

**SB5a Health and disease**

Word	Pronunciation	Meaning
<b>cause</b>		A factor that, when it changes, makes something else change.
<b>communicable disease</b>		A disease caused by a pathogen that can be passed from an infected individual to others. Also called an infectious disease.
<b>correlation</b>		When two factors change in a similar pattern, we say they are correlated.
<b>disease</b>		Something that causes the body not to work properly.
<b>health</b>		A state of complete physical, social and mental well-being.
<b>immune system</b>	<i>im-youn sis-tem</i>	The system that helps protect the body from harm by diseases, especially communicable diseases.
<b>lifestyle</b>		The way we live, such as our diet, whether we smoke tobacco, and how much exercise we take. Lifestyle can affect whether we develop some diseases.
<b>non-communicable disease</b>		A disease that cannot be passed from individuals to those around them. Examples include inherited diseases and some diseases caused by lifestyle.
<b>pathogen</b>	<i>path-o-jen</i>	A microorganism that causes a communicable disease.

**SB5b Non-communicable diseases**

Word	Pronunciation	Meaning
<b>cirrhosis</b>	<i>si-rO-sis</i>	A disease of the liver, often caused by drinking a large amount of ethanol (alcohol) over a long period of time.
<b>deficiency disease</b>	<i>def-ish-un-see</i>	A disease caused by a lack of a particular nutrient in the body, such as anaemia caused by a lack of iron.
<b>drug</b>		A substance that we take into the body, which affects how the body works.
<b>genetic disorder</b>		A disease caused by faulty alleles of our genes.
<b>malnutrition</b>	<i>mal-new-trish-un</i>	Health problems caused by a diet that contains too little or too much of one or more nutrients.

**SB5c Cardiovascular disease**

Word	Pronunciation	Meaning
<b>body mass index (BMI)</b>		An estimate of how healthy a person's mass is for their height.
<b>cardiovascular disease</b>	<i>car-dee-O-vas-kyoo-lar</i>	A disease in which the heart or circulatory system does not function properly.
<b>heart attack</b>		When the heart stops pumping properly due to a lack of oxygen reaching part of it.
<b>obesity</b>	<i>o-bee-sit-ee</i>	A condition in which someone is overweight for their height and has a BMI above 30.

<b>stent</b>		A small mesh tube used to widen narrowed blood vessels and allow blood to flow more easily.
<b>stroke</b>		Death of brain cells caused by a lack of blood, due to a blockage in a blood vessel in the brain.
<b>waist : hip (waist-to-hip) ratio</b>		A measure of the amount of fat in the body, calculated by dividing the waist measurement by the hip measurement.

## SB5d Pathogens

Word	Pronunciation	Meaning
<b>AIDS (acquired immune deficiency syndrome)</b>		When HIV has damaged a person's immune system, so they are more likely to get secondary infections.
<b>chalara dieback</b>	<i>cal-ar-ra</i>	A communicable disease of ash trees caused by a fungus. It produces lesions of the trunk and branches, and dieback of the top of the tree.
<b>cholera</b>	<i>col-e-ra</i>	A communicable disease caused by a bacterium, which causes extreme diarrhoea.
<b>diarrhoea</b>	<i>dye-a-ree-a</i>	Loose or watery faeces.
<b>haemorrhagic fever</b>	<i>hem-or-raj-ik</i>	A disease that includes a fever (high body temperature) and internal bleeding, such as caused by the Ebola virus.
<b>host</b>		An individual or species that can be infected by a certain pathogen.
<b>HIV (human immunodeficiency virus)</b>		A virus that attacks white blood cells in the human immune system, often leading to AIDS.
<b>malaria</b>	<i>mal-air-ee-a</i>	A dangerous disease, caused by a protist, that causes serious fever, headaches and vomiting and can lead to death.
<b>protist</b>		A kingdom of eukaryotic and mainly single-celled organisms (also called 'protoctists').
<b>secondary infection</b>		An infection due to the immune system being weakened previously by a different pathogen.
<b>tuberculosis (TB)</b>	<i>tyoo-ber-cyoo-IOW-sis</i>	A communicable bacterial disease that infects the lungs.
<b>ulcer</b>	<i>ull-ser</i>	A sore area in the stomach lining which can be caused by a bacterium.
<b>virus</b>		A microbe that multiplies by infecting a cell and taking over the cell's DNA copying processes. Virus particles have no cellular structure and so are not true organisms.
<b>white blood cell</b>		A type of blood cell that forms part of the body's defence system against disease.

**SB5e Spreading pathogens**

Word	Pronunciation	Meaning
epidemic		When many people over a large area are infected with the same pathogen at the same time.
hygiene	<i>hy-jean</i>	Keeping things clean, by removing or killing pathogens.
oral route		When something enters the body through the mouth.
vector	<i>vek-tor</i>	Something that transfers things from one place to another.

**SB5f Virus life cycles**

Word	Pronunciation	Meaning
bacterial lawn plate		A nutrient agar plate covered in a thin film of bacteria.
capsid		The protein coat of a virus.
cross-sectional area (of a cylinder)		The area of a circle cut at right angles through a cylinder. It is calculated as $\pi r^2$ , where $r$ is the radius of the circle.
lysis	<i>lie-sis</i>	When the cell membrane of a cell breaks open, releasing everything inside the cell.
lysogenic pathway	<i>lie-so-jen-ick</i>	The pathway in a virus life cycle where the virus genetic material inserts into the cell's genetic material and is replicated each time the cell divides.
lytic pathway	<i>lit-tick</i>	The pathway where a virus enters a cell, takes over the cell's replication process to produce more viruses, and causes lysis of the cell as the new viruses are released.
nutrient agar		Agar containing nutrients; used for growing cells, such as in bacterial lawn plates.

**SB5g Plant defences**

Word	Pronunciation	Meaning
aseptic techniques		Techniques used to keep out unwanted microorganisms, such as out of cultures.
autoclave		Machine used to sterilise equipment and culture media using pressure and heat.
chemical defence		Use of chemical compounds to defend against attacks by pathogens, such as lysozyme and hydrochloric acid in humans, and poisons and insect repellents in plants.
cuticle		An outer covering that is not made of cells. Plants have a cuticle covering the leaves.
pest		Any unwanted organism, such as animals that damage crop plants.

<b>physical barrier</b>		A barrier that makes it difficult for pathogens to get into the body, such as skin, mucus and cilia in animals, and cuticles and cell walls in plants.
<b>symptom</b>	<i>simp-tom</i>	Something that is suffered when an organism is ill, such as pain, or is a sign of illness, such as a high temperature.

### SB5h Plant diseases

Word	Pronunciation	Meaning
<b>diagnosis</b>		The identification of the cause of a problem.
<b>distribution analysis</b>		Looking at where damaged plants occur, to help identify the cause of damage.
<b>lesion</b>	<i>lee-zshun</i>	An area of damage, such as the cracks in bark caused by chalara dieback fungus in ash trees.
<b>yield (crop)</b>	<i>yeeld</i>	The amount of the harvested part of a crop, such as grain from wheat.

### SB5i Physical and chemical barriers

Word	Pronunciation	Meaning
<b>chemical defence</b>		The use of chemical compounds to defend against attacks. Examples include lysozyme and hydrochloric acid.
<b><i>Chlamydia</i></b>	<i>clam-id-ee-a</i>	A bacterium that causes a sexually transmitted infection.
<b>ciliated cells</b>		A cell that lines certain tubes in the body and has cilia on its surface.
<b>hydrochloric acid</b>		Acid produced by cells lining the stomach, of about pH 2, which destroys many pathogens in food and drink.
<b>lysozyme</b>		An enzyme produced in tears, saliva and mucus, which damages pathogens.
<b>mucus</b>	<i>myou-kus</i>	A sticky substance secreted by cells that line many openings to the body.
<b>physical barrier</b>		A structure that stops something from entering a certain area. For example, the body has physical barriers, such as the skin, that stop microbes from getting inside the body.
<b>screening</b>		Tests on samples of body fluids to check if people have a certain condition, e.g. an STI.
<b>sexually transmitted infection (STI)</b>		A communicable disease that is passed from an infected person to an uninfected person during sexual activity.

## SB5j Immune system

Word	Pronunciation	Meaning
activate		To make active, such as when a lymphocyte is triggered by a pathogen to start dividing rapidly.
antibody		A protein produced by lymphocytes. It attaches to a specific antigen on a microorganism and helps to destroy it.
antigen		A protein on the surface of a cell. White blood cells are able to recognise pathogens because of their antigens.
herd immunity		When the majority of people in a group are immunised, which provides protection to the few who are not by reducing their chance of meeting an infected person.
immune	<i>im-youn</i>	When a person does not fall ill after infection, because their immune system attacks and destroys the pathogen quickly.
immunisation	<i>im-youn-l-zay-shun</i>	Giving a vaccine that causes an immune response without the person becoming ill, and which will make the person immune to the pathogen.
lymphocyte	<i>lim-fO-site</i>	A type of white blood cell that produces antibodies.
memory lymphocyte		A lymphocyte that remains in the blood for a long time after an infection or vaccination.
MMR		Stands for measles, mumps and rubella. The vaccine given to develop immunity to these diseases.
secondary response		A much more rapid, and larger, production of antibodies to a pathogen when it infects the body again.
vaccine	<i>vack-seen</i>	A mixture containing weakened or inactive pathogens, or antigens from the pathogen. When put into the body it causes an immune response.

## SB5k Antibiotics

Word	Pronunciation	Meaning
antibiotic	<i>an-ti-by-ot-ick</i>	A substance that, when inside the body, either kills bacteria or stops them growing.
clinical trial		Testing of a medicine on people.
colony		A cluster of microorganisms living closely together.
dose		The total amount of something received, such as of a medicine.
inhibit		To stop or slow down a process.
penicillin	<i>pen-i-sill-in</i>	The first kind of antibiotic. It was extracted from a mould (fungus).
pre-clinical testing		Testing a drug before it is tried on humans, including testing on cells or tissues and on other animals.

<b>resistance (to an antibiotic)</b>		When a bacterium is no longer damaged by an antibiotic.
<b>side effect</b>		Unintended effect of a medicine, which may be harmful.

### SB5I Monoclonal antibodies

Word	Pronunciation	Meaning
<b>cancer cell</b>		A cell that continues dividing uncontrollably, causing disease inside the body.
<b>chemotherapy</b>		Use of drugs to treat a disease, such as in the treatment of cancer.
<b>clone</b>		Offspring from asexual reproduction. All the cells in a clone are genetically identical to each other and to the parent's cells.
<b>diagnosis</b>		The identification of the cause of a problem.
<b>hybridoma cell</b>		A cell made by fusing a lymphocyte and a cancer cell.
<b>monoclonal antibodies</b>		Many identical antibodies.
<b>PET scanner</b>		A scanner used to identify the position of radioactive substances inside the body.
<b>platelet</b>		Cell fragments that are important in the clotting mechanism of the blood.
<b>radiotherapy</b>		Use of ionising radiation to treat diseases, such as to kill cancer cells.