Anabolic steroids—testosterone-derived drugs that increase muscle strength, power, size, and endurance.

Anatomical position—reference standard for motion analysis where the individual stands erect with joints extended, palms facing forward, and feet parallel.

Angular motion—occurs when all points on a body or object move in circular patterns around the same axis.

Anthropometry—measurement of the human body in terms of dimensions such as height, weight, circumferences, girths, and skinfolds.

Arterio-venous oxygen (A-VO2) difference—the oxygen difference between arterial circulation and the tissues allowing for diffusion of oxygen at the tissue level.

Ballistic resistance training—an explosive type of resistance training where the load is lifted at maximal speed throughout the range of motion (to limit deceleration).

Ballistic stretching—dynamic stretching involving a bouncing type of motion where the final position is not held.

Baroreceptor—a stretch-sensitive sensory receptor located in the walls of blood vessels, which detects blood pressure.

Basal metabolic rate—the minimal level of energy needed to sustain bodily functions.

Beta oxidation—a process leading to the conversion of fatty acids to acetyl CoA.

Bilateral deficit—maximal force produced by both limbs contracting bilaterally is smaller than the sum of the limbs contracting unilaterally.

Bioenergetics—the flow of energy change within the human body from mostly carbohydrates, fats, and proteins.

Biomechanics—the science of applying the principles of mechanics to biological systems.

Blood doping—intravenous infusion of blood or blood products to increase athletic performance.

Blood pressure—the pressure in the arteries following contraction of the left ventricle.

Bone mineral density—the quantity of mineral deposited in bone, which is used as a common assessment of bone anabolism.

Cardiovascular endurance—the ability to perform prolonged aerobic exercise at moderate to high exercise intensities.

Conditioning—generic term for improving physical fitness and performance

Delayed onset muscle soreness—the soreness associated with muscle damage accompanying unaccustomed or high-intensity exercise.

Frequency—a term used to describe the number of training sessions per week or day.

Golgi tendon organs—proprioceptors located at the muscle-tendon junction that conveys information regarding muscle tension to the central nervous system.

Lactate threshold—the intensity that blood lactate increases beyond resting levels.

Lean body mass—fat-free mass consisting of muscle, water, bones, and organs/tissues.

Leptin resistance—condition where leptin does not activate its receptors to regulate appetite and energy expenditure.

Macrocycle—a plan for an extended training period (usually a year).

Motor nervous system— branch of peripheral nervous system that consists of the somatic and autonomic nervous systems.

Muscular endurance— the ability to sustain performance and resist fatigue.

Onset of blood lactate accumulation— intensity where blood lactate values exceed 4 mmol L-1.

Weightlifting— the act of lifting weights to enhance performance and health (not the sport!).

Weight training— exercise training performed using free weights, machines, or similar equipment for the purposes of increasing muscle strength, power, size, endurance, or any other goals associated with training.

Periodization – The systematic planning of athletic training, dividing the training year into phases (macrocycle, mesocycle, microcycle) to optimize performance and recovery.

Overload – A principle stating that for athletes to improve, they must train at a level that is greater than their normal level of activity.

VO_2 max – The maximum amount of oxygen an individual can use during intense exercise; a key indicator of aerobic endurance.

Plyometrics – Explosive exercises (like jump training) aimed at increasing power by enhancing the stretch-shortening cycle of muscles.

Anaerobic Threshold – The exercise intensity at which lactic acid begins to accumulate in the blood; crucial for pacing and endurance training.

Recovery – The process by which the body repairs and strengthens itself after training; includes rest, nutrition, hydration, and sleep.

Hypertrophy – An increase in muscle size, typically achieved through resistance training.

Agility – The ability to rapidly change direction with precision and speed; essential in many team and combat sports.

Tapering – A reduction in training volume before a competition to allow full recovery and peak performance.

Specificity – The principle that training should be relevant and appropriate to the sport for which the individual is preparing.

Reference :

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