

adenosine
triphosphate (ATP)

a high energy compound that stores and transfers energy to body cells allowing for muscle contraction

aerobic interval
training

alternating sessions of work and recovery

aerobic metabolism

the breakdown of fuel in the presence of oxygen to produce energy (ATP)

aerobic threshold

a level of exercise intensity that is sufficient to cause a training effect (around 70% of maximal heart rate)

aerobic training zone

a level of intensity that causes the heart rate to be high enough to cause significant training gains

anaerobic

a reaction that occurs in the absence of oxygen

anaerobic glycolysis

the process where glucose is broken down in the absence of oxygen to produce energy

anaerobic threshold

a level of intensity where the accumulation of lactic acid in the blood increases very quickly

atrophy

wasting away or decreasing in size

capillaries

tiny blood vessels that connect smallest arteries to the smallest veins

cardiac output

the amount of blood pumped by the heart per minute

chemical energy

energy stored in bonds between atoms

circuit training

activity in which participants move from one station to another performing specific exercises at each

creatine phosphate (CP)

an energy-rich compound that serves as an alternate energy source for muscular contraction

dynamic stretching

activity using speed and momentum with movements experienced in a game to increase flexibility

fartlek training
(speed play)

activity in which participants vary their speed and terrain, engaging both anaerobic and aerobic energy systems

fast-twitch muscle
fibres

fibres that reach peak tension quickly and are recruited for power and explosive movements

flexibility

the range through which joints and body parts are able to move

glycogen

the storage form of glucose, used for fuel when blood glucose levels decline

glycolysis

the process of using glycogen or glucose as fuel

haemoglobin

the substance in the blood that binds to oxygen and transports it around the body

kilojoule

a unit of measure of the energy value of food

lactate inflection point (LIP)

a point beyond which a given power output cannot be maintained

lactate threshold

the point at which lactic acid accumulates rapidly in the blood

lactic acid

a by-product of the incomplete breakdown of carbohydrate in the absence of oxygen

lung capacity

the amount of air
that the lungs can
hold

mechanical energy

motion or
movement energy

metabolism

the sum of all chemical
processes within cells
that transforms
substances into energy

muscle hypertrophy

muscle growth together
with an increase in the
size of muscle cells

oxygen uptake

the ability of the working
muscles to use the
oxygen being delivered

plyometrics

a special range of exercises in which a muscle is lengthened using an eccentric contraction, then followed by a shortening or concentric contraction

PNF stretching

a progressive cycle involving a static stretch, an isometric contraction and a period of relaxation in the lengthened position

respiration

the process of breathing

resting heart rate

the number of heartbeats per minute while the body is at rest

resynthesis

the process of restoring ATP to its former state

slow-twitch muscle fibres	fibres that contract slowly for long periods of time and are recruited for endurance activities
static stretching	a safe form of stretching in which the stretch is held for a period of 10-30 seconds
strength	the ability of a muscle or muscle group to exert a force against a resistance
stretch reflex	an involuntary muscle contraction that prevents fibre damage if muscles are lengthened beyond their normal range
stroke volume	the amount of blood ejected by the left ventricle of the heart during a contraction, measured in mL/beat