



BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI - 620 024

(Accredited With A+ Grade By NAAC In The Third Cycle)

Department Of Physical Education And Yoga

Bachelor Of Physical Education (B. P. Ed)

CC- VII SPORTS TRAINING (21BPE31)

Sem. -III

Credit-4

UNIT-3

TRAINING PROCESS

TYPES OF TRAINING LOAD

1. Internal load
2. External load

Internal load (reaction of the organism)

It is the psycho-physiological reaction of sportsman to external load. The degree of internal load by pulse rate, lactic acid concentration in the blood and various biochemical changes in the tissues. It can also be judged by various symptoms of fatigue.

External load (the amount of work done)

It is the work done by the sportsman.

For example, the distances run a distance runner.

PRINCIPLES OF TRAINING LOAD

Continuity and Repetition of Load

The load must be given several times to achieve the stable increase in performance capacity and the training should be continuous, otherwise achieved adaptation or performance improvement will be lost after some time.

Optimum load

The load given is neither too low too much excessive, because no super compensation takes place or recovery process is slowed down respectively. Therefore for compensation and optimum recovery the optimum load must be given.

Load and recovery

Optimum load is essential to achieve good super compensation and the super compensation will take place only if enough time for recovery is given.

Specificity of load

Since specific type of load leads to a super compensation of a particular type of substance, when different performance factors need to be improved different type of load should be given.

Progression of load

The load should be increased from time to time for continuous improvement of performance. According to the need, the load should be given. For example, higher load should be given for the adaptation to a higher level.

COMPONENTS OF LOAD

Intensity

It is the rate of doing work. In other words, it is the pace at which physical activity is done. An activity can be carried out with different intensities which will have different effect on the organism. Hence practice, the total range of intensity for planning implementation and evaluation of training. The highest intensity which can be achieved by the sportsman is taken as 100 percent.

In endurance training the intensity zones are made according to the heart rate. Intensity zones training the heart rate must be above 140 beats/ min.

In strength training for the beginners the intensity must be above 30% but for advanced athlete the intensity must be above 75%.

Magnitude of resistance	Intensity zone	Speed	Heart rate
30 to 50% of maximum weight lifted	Low	30 to 50% maximum running speed	130-140 beats/min
50 to 70%	Light	50 to 60%	140-150
70 - 80%	Medium	60 to 75%	150-165
80 - 90%	Sub maximum	75 to 85%	165-180
90 -100%	Maximum	85 to 100%	180

Density

The temporal relationship between load and recovery phases in a training session is called density. It is also referred to as the rest period between two motor stimuli. In more stimuli are given in a certain time period, then the training is more dense that is high. The role of density is two-folded: 1. the fatigue is overcome in the pause. 2. The adaptation process is started.

Volume

It is the total amount of work done in a training session. The total distance covered total number of repetition or the total duration of the activity is the volume. Like intensity, the volume should also be optimum in order to have some effect on the organism (e.g. for the development of endurance, one should run continuously for at least- 30 minutes).

Overload

Overload is a state of decreased performance capacity of a sportsman due to several factors like training and competition load, social problems, family problems, professional problems, economical problems, infection, poor nutrition, lack of rest, over training etc.

Causes for overload

- ✓ Too high intensity of training.
- ✓ Improper recovery period.
- ✓ Rapid increase of load.
- ✓ Too high volume of training.
- ✓ Improper rest during daily routine and irregular sleeping.
- ✓ Similar type of training load over longer period.
- ✓ Lack of faith in coach.

SYMPTOMS OF OVERLOAD

Performance related symptoms

- ✓ Reduced performance capacity, Reduced qualities.
- ✓ Increased recovery period, Loss of co-ordination.
- ✓ Improper and tensed movement.

Physiological symptoms

- ✓ Loss of sleep,
- ✓ weight,
- ✓ appetite,
- ✓ Prone to injury.
- ✓ Decreased vital capacity,
- ✓ Slower pulse recovery.

Psychological symptoms

- ✓ Increased excitability,
- ✓ Uncontrolled emotion.
- ✓ Quarrelsome behaviour,
- ✓ Over sensitiveness.
- ✓ Decreased concentration,
- ✓ Depression,
- ✓ Loss of motivation.
- ✓ Uneasiness,
- ✓ Loss of confidence.

Thank
you