Communication

International Baccalaureate · IB Diploma · Sports, Exercise and Health Science · SL · Vocabulary in context

Word	Example
nervous system /ˈnɜːvəs ˈsɪstəm/	The **nervous system** carries fast messages.
central nervous system /ˈsentrəl ˈnɜːvəs ˈsɪstəm/	The brain and spinal cord form the **central nervous system**.
peripheral nervous system /pəˈrɪfərəl ˈnɜːvəs ˈsɪstəm/	The **peripheral nervous system** connects the body to the brain and spinal cord.
somatic nervous system /səˈmætɪk ˈnɜːvəs ˈsɪstəm/	The **somatic nervous system** controls the muscles you choose to move.
autonomic nervous system /ɔːtəˈnɒmɪk ˈnɜːvəs ˈsɪstəm/	The **autonomic nervous system** controls things like heartbeat, without you thinking.
sympathetic /ˌsɪmpəˈθetɪk/	**Sympathetic** activity raises heart rate before a race.
parasympathetic /ˌpærəˌsɪmpəˈθetɪk/	**Parasympathetic** activity helps slow heart rate after exercise.
neuron /ˈnjuːrɒn/	A **neuron** carries nerve signals.
dendrite	A **dendrite** receives signals from other nerve cells.
cell body /sel ˈbɒdi/	The neuron's **cell body** contains its nucleus.
axon /ˈæksɒn/	An **axon** carries signals away from the cell body.
myelin sheath /ˈmaɪəlɪn ʃiːθ/	The **myelin sheath** covers the axon and makes impulses travel faster.

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nodes of Ranvier	Signals jump between the **nodes of Ranvier**, the gaps in the myelin.
motor neuron	A **motor neuron** carries signals towards a muscle.
action potential /ˈækʃn pəˈtenʃl/	An **action potential** travels along the nerve.
resting potential /ˈrestɪŋ pəˈtenʃl/	At **resting potential**, the inside of the neurone is about −70 mV. −70 mV
threshold /ˈθreʃəʊld/	The alarm goes off above a **threshold** temperature.
depolarisation /diːˌpəʊləraɪˈzeɪʃn/	During **depolarisation**, the inside of the nerve becomes less negative.
repolarisation /rɪˌpəʊləraɪˈzeɪʃn/	During **repolarisation**, the inside of the nerve becomes negative again.
synapse /ˈsɪnæps/	A **synapse** is a small gap between two nerve cells.
neurotransmitter /ˈnjuːrətrænsmɪtə/	A **neurotransmitter** crosses the gap between two neurones.
neuromuscular junction /ˌnjuːrəˈmʌskjʊlə ˈdʒʌŋkʃn/	At a **neuromuscular junction**, a nerve passes its signal to a muscle.
acetylcholine /ˈæsɪtɪlkəliːn/	**Acetylcholine** carries the signal across the gap between two neurones.
motor unit	A **motor unit** is one nerve cell and all the muscle fibres it controls.
recruitment /rɪˈkruːtmənt/	Lifting heavier weights needs the **recruitment** of more motor units.

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proprioceptor	A **proprioceptor** tells the brain where your body parts are.
muscle spindle	A **muscle spindle** detects muscle stretch.
golgi tendon organ	A **Golgi tendon organ** senses how hard a tendon is pulled.
reflex /'ri:fleks/	Blinking when something flies at your eye is a **reflex**.
endocrine system /'endəʊkraɪn 'sɪstəm/	The **endocrine system** uses hormones to send messages in the blood.
gland /glænd/	A sweat **gland** makes sweat.
hormone /'hɔ:məʊn/	Insulin is a **hormone**.
adrenaline /ə'drenəlɪn/	**Adrenaline** makes your heart beat faster when you are scared.
insulin /'ɪnsju:lɪn/	**Insulin** lowers the level of sugar in the blood.
glucagon /'glu:kægən/	**Glucagon** raises the level of sugar in the blood.
cortisol /'kɔ:tɪsɒl/	**Cortisol** is a stress hormone.
growth hormone	**Growth hormone** supports growth and tissue repair.
erythropoietin	**Erythropoietin** makes the body produce more red blood cells.
antidiuretic hormone /ˌæntɪˌdjʊ:'retɪk 'hɔ:məʊn/	**Antidiuretic hormone** makes the kidneys save water, so urine is darker.

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cardiovascular system	The **cardiovascular system** transports blood around the body.
double circulation /'dʌbl ˌsɜ:kjʊ'leɪʃn/	Humans have a **double circulation**.
atria /'eɪtrɪə/	The **atria** receive blood returning to the heart.
ventricle /'ventrɪkl/	The left **ventricle** pumps blood to the body.
valve /vælv/	A **valve** in the vein stops blood flowing backwards.
myogenic /ˌmaɪəʊ'dʒenɪk/	Heart muscle is **myogenic**: it beats by itself without a signal from a nerve.
sinoatrial node /sɪ'nəʊtrɪəl nəʊd/	The **sinoatrial node** is the heart's pacemaker: it starts each beat.
atrioventricular node /ˌeɪtrɪˌəʊvən'trɪkjʊlə nəʊd/	The **atrioventricular node** holds the signal back for a moment before passing it on.
purkinje fibre	A **Purkinje fibre** carries the signal quickly through the heart wall.
systole /'sɪstəʊl/	During **systole**, the heart muscle squeezes and pushes blood out.
diastole /'daɪəstəʊl/	During **diastole**, the heart relaxes and fills with blood.
artery /'ɑ:təri/	An **artery** carries blood away from the heart.
capillary /kə'pɪləri/	A **capillary** has walls only one cell thick, so things pass through easily.
vein /veɪn/	A **vein** carries blood back to the heart.

Word	Example
red blood cell /red blʌd sel/	A **red blood cell** has no nucleus, so it has more room for haemoglobin.
haemoglobin /ˌhiːməˈgləʊbɪn/	**Haemoglobin** in red blood cells carries oxygen.
blood pressure /blʌd ˈpreʃə/	**Blood pressure** is the push of blood against the walls of the arteries.
venous return	Muscles squeezing the veins increase **venous return** to the heart.
cardiac output /ˈkɑːdiæk ˈaʊtpʊt/	**Cardiac output** is heart rate times stroke volume.
stroke volume /strəʊk ˈvɒljuːm/	**Stroke volume** is the amount of blood pumped by each beat.
vascular shunt	During exercise, the **vascular shunt** sends more blood to the muscles.
respiratory system	The **respiratory system** exchanges oxygen and carbon dioxide.
alveoli /ˈælvɪəlɪ/	Gas exchange happens in the **alveoli**.
inspiration	During **inspiration**, air enters the lungs.
diaphragm /ˈdaɪəfræm/	The **diaphragm** contracts and flattens during breathing in.
expiration	During **expiration**, air leaves the lungs.
spirometer	A **spirometer** measures volumes of air breathed.
tidal volume	**Tidal volume** is the air moved in one normal breath.

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Word	Example
residual volume	**Residual volume** is the air left in the lungs after you breathe out hard.
vital capacity	**Vital capacity** is the most air you can breathe out after a deep breath in.
minute ventilation /ˈmɪnɪt ˌventɪˈleɪʃn/	**Minute ventilation** is how much air you breathe in one minute.
diffusion /dɪˈfjuːʒn/	The smell of perfume spreads across a room by **diffusion**.
chemoreceptor /ˌkiːməʊˈreseptə/	A **chemoreceptor** detects chemicals, such as carbon dioxide in the blood.
homeostasis /ˌhəʊmiːəˈstɑːsɪs/	Sweating is part of **homeostasis**: it keeps body temperature steady.
negative feedback /ˈnegətɪv ˈfiːdbæk/	**Negative feedback** brings body temperature back to normal.
receptor /rɪˈseptə/	The skin has a **receptor** for heat.
effector /ɪˈfektə/	A muscle is an **effector**.
hypothalamus /ˌhaɪpəʊˈθælæməs/	The **hypothalamus** in the brain checks the water level of the blood.
vasodilation /ˌvæsədɪˈleɪʃn/	**Vasodilation** makes your skin red when you are hot.
vasoconstriction /ˌvæsəkənˈstrɪkʃn/	**Vasoconstriction** makes your skin pale when you are cold.
acclimatisation	After two weeks in a hot country, **acclimatisation** makes exercise easier.