| | | |
|---|---|---|
| T1<br>nervous system | T1<br>central nervous system | T1<br>peripheral nervous system |
| T1<br>somatic nervous system | T1<br>autonomic nervous system | T1<br>sympathetic |
| T1<br>parasympathetic | T1<br>neuron | T1<br>dendrite |

| | | |
|---|---|---|
| T1<br>The nerves and associated structures outside the brain and spinal cord. | T1<br>The brain and spinal cord, which process information and coordinate responses. | T1<br>The network of nerve cells and supporting structures that detects information, coordinates responses and controls body functions. |
| T1<br>The autonomic division that prepares the body for action. | T1<br>The part of the nervous system that controls involuntary functions such as heart rate. | T1<br>The part of the peripheral nervous system that controls voluntary movement. |
| T1<br>A short branch of a neuron that receives signals. | T1<br>A nerve cell that carries electrical impulses. | T1<br>The autonomic division that supports rest and recovery. |

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|---|---|---|
| T1<br>cell body | T1<br>axon | T1<br>myelin sheath |
| T1<br>nodes of Ranvier | T1<br>motor neuron | T1<br>action potential |
| T1<br>resting potential | T1<br>threshold | T1<br>depolarisation |

| | | |
|---|---|---|
| T1<br><br>An insulating layer around many axons that increases the speed of nerve impulse transmission. | T1<br><br>A long projection of a neuron that carries electrical impulses away from the cell body. | T1<br><br>The part of a neuron that contains the nucleus. |
| T1<br><br>A brief reversal of the charge across a neuron or muscle membrane that carries a signal. | T1<br><br>A neuron that carries impulses from the central nervous system to muscle. | T1<br><br>Gaps in the myelin sheath where an impulse is regenerated. |
| T1<br><br>The inside of a membrane becoming less negative as sodium ions enter. | T1<br><br>A boundary value at which a specified effect begins or a decision changes. | T1<br><br>The charge across a membrane when it is not sending an impulse, about -70 mV in a neuron. |

| | | |
|---|---|---|
| T1<br>repolarisation | T1<br>synapse | T1<br>neurotransmitter |
| T1<br>neuromuscular junction | T1<br>acetylcholine | T1<br>motor unit |
| T1<br>recruitment | T1<br>proprioceptor | T1<br>muscle spindle |

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|---|---|---|
| T1<br><br>A chemical released by a neuron that transmits a signal across a synapse by binding to receptors on a target cell. | T1<br><br>A junction through which a neuron communicates with another cell, usually using a chemical transmitter. | T1<br><br>The membrane returning towards its resting charge as potassium ions leave. |
| T1<br><br>One motor neuron and all the muscle fibres it controls. | T1<br><br>A neurotransmitter released at neuromuscular junctions and at many other synapses. | T1<br><br>The specialised synapse through which a motor neurone signals to a muscle fibre. |
| T1<br><br>A stretch receptor inside a muscle that detects changes in length. | T1<br><br>A sensory receptor that detects body position and movement. | T1<br><br>How many motor units are active (small units are usually recruited first, then larger ones). |

| | | |
|---|---|---|
| T1<br>golgi tendon organ | T1<br>reflex | T1<br>endocrine system |
| T1<br>gland | T1<br>hormone | T1<br>adrenaline |
| T1<br>insulin | T1<br>glucagon | T1<br>cortisol |

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|---|---|---|
| T1<br>The glands and tissues that release hormones into the blood to coordinate body functions. | T1<br>A fast, automatic response that does not need the brain to decide. | T1<br>A receptor at the muscle-tendon junction that detects tension. |
| T1<br>A hormone released by the adrenal medulla that prepares the body for rapid action during stress or excitement. | T1<br>A chemical messenger released by a cell or gland that affects target cells with suitable receptors. | T1<br>An organ or group of cells that produces and releases a substance. |
| T1<br>A steroid stress hormone that raises blood glucose and supports fuel use. | T1<br>A hormone from pancreatic alpha cells that helps raise blood glucose concentration. | T1<br>A hormone produced by pancreatic beta cells that helps lower blood glucose concentration. |

| | | |
|---|---|---|
| T1<br>growth hormone | T1<br>erythropoietin | T1<br>antidiuretic hormone |
| T1<br>cardiovascular system | T1<br>double circulation | T1<br>atria |
| T1<br>ventricle | T1<br>valve | T1<br>myogenic |

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|---|---|---|
| T1<br>A hormone that increases water reabsorption in the kidneys, helping regulate body water balance. | T1<br>A kidney hormone that stimulates red blood cell production. | T1<br>A pituitary hormone that promotes tissue growth and repair. |
| T1<br>The two upper heart chambers, which receive blood. | T1<br>A system in which blood passes through the heart twice in a complete journey through the lungs and body. | T1<br>The heart, blood vessels and blood, which transport materials around the body. |
| T1<br>Starting within the muscle itself, as the heartbeat does. | T1<br>A flap of tissue that keeps blood flowing in one direction. | T1<br>A lower heart chamber, which pumps blood out of the heart. |

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|---|---|---|
| T1<br>sinoatrial node | T1<br>atrioventricular node | T1<br>purkinje fibre |
| T1<br>systole | T1<br>diastole | T1<br>artery |
| T1<br>capillary | T1<br>vein | T1<br>red blood cell |

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|---|---|---|
| T1<br><br>A specialised fibre that spreads the impulse through the ventricle walls. | T1<br><br>A group of specialised cells that delays and conducts electrical excitation from the atria toward the ventricles. | T1<br><br>A group of specialised cells in the right atrium that normally initiates the heart's electrical rhythm. |
| T1<br><br>A thick-walled vessel that carries blood away from the heart at high pressure. | T1<br><br>The relaxation phase of a heart chamber's cycle, during which it can fill with blood. | T1<br><br>The contraction phase of a heart chamber's cycle. |
| T1<br><br>Blood cells specialised to carry oxygen using haemoglobin. | T1<br><br>A blood vessel that carries blood towards the heart. | T1<br><br>A very small blood vessel with thin walls that allow exchange between blood and tissues. |

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|---|---|---|
| T1<br>haemoglobin | T1<br>blood pressure | T1<br>venous return |
| T1<br>cardiac output | T1<br>stroke volume | T1<br>vascular shunt |
| T1<br>respiratory system | T1<br>alveoli | T1<br>inspiration |

| | | |
|---|---|---|
| T1<br>The volume of blood flowing back to the heart. | T1<br>The force of blood on the artery walls, given as systolic over diastolic pressure; a typical resting value is about 120/80 mmHg. | T1<br>The iron-containing protein in red blood cells that binds and transports oxygen. |
| T1<br>Redirection of blood towards active muscles by widening and narrowing vessels. | T1<br>The volume of blood pumped by one ventricle in a single heartbeat. | T1<br>The volume of blood the heart pumps per minute: heart rate times stroke volume. |
| T1<br>Breathing in. | T1<br>Tiny air sacs in the lungs where gases are exchanged between air and blood. | T1<br>The airways and lungs, which exchange oxygen and carbon dioxide with the air. |

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|---|---|---|
| T1<br>diaphragm | T1<br>expiration | T1<br>spirometer |
| T1<br>tidal volume | T1<br>residual volume | T1<br>vital capacity |
| T1<br>minute ventilation | T1<br>diffusion | T1<br>chemoreceptor |

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|---|---|---|
| T1<br>A device that measures the volume of air breathed in and out. | T1<br>Breathing out. | T1<br>The dome-shaped muscle under the lungs, which flattens during inspiration. |
| T1<br>The largest volume of air that can be breathed out after a maximal breath in. | T1<br>The air left in the lungs after a maximal breath out. | T1<br>The volume of air moved in one normal breath. |
| T1<br>A receptor that detects chemical changes, such as carbon dioxide or pH in the blood. | T1<br>The net movement of particles from higher to lower concentration due to their random motion. | T1<br>The volume of air breathed per minute: tidal volume times breathing frequency. |

| | | |
|---|---|---|
| T1<br>homeostasis | T1<br>negative feedback | T1<br>receptor |
| T1<br>effector | T1<br>hypothalamus | T1<br>vasodilation |
| T1<br>vasoconstriction | T1<br>acclimatisation | T2<br>water balance |

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|---|---|---|
| T1<br><br>A cell or molecule that detects a stimulus or binds a specific signalling molecule to initiate a response. | T1<br><br>A control process in which a change triggers responses that oppose that change. | T1<br><br>Maintaining a relatively stable internal environment despite external or internal changes. |
| T1<br><br>Widening of blood vessels, which can increase blood flow through them. | T1<br><br>A brain region that helps regulate homeostasis and links nervous control with hormonal signalling. | T1<br><br>A muscle, gland or other structure that carries out a response to a stimulus. |
| T2<br><br>The match between fluid taken in and fluid lost. | T1<br><br>Gradual adjustment of the body to a new environment such as heat or altitude. | T1<br><br>The narrowing of blood vessels due to contraction of muscle in their walls. |

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|---|---|---|
| T2<br>sweat rate | T2<br>digestion | T2<br>absorption |
| T3<br>acute response | T3<br>training adaptation | T3<br>steady state |
| T3<br>submaximal | T3<br>maximum heart rate | T3<br>stroke volume |

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| T2<br><br>Movement of digested nutrients across the intestinal lining into the body. | T2<br><br>The breakdown of large, insoluble food molecules into smaller, soluble molecules that can be absorbed. | T2<br><br>The amount of sweat produced per unit time. |
| T3<br><br>A period in which oxygen supply meets demand and measures such as heart rate level off. | T3<br><br>A longer-term change in the body that develops through repeated training sessions. | T3<br><br>An immediate or short-term change in the body during or soon after exercise. |
| T3<br><br>The volume of blood pumped by one ventricle in a single heartbeat. | T3<br><br>The highest heart rate a person can reach during all-out exercise. | T3<br><br>Below the highest intensity a person can reach. |

| | | |
|---|---|---|
| T3<br>venous return | T3<br>systolic pressure | T3<br>diastolic pressure |
| T3<br>arteriovenous oxygen difference | T3<br>Bohr shift | T3<br>minute ventilation |
| T3<br>ventilatory threshold | T3<br>fatigue | T3<br>peripheral fatigue |

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|---|---|---|
| T3<br>Arterial blood pressure while the ventricles relax. | T3<br>Arterial blood pressure while the ventricles contract. | T3<br>The volume of blood flowing back to the heart. |
| T3<br>The volume of air breathed per minute: tidal volume times breathing frequency. | T3<br>Haemoglobin releasing oxygen more easily at higher carbon dioxide, acidity or temperature. | T3<br>The difference in oxygen content between arterial and venous blood, showing how much tissues extract. |
| T3<br>A loss of force arising within the muscle. | T3<br>crack growth and failure under repeated loads below yield | T3<br>The exercise intensity at which ventilation starts to rise faster than oxygen uptake. |

| | | |
|---|---|---|
| T3<br>central fatigue | T3<br>delayed-onset muscle soreness | T3<br>recovery |
| T3<br>active recovery | T3<br>supercompensation | T3<br>specificity |
| T3<br>progressive overload | T3<br>reversibility | T3<br>individual difference |

| | | |
|---|---|---|
| T3<br>The return of the body towards its resting state after exercise. | T3<br>Muscle pain that peaks a day or two after unaccustomed exercise. | T3<br>A loss of force from reduced drive by the nervous system. |
| T3<br>The principle that training adaptations match the type of training done. | T3<br>Fitness rising above its starting level after training and rest. | T3<br>Light exercise after hard effort, used to help recovery. |
| T3<br>The principle that people respond differently to the same training. | T3<br>The principle that fitness gains fade when training stops. | T3<br>Gradually raising training demand so the body keeps adapting. |

| | | |
|---|---|---|
| T3<br>heart rate reserve | T3<br>rating of perceived exertion | T3<br>percentage of maximal oxygen uptake |
| T3<br>continuous training | T3<br>interval training | T3<br>fartlek |
| T3<br>resistance training | T3<br>plyometrics | T3<br>circuit training |

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| T3<br>Exercise intensity given as a share of a person's highest oxygen uptake. | T3<br>A person's own score for how hard exercise feels. | T3<br>Maximum heart rate minus resting heart rate. |
| T3<br>Continuous running with unstructured changes of pace. | T3<br>Repeated work periods separated by planned rest or easy periods. | T3<br>Sustained exercise without rest intervals. |
| T3<br>A series of different exercise stations done in order. | T3<br>Jumping and bounding exercises that train the stretch-shortening cycle. | T3<br>Exercise against a load to build strength, power or muscular endurance. |

| | | |
|---|---|---|
| T3<br>hypertrophy | T3<br>periodisation | T3<br>macrocycle |
| T3<br>mesocycle | T3<br>microcycle | T3<br>taper |
| T3<br>bradycardia | T3<br>mitochondria | T3<br>myoglobin |

| | | |
|---|---|---|
| T3<br>The long-term plan, often a whole season or year. | T3<br>Dividing training into planned phases to peak at the right time. | T3<br>An increase in muscle size. |
| T3<br>A planned reduction in training load before competition. | T3<br>A short training block, usually about a week. | T3<br>A block of about 3 to 6 weeks with one main aim. |
| T3<br>An oxygen-storing protein in muscle. | T3<br>Organelles in eukaryotic cells where most aerobic respiration and ATP production occur. | T3<br>A resting heart rate below 60 beats per minute. |

| | | |
|---|---|---|
| T3<br>neural adaptation | T3<br>lactate threshold | T3<br>functional overreaching |
| T3<br>overtraining syndrome | T3<br>partial pressure of oxygen | T3<br>erythropoietin |
| T3<br>heat acclimatisation | T3<br>hypothermia | T4<br>base of support |

| | | |
|---|---|---|
| T3<br><br>A short planned overload that dips performance before it improves with rest. | T3<br><br>The exercise intensity at which blood lactate starts to rise sharply. | T3<br><br>Improved muscle activation by the nervous system, without a change in muscle size. |
| T3<br><br>A kidney hormone that stimulates red blood cell production. | T3<br><br>The pressure exerted by oxygen alone within a gas mixture. | T3<br><br>Long-lasting loss of performance from too much training and too little recovery. |
| T4<br><br>The area beneath a body enclosed by its points of contact with the supporting surface. | T3<br><br>A dangerous fall in core temperature, below about 35 °C. | T3<br><br>Adjustment to repeated heat exposure, such as earlier sweating and higher plasma volume. |

| | | |
|---|---|---|
| T4<br>impulse | T4<br>plane | T4<br>axis |
| T4<br>motor unit | T5<br>impulse | T5<br>lever arm |
| T5<br>torque | T5<br>centre of mass | T5<br>base of support |

| | | |
|---|---|---|
| T4<br><br>A line about which rotation occurs. | T4<br><br>A flat two-dimensional surface extending indefinitely in every direction within it. | T4<br><br>Change in momentum, equal to average net force multiplied by elapsed time. |
| T5<br><br>The perpendicular distance from a pivot or axis to a force's line of action. | T5<br><br>Change in momentum, equal to average net force multiplied by elapsed time. | T4<br><br>One motor neuron and all the muscle fibres it controls. |
| T5<br><br>The area beneath a body enclosed by its points of contact with the supporting surface. | T5<br><br>The point representing an object's or system's mass-weighted average position. | T5<br><br>The turning effect of a force, given by the force multiplied by the perpendicular distance of its line of action from the pivot. |

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|---|---|---|
| T6<br>incidence rate | T6<br>overuse injury | T7<br>personality |
| T7<br>trait theory | T7<br>extrovert | T7<br>introvert |
| T7<br>big Five | T7<br>conscientiousness | T7<br>neuroticism |

| | | |
|---|---|---|
| T7<br><br>The set of characteristics that make a person unique and that influence how they behave across many situations. | T6<br><br>An injury associated with repeated loading over time. | T6<br><br>New cases in a group divided by the exposure or time at risk. |
| T7<br><br>A person who tends to be quieter and prefers less stimulation. | T7<br><br>A person who tends to be outgoing and seeks stimulation. | T7<br><br>The idea that stable personality traits explain behaviour. |
| T7<br><br>A tendency to experience negative emotions and emotional instability. | T7<br><br>A personality dimension concerning organisation, dependability and self-discipline. | T7<br><br>A personality model of openness, conscientiousness, extraversion, agreeableness and neuroticism. |

| | | |
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| T7<br>social learning theory | T7<br>interactionist approach | T7<br>iceberg profile |
| T7<br>mental toughness | T7<br>perfectionism | T7<br>relative age effect |
| T7<br>maturation | T7<br>developmental model of sport participation | T7<br>early specialisation |

| | | |
|---|---|---|
| T7<br><br>A mood pattern with vigour above the population norm and negative moods below it. | T7<br><br>The idea that behaviour comes from personality and situation together. | T7<br><br>The idea that people learn behaviour by observing and copying others. |
| T7<br><br>The over-representation of people born early in the selection year. | T7<br><br>Setting extremely high standards, often with harsh self-evaluation. | T7<br><br>A set of qualities that help an athlete perform consistently under pressure and recover from setbacks. |
| T7<br><br>Focusing on one sport from a young age. | T7<br><br>A model of pathways from sampling sports in childhood to specialising or recreation. | T7<br><br>The body's progress towards its adult state. |

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|---|---|---|
| T8<br>motor skill | T8<br>ability | T8<br>deliberate practice |
| T8<br>selective attention | T8<br>short-term memory | T8<br>long-term memory |
| T8<br>motor programme | T8<br>reaction time | T8<br>hick's law |

| | | |
|---|---|---|
| T8<br>Effortful practice designed to improve a specific weakness. | T8<br>A stable, largely inherited trait that underlies skill, such as balance, coordination, reaction time or strength. | T8<br>A learned ability to bring about a planned result with maximum certainty and the least time and energy. |
| T8<br>A large and lasting store of knowledge and skills. | T8<br>A limited store holding information for a few seconds. | T8<br>Focusing on relevant information and filtering out the rest. |
| T8<br>The rule that choice reaction time rises with the logarithm of the number of choices. | T8<br>The time from a stimulus to the start of a response. | T8<br>A stored plan of movement commands for a skill. |

| | | |
|---|---|---|
| T8<br>anticipation | T8<br>psychological refractory period | T8<br>schema theory |
| T8<br>feedback | T8<br>intrinsic feedback | T8<br>extrinsic (augmented) feedback |
| T8<br>knowledge of result | T8<br>knowledge of performance | T8<br>stages of learning |

| | | |
|---|---|---|
| T8<br>The idea that skills use general rules that adapt to new situations. | T8<br>The delay when a second stimulus arrives before the first has been processed. | T8<br>Predicting what will happen and when, using cues. |
| T8<br>Information from an outside source, such as a coach or video. | T8<br>Information from one's own senses during movement. | T8<br>Information about an outcome returned to a person or system to guide subsequent action. |
| T8<br>The cognitive, associative and autonomous phases of acquiring a skill. | T8<br>Feedback about how a movement was carried out. | T8<br>Feedback about the outcome of a movement. |

| | | |
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| T8<br>cognitive stage | T8<br>associative stage | T8<br>autonomous stage |
| T8<br>plateau | T8<br>Learning | T8<br>retention test |
| T8<br>transfer test | T8<br>contextual interference | T8<br>transfer |

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| T8<br>The final learning stage, when a skill runs with little attention. | T8<br>The middle learning stage, in which practice refines the skill and errors fall. | T8<br>The first learning stage, with high attention and frequent errors. |
| T8<br>A test after a delay, showing whether learning has lasted. | T8<br>A relatively permanent change in the ability to perform, produced by practice. | T8<br>A period when performance stops improving despite practice. |
| T8<br>The effect of learning one skill on learning or performing another. | T8<br>The interference created by mixing different skills in practice. | T8<br>A test in a new task or setting, showing whether learning can be applied. |

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|---|---|---|
| T9<br>motivation | T9<br>intrinsic motivation | T9<br>extrinsic motivation |
| T9<br>cognitive evaluation theory | T9<br>self-determination theory | T9<br>autonomy |
| T9<br>competence | T9<br>relatedness | T9<br>amotivation |

| | | |
|---|---|---|
| T9<br>Taking part for outside rewards or pressures. | T9<br>Taking part for the enjoyment or interest of the activity itself. | T9<br>The reasons or influences that encourage a person to act or make an effort. |
| T9<br>The feeling of choosing one's own actions. | T9<br>The idea that motivation depends on the needs for autonomy, competence and relatedness. | T9<br>The idea that rewards raise or lower intrinsic motivation by how they affect autonomy and competence. |
| T9<br>A lack of any intention or reason to take part. | T9<br>The feeling of being connected to others. | T9<br>The feeling of being able to do something effectively. |

| | | |
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| T9<br>achievement motivation | T9<br>achievement goal theory | T9<br>task orientation |
| T9<br>ego orientation | T9<br>motivational climate | T9<br>attribution |
| T9<br>self-serving bia | T9<br>Learned helplessness | T9<br>attribution retraining |

| | | |
|---|---|---|
| T9<br>Judging success by personal improvement and mastery. | T9<br>The idea that people define success through either mastery or comparison with others. | T9<br>The drive to succeed and to avoid failure. |
| T9<br>The reason a person gives for an outcome. | T9<br>The learning atmosphere that coaches and peers create, emphasising mastery or rivalry. | T9<br>Judging success by beating others. |
| T9<br>Teaching people to explain failure by causes they can change. | T9<br>Reduced attempts to change a situation after experience with events perceived as uncontrollable. | T9<br>Crediting success to oneself and blaming failure on outside causes. |

| | | |
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| T9<br>self-efficacy | T9<br>vicarious experience | T9<br>verbal persuasion |
| T9<br>exercise adherence | T9<br>transtheoretical model | T10<br>stress |
| T10<br>stressor | T10<br>eustress | T10<br>distress |

| | | |
|---|---|---|
| T9<br><br>Gaining confidence from what others say. | T9<br><br>Gaining confidence by watching someone similar succeed. | T9<br><br>Belief in one's ability to succeed at a specific task. |
| T10<br><br>A harmful or demanding environmental influence that can disrupt an organism's normal functioning or reduce its success. | T9<br><br>A model of behaviour change through stages from precontemplation to maintenance. | T9<br><br>Keeping to an exercise programme over time. |
| T10<br><br>Stress that feels harmful and can impair performance. | T10<br><br>Stress that feels positive and can help performance. | T10<br><br>The situation or event that causes it. |

| | | |
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| T10<br>transactional model | T10<br>appraise | T10<br>cortisol |
| T10<br>general adaptation syndrome | T10<br>arousal | T10<br>drive theory |
| T10<br>individual zones of optimal functioning | T10<br>catastrophe theory | T10<br>anxiety |

| | | |
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| T10<br>A steroid stress hormone that raises blood glucose and supports fuel use. | T10<br>To judge what a situation means and whether one can cope with it. | T10<br>A stress model in which stress depends on how a person appraises demands and resources. |
| T10<br>The idea that performance of a well-learned skill rises as arousal rises. | T10<br>A person's level of physiological and psychological activation. | T10<br>Selye's three stages of the stress response: alarm, resistance and exhaustion. |
| T10<br>An unpleasant emotional state of worry, nervousness and apprehension, with activation of the body. | T10<br>The idea that high cognitive anxiety with high arousal causes a sudden drop in performance. | T10<br>The idea that each athlete has a personal arousal or anxiety range for best performance. |

| | | |
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| T10<br>trait anxiety | T10<br>state anxiety | T10<br>cognitive anxiety |
| T10<br>somatic anxiety | T10<br>multidimensional anxiety theory | T10<br>coping |
| T10<br>problem-focused coping | T10<br>emotion-focused coping | T10<br>avoidance coping |

| | | |
|---|---|---|
| T10<br>The worry and negative thoughts part of anxiety. | T10<br>Temporary anxiety felt in a particular situation. | T10<br>A stable, general tendency to find situations threatening; state anxiety is felt at a particular moment and changes. |
| T10<br>Thoughts and actions used to manage demands, stress or difficult situations. | T10<br>The idea that cognitive and somatic anxiety affect performance differently. | T10<br>The bodily signs, such as a racing heart and tense muscles. |
| T10<br>Dealing with stress by moving attention or effort away from it. | T10<br>Dealing with stress by managing one's feelings about it. | T10<br>Dealing with stress by acting on its cause. |

| | | |
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| T10<br>social support | T10<br>burnout | T11<br>psychological skills training |
| T11<br>performance profile | T11<br>single-case design | T11<br>goal setting |
| T11<br>outcome goal | T11<br>performance goal | T11<br>process goal |

| | | |
|---|---|---|
| T11<br>Systematic practice of mental skills to improve performance or well-being. | T10<br>Physical and emotional exhaustion with reduced accomplishment and lost interest in sport. | T10<br>Practical or emotional help from other people. |
| T11<br>Choosing specific targets to direct effort and measure progress. | T11<br>A study that tracks one participant repeatedly before and during an intervention. | T11<br>An athlete's own rating of the qualities their sport requires. |
| T11<br>A target based on technique or actions during performance. | T11<br>A target based on the athlete's own standard, such as a personal best. | T11<br>A target based on the result of a competition, such as winning. |

| | | |
|---|---|---|
| T11<br>imagery | T11<br>mental rehearsal | T11<br>internal imagery |
| T11<br>external imagery | T11<br>kinaesthetic imagery | T11<br>self-talk |
| T11<br>instructional self-talk | T11<br>motivational self-talk | T11<br>thought stopping |

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| T11<br>Imagining a skill from one's own viewpoint. | T11<br>Practising a skill in the mind without moving. | T11<br>A skill: vividness and control improve with regular short practice, for example 10 minutes a day. |
| T11<br>What athletes say to themselves, aloud or silently. | T11<br>Imagining how a movement feels in the body. | T11<br>Imagining a skill as if watching oneself from outside. |
| T11<br>Using a trigger to interrupt an unwanted thought. | T11<br>Self-talk that builds effort, confidence or mood. | T11<br>Self-talk that directs technique or focus. |

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| T11<br>reframing | T11<br>cue word | T11<br>matching hypothesis |
| T11<br>progressive muscle relaxation | T11<br>biofeedback | T11<br>mindfulness and meditation |
| T11<br>concentration | T11<br>pre-performance routine | T11<br>choking |

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| T11<br>The idea that a stress technique works best when it fits the type of anxiety. | T11<br>A short word that triggers a focus or action. | T11<br>Interpreting a situation in a more useful way. |
| T11<br>Practices that train calm, non-judging attention to the present moment. | T11<br>Using live body measurements to learn to control a body response. | T11<br>Tensing and releasing muscle groups in turn to reduce tension. |
| T11<br>A sudden, large fall in performance under pressure. | T11<br>A fixed sequence of thoughts and actions before a skill, such as a basketball free throw, a tennis serve, a golf putt or a rugby place kick. | T11<br>Holding attention on relevant cues. |

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| T12<br>research question | T12<br>independent variable | T12<br>dependent variable |
| T12<br>controlled variable | T12<br>hypothesis | T12<br>null hypothesis |
| T12<br>learning effect | T12<br>counterbalancing | T12<br>pilot study |

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| T12<br>The measured or calculated outcome whose response to changes in another variable is studied. | T12<br>An input or factor whose value is chosen or varied to examine its effect on another quantity. | T12<br>The specific question an investigation is designed to answer. |
| T12<br>The default claim about a population parameter that a statistical test assesses against an alternative. | T12<br>A proposed explanation or prediction that can be tested using evidence. | T12<br>A factor kept constant so that it cannot affect the result. |
| T12<br>A small trial run that tests a method before the main study. | T12<br>Varying the order of experimental conditions across participants to reduce order effects. | T12<br>Scores improving on a repeated test because of practice with the test. |

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| T12<br>double-blind | T12<br>placebo | T12<br>informed consent |
| T12<br>anonymous | T12<br>validity | T12<br>reliability |
| T12<br>internal validity | T12<br>external validity | T12<br>ecological validity |

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| T12<br>Voluntary agreement to participate after receiving and understanding information about what participation involves and its relevant risks. | T12<br>A comparison treatment lacking the active intervention being tested, used to help distinguish its effects from other influences. | T12<br>A design in which neither participants nor researchers know who received the treatment. |
| T12<br>The consistency of a measurement or assessment when repeated under comparable conditions. | T12<br>How well a measure or study represents the concept or conclusion it is intended to address. | T12<br>Recorded so that no participant can be identified. |
| T12<br>How closely study conditions match real-world performance. | T12<br>How far results apply beyond the study's participants and setting. | T12<br>How confidently a measured effect can be attributed to the variable tested. |

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| T12<br>normative data | T12<br>random error | T12<br>systematic error |
| T12<br>calibration | T12<br>biological variation | T12<br>mean |
| T12<br>standard deviation | T12<br>coefficient of variation | T12<br>error bar |

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| T12<br>A consistent measurement bias caused by the method or instrument. | T12<br>Unpredictable variation between repeated measurements. | T12<br>Reference values from a group, used to compare a person's score. |
| T12<br>The sum of a set of values divided by the number of values. | T12<br>Natural differences between people, and within one person over time. | T12<br>Comparing and, where appropriate, adjusting a measuring instrument against a known reference. |
| T12<br>A line on a graph showing the spread or uncertainty of a value. | T12<br>Standard deviation as a percentage of the mean. | T12<br>A measure of spread equal to the square root of the variance. |

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| T12<br>scatter graph | T12<br>statistically significant | T12<br>pearson's correlation coefficient |
| T12<br>critical value | T12<br>scientific investigation | T12<br>collaborative sciences project |
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| T12<br><br>A statistic from -1 to +1 giving the strength of a linear relationship. | T12<br><br>Unlikely enough under the null hypothesis that the result passes the chosen threshold. | T12<br><br>A plot of paired values used to see a relationship between two variables. |
| T12<br><br>An IB group task in which students from different sciences address a shared problem. | T12<br><br>The individual IB internal assessment task: a student's own research question and data. | T12<br><br>The value a test statistic must reach for significance at a chosen level. |
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