

LOOK AFTER YOURSELF

PHYSICAL CONDITIONING & TRAINING

(19 pages)

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Some definitions

Specificity

Specificity refers to the way in which training is very specialised or specific to the activity. Skill training can be very specific, e.g. training for putting in golf, will not improve your basketball set shot. Training for simpler activities such as running is also specific, e.g. the 100 metre runner trains differently from a 800 metre runner, let alone a marathon runner. However, there can be some cross-over of training effects; e.g. all hand-eye coordination activities such as those involving hand-held implements like rackets and sticks will have some common elements; and the 100 metre runner will also be pretty good at the 200 and 400 metres.

Overload

Overload is the basic training principle by which the body is exposed to greater stresses than it is normally used to, as a result of which it becomes stronger to meet these demands. The overload can be achieved by increasing the **frequency** (number of times); the **intensity** (working harder) the activity; and **duration** (length of time) of the training sessions.

Progression

Progression refers to the fact that the overload must be increased to achieve continuing progress, otherwise the body will 'plateau' out as it gets used to the increased load. Progression must be carried out in a controlled way, to allow time for the body to adapt to the increasing training loads.

Reversibility

Reversibility refers to the unfortunate fact that training gains are rapidly lost once the activity ceases.

Repetitions & sets

Repetitions and sets are a way of organising and progressing overload in a controlled way. In weight training it is common to repeat an exercise 8 times (repetitions) before having a short rest and then repeating the procedure another 2 or 3 times (a set of repetitions). Sets of repetitions can be repeated. Repetitions have longer recovery breaks between them than sets. This can be shown as: 3{8 x 40 kgs}; that is 3 sets of 8 repetitions of lifting 40 kgs. In running and other endurance events this is also known as interval training. A classic track session for middle distance runners is 3{6 x 200}; that is 3 sets of 6 repetitions of 200 metres.

Aerobic/Anaerobic Fitness

Although often treated as separate systems, the aerobic and anaerobic systems always operate together and training for each affects the other to a certain extent. Short intense work favours anaerobic fitness, and long steady endurance work favours aerobic fitness.

If a group of runners are running along easily together they will be able to chat quite naturally. However, as the pace increases the conversation will slow and eventually stop, as the work becomes more anaerobic and lactic acid begins to accumulate. Past a certain level the anaerobic or lactic threshold is passed and discomfort increases considerably. As your ability to take up and use oxygen for aerobic respiration is increased by training, the anaerobic threshold is delayed and you are able to sustain a higher pace of running without feeling so much discomfort. Much training is done around the anaerobic threshold level in order to stress the body sufficiently but not too much while training for long periods.

Specific Conditioning/Training Methods

Weight training

The amount of weight, the repetitions used, and the recovery periods can all be adjusted to progressively load muscles (see Progressive Loading: p.96). Training for strength involves high resistance (weights) and few repetitions. Training for muscular endurance involves low resistance and many repetitions.

Circuit training

This involves a number of different exercises at 'work stations' which affect the different components of fitness (eg. strength, muscular endurance etc.). The number of 'work station' repetitions, and the rest periods should add up to between 15 to 20 minutes for one complete circuit. You can repeat circuits between 3-6 times depending upon their length.

