

Fitness Terms

AEROBIC - Using oxygen.

AEROBIC ACTIVITIES - Activities using large muscle groups at moderate intensities that permit the body to use oxygen to supply energy to maintain a steady state for more than a few minutes. See steady state.

AEROBIC ENDURANCE - The ability to continue anaerobic activity over a period of time.

AEROBIC POWER - See maximal oxygen uptake.

AGONIST - A muscle which directly engages in an action around a joint which has another muscle that can provide an opposing action.

ANAEROBIC - Not using oxygen.

ANAEROBIC ACTIVITIES - Activities using muscle groups at high intensities that exceed the body's capacity to use oxygen to supply energy and create an oxygen debt by using energy produced without oxygen.

ANAEROBIC ENDURANCE - The ability to continue anaerobic activity over a period of time (much shorter time than with aerobic activity).

ANAEROBIC THRESHOLD - The point where increasing energy demands of exercise cannot be met by the use of oxygen, and an oxygen debt begins to be incurred.

ANTAGONIST - A muscle that can provide an opposing action to the action of another muscle (the agonist) around a joint.

ATROPHY - Reduction in size, or wasting away, of a body part, organ, tissue or cell.

BALLISTIC MOVEMENT - An exercise movement in which a part of the body is "thrown" against the resistance of antagonist muscles or against the limits of a joint. The latter, especially, is considered dangerous to the integrity of ligaments and tendons.

CARDIOVASCULAR - Pertaining to the heart and blood vessels.

CIRCUIT TRAINING - A series of exercises, performed one after the other, with little rest between. Resistance training in this manner increases strength while making some contribution to cardiovascular endurance as well. (It remains controversial as to whether a significant cardiovascular benefit will be achieved in the absence of very consistent motivation or close supervision of the sessions.)

CONCENTRIC ACTION - Muscle action in which the muscle is shortening under its own power. This action is commonly called "positive" work, or, redundantly, "concentric contraction."

COOL DOWN - A gradual reduction of the intensity of exercise to allow physiological processes to return to normal. Helps avoid blood pooling in the legs and may reduce muscular soreness.

DEHYDRATION - The condition resulting from the excessive loss of body water.

DURATION - The time spent in a single exercise session. Duration, along with frequency and intensity, are factors that affect the effectiveness of exercise.

ECCENTRIC ACTION - Muscle action in which the muscle resists while it is forced to lengthen. This action is commonly called "negative" work, or "eccentric contraction," but, since the muscle is lengthening, the word "contraction" is misapplied.

ENDURANCE - The capacity to continue a physical performance over a period of time.

ENERGY - The capacity to produce work.

EXERCISE - Physical exertion of sufficient intensity, duration and frequency to achieve or maintain fitness, or other health or athletic objectives.

EXERCISE PRESCRIPTION - A recommendation for a course of exercise to meet desirable individual objectives for fitness. Includes activity types; duration, intensity, and frequency of exercise.

EXPIRATION - Breathing air out of the lungs.

EXTENSION - A movement which moves the two ends of a jointed body part away from each other, as in strengthening of the arm.

EXTENSOR - A muscle that extends a jointed body part.

FAST-TWITCH FIBERS - Muscle fiber type that contracts quickly and is used most in intensive, short-duration exercised, such as weightlifting or sprints.

FATIGUE - A loss of power to continue a given level of physical performance.

FITNESS - The state of well-being consisting of optimum levels of strength, flexibility, weight control, cardiovascular capacity and positive physical and mental health behaviors, that prepare a person to participate fully in life, to be free from controllable health-risk factors and to achieve physical objectives consistent with his/her potential.

FITNESS TESTING - Measuring the indicators of the various aspects of fitness.

FLEXIBILITY - The range of motion around a joint.

FLEXION - A movement which moves the two ends of a jointed body part closer to each other, as in bending the arm.

FREQUENCY - How often a person repeats a complete exercise session.

HAMSTRINGS - The group of muscles at the back of the thigh, and their tendons.

HEART RATE - Number of heartbeats per minute.

HEAT CRAMPS - Muscle twitching or painful cramping, usually following heavy exercise with profuse sweating. The legs, arms and abdominal muscles are the often affected.

HEAT EXHAUSTION - Caused by dehydration (and sometimes salt loss). Symptoms include a dry mouth, excessive thirst, loss of coordination, dizziness, headache, paleness, shakiness and cool and clammy skin.

HEAT STROKE - A life-threatening illness when the body's temperature-regulating mechanisms fail. Body temperature may rise to over 104 degrees F. skin appears red, dry and warm to the touch. The victim has chills, sometimes nausea and dizziness, and may be confused or irrational. Seizures and coma may follow unless temperature is brought down to 102 degrees within an hour.

ILLIAC CREST - The upper, wide portion of the hip bone.

INTENSITY - The rate of performing work; power. A function of energy output per unit of time.

INTERVAL TRAINING - An exercise session in which the intensity and duration of exercise are consciously alternated between harder and easier work. Often used to improve aerobic capacity and/or anaerobic endurance in exercisers who already have a base of endurance training.

ISOKINETIC CONTRACTION - A muscle contraction against a resistance that moves at a consistent velocity, so that the maximum force of which the muscle is capable throughout the range of motion to be applied.

ISOMETRIC ACTION - Muscle action in which the muscle attempts to contract against a fixed limit. This is also sometimes called "isometric contraction," although there is not appreciable shortening of the muscle.

ISOTONIC CONTRACTION - A muscle contraction against a constant resistance, as in lifting a weight.

LACTIC ACID - The end product of the metabolism of glucose for the anaerobic production of energy.

LIGAMENT - The fibrous, connective tissue that connects bone to bone, or bone to cartilage, to hold together and support joints.

LUMBAR - Pertaining to the lower back, defined by the five lumbar vertebrae, just above the sacrum.

MAXIMAL HEART RATE - The highest heart rate of which an individual is capable. A broad rule of thumb for estimating maximal heart rate is 220 (beats per minute) minus the person's age.

METABOLISM - The total of all the chemical and physical processes by which the body builds and maintains itself and by which it breaks down its substances for the production of energy.

NUTRIENTS - Food and its specific elements and compounds that can be used by the body to build and maintain itself and to produce energy.

NUTRITION - The processes involved in taking in and using food substances.

OBESITY - Excessive accumulation of body fat.

ONE REPETITION MAXIMUM, 1 RM - The maximum resistance with which a person can execute one repetition of an exercise movement. See repetition.

MUSCLE GROUP - Specific muscles that act together at the same joint to produce a movement.

OVERLOAD - Subjecting a part of the body to efforts greater than it is accustomed to, in order to elicit a training response. Increases may be in intensity or duration.

OVERUSE - Excessive repeated exertion or shock which results in injuries such as stress fractures of bones or inflammation of muscles and tendons.

OXYGEN DEBT - The oxygen required to restore the capacity for anaerobic work after an effort has used those reserves. Measured by the extra oxygen that is consumed during the recovery from the work.

PEAK HEART RATE - The highest heart rate reached during a work session.

PHYSICAL CONDITIONING - A program of regular, sustained exercise to increase or maintain levels of strength, flexibility, aerobic capacity and body composition consistent with health, fitness or athletic objectives.

PHYSICAL FITNESS - The physiological contribution to wellness through exercise and nutrition behaviors that maintain high aerobic capacity, balance body composition and adequate strength and flexibility to minimize risk of chronic health problems and to enhance the enjoyment of life.

PLYOMETRIC - A type of exercise that suddenly preloads and forces the stretching of a muscle an instant prior to its concentric action.

PNF STRETCH - See proprioceptive neuromuscular facilitation stretch.

POWER - Work performed per unit of time. Measured by the formula: work equal force times distance divided by time. A combination of strength and speed.

PRIME MOVER - The muscle or muscle group that is causing the movement around a joint.

PROGRESSIVE RESISTANCE EXERCISE - Exercise in which the amount of resistance is increased to further stress the muscle after it has become accustomed to handling a lesser resistance.

PRONATION - Assuming a face-down position. Of the hand, turning the palm backward or downward. Of the foot, lowering the inner side of the foot so as to flatten the arch. The opposite of supination.

PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION, PNF STRETCH - Muscle stretches that use the proprioceptors (muscle spindles) to send inhibiting messages to the muscle that is to be stretched.

QUADRICEPS - A muscle group at the front of the thigh connected to a common tendon that surrounds the kneecap and attaches to the tibia (lower leg bone). The individual muscles are the rectus femoris, vastus intermedius, vastus lateralis and vastus medialis. Acts to extend the lower leg.

RADIAL PULSE - The pulse at the wrist.

REPETITION - An individual completed exercise movement. Repetitions are usually done in multiples.

RESISTANCE - The force which a muscle is required to work against.

RESPIRATION - Exchange of oxygen and carbon dioxide between the atmosphere and the cells of the body.

SET - A group of repetitions of an exercise movement done consecutively, without rest, until a given number, or momentary exhaustion, is reached.

SHIN SPLINTS - Pain in the front of the lower leg from inflammation of muscle and tendon tissue caused by overuse.

SLOW-TWITCH FIBERS - Muscle fiber type that contracts slowly and is used most in moderate-intensity, endurance exercises, such as distance running.

SPECIFICITY - The principle that the body adapts very specifically to the training stimuli it is required to deal with. The body will perform best at the specific speed, type of contraction, muscle-group usage and energy source usage it has become accustomed to in training.

SPOT REDUCING - An effort to reduce fat at one location on the body by concentrating exercise, manipulation, wraps, ect. on that location.

SPRAIN - A stretching or tearing of ligaments.

STATIC CONTRACTION - See isometric action.

STRAIN - A stretching or tearing of a musculotendinous unit.

STRENGTH - The amount of muscular force that can be exerted.

STRESS - The general physical and psychological response of an individual to any real or perceived adverse stimulus, internal or external, that tends to disturb the individual's homeostasis. Stress that is excessive or reacted to inappropriately, may cause disorders.

STRETCHING - Lengthening a muscle to its maximum extension; moving a joint to the limits of extension.

SUBMAXIMAL - Less than maximum. Submaximal exercise requires less than ones maximum oxygen uptake, heart rate or anaerobic power.

SUPINATION - Assuming a horizontal position facing upward. In the case of the hand, it also means turning the palm to face forward. The opposite of pronation.

TARGET HEART RATE (THR) - The heart rate at which one aims to exercise.

TENDON - The fibrous connective tissue that connects muscle to bone.

TENDONITIS - Inflammation of a tendon.

TESTOSTERONE - The sex hormone that predominates in the male, is responsible for the development of male secondary sex characteristics and is involved in the hypertrophy of muscle.

TRAINING ZONE - See target heart rate.

WARM-UP - A gradual increase in the intensity of exercise to allow physiological processes to prepare for greater energy outputs.

WORK - Force times distance. Measured in foot-pounds and similar units.

WORKOUT - A complete exercise session, ideally consisting of warm-up, intense aerobic and/or strength exercises, and cool down.