The symptoms are coughing long damage
- it is spread through air when infected people cough
- the prevention is infected people avoid crowds
- good Hygiene
- sleep alone
- good ventilation at home

Malaria

- So pathogen name is protist
- symptoms are damaged to red blood cells and liver
- it is spread through mosquitoes
- prevention is to use mosquito nest and insect repellent

Chalara ash dieback

- The pathogen is fungus
- the symptoms are leaf loss and bark wounds

- it is spread through wind and movement of infected ash trees
- the prevention is to remove the young infected trees
- Replant different species
- stop moving ash trees between areas

STI sexually transmitted infection

STI spread through sexual contact including intercourse

you need to know HIV and chlamydia

HIV

- HIV is the virus
- viruses must enter host cells to reproduce
- HIV infact and kills white blood cells which are important for immunity
- HIV leads to AIDS when the immune system becomes we can fails
- a person with AIDS become very vulnerable to other infections

How HIV spreads

Through infected body leaf fluids

- Blood
- Semen
- Vaginal fluid

How to reduce spread

- Do not share needles
- medicine and treatment reduce the chance of passing HIV to others

Chlamydia

- Chlamydia is a bacterium but it acts like a virus because it only reproduces inside host cells
- It may cause no symptoms but it can cause infertility in both women and men

How to reduce spread

- screen people so they can be treated
- avoid sexual contact

The body stops pathogen from entry

Physical barriers

- skin blocks pathogen
- hair and mucus in the nose trap particles with pathogen
- cells in trachea and bronchie make mucus to trap pathogen

- other cells have cilia that move the mucus to the throat to be swallowed

Chemical barriers

- Stomach acid hydrochloric acid kills most swallowed pathogen
- tears from eyes contain lysozymes which kills bacteria

These barriers are non specific meaning they work against many types of pathogens

Immune system how the body fight pathogens

- If pathogens enter the body the immune system attacks them
- the main workers are white blood cells

B lymphocytes

- It is a type of white blood cells
- they carry out specific immune response

here is how it works

- Every pathogen has antigens on its surface
- B lymphocytes see the antigen and make the antibodies

- antibodies Lock on to the pathogens so other blood cells can destroy them
- antibodies are specific
- one antibody only works for one type of pathogen
- Once Made antibody spread around the body to attack all matching pathogens