

General principles of sports training

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Abstract

With the enhanced status of sports in society the provision of sports training has become very important although the need for competent training has long been recognized. Over 3000 years ago the Greeks saw the need to provide effective and efficient training for the athletes taking part in the Olympic Games. But since 1950s, many countries have recognized the importance of an effective sports training programme in a wide range of activities not only of the success in major international competitions but also for the development of healthy participants. Earlier one has only to look towards the 'eastern block' countries to see the value placed on success in sports. Quite good amount of money have been expended on facilities and sportspersons. But, without provision of effective sports training, any sportsperson's potential will never be fulfilled comprehensive sports training programme is the key factors in producing the skillful high performers.

Keywords: principles, prognostic, load, Peak.

Introduction

Principles of sports training are the guidelines for the coaches, teachers and sportspersons for the formulation, implementation and control of sports training. These principles are valid for all aspects and elements of training. These are formed on the basis of knowledge gained from various sports science disciplines and successful practice. The principles of training can be general or specific. General principles are valid for the process of sports training as a whole. The specific principles however, are applicable to a limited part or aspect of training only e.g., principles of periodization, principles of technical training etc. Principles are not applicable to specific situations or actions. These have regulative function for a whole class or group of actions. The principles, however, can be further split into rules which are more specific in nature.

Principle of formulation of training on the basis of prognostic performance and its structure

Sports training aims at achieving high performance in future. Therefore the structure of prognostic sports performance should form the basis of formulation of training. All aims, objectives means, methods and measures for different stages of training are to be derived from the performance capacity essential to achieve the prognostic sports performance. The performance structure, in combination of other factors like motor development, age training state, periodization etc., determines the training structure.

The Principle of continuity of training

This principle states that sports training should be a continuous and regular process. Continues and regular training leads to improvement of performance capacity. But when the training leads to improvement of performance capacity. But when the training is stopped for some period or there are too long intervals between raining sessions the performance capacity starts decreasing. It is, therefore, of utmost importance to ensure continuity of training. It is also important to take pre-cautionary measures to neutralize the effect of factors which can result in

shorter or longer training breaks. For; proper implementation of the principle of continuity the following rules have to be observed:-

- a) The sportsman must be education about the importance of continuity of training by convincing him about the negative effects of training breaks and irregular training on his performance capacity. He should be enabled to carry out his training programmes independently even when the coach cannot be physically present. For periods of vacations etc., the sportsman should be supplied with training programmes which can follow without any problem.
- b) The principles of continuity of training extend to all factors of performance. A performance factor developed by training over a period of time needs to be maintained when the stress is shifted to other performance factors. Therefore, in the complex process of training some amount of training, either for development or maintenance, should always be there for all factors of performance. It is, however, important to note that much larger volume of training is required to develop a performance factors as compared to its maintenance.
- c) The state of overload always results in markedly low training volumes or even worse long training break. Therefore, proper measures should be adopted to prevent the occurrence of over-load.
- d) In case the sportsman is sick or injured the coach should try to find out, in consultation with the physician, ways and means by which the sportsman can continue his training even though with low load intensity and volume e.g. with leg injury the sportsman can do some exercises with his arms or upper body from sitting or reclining position.

Principle of progression of Load

Training load is the principal stimulus for starting the psycho-physiological processes of adaptation which eventually lead to increase in performance capacity. A certain quantum of training load forces the organism to adapt to a certain level of psychic

and physical demands. If the same load is repeated again and again, then it gradually loses its value as a stimulus for adaptation. The organism adapts to this load and is in a position to tackle this load effectively and easily. It is no longer adequate to force the organism to adapt to higher level of functioning. In simple words this load is just good enough to maintain the achieved level of adaptation or the achieved level of performance. Higher performance will be achieved when the organism adapts to a higher level of functioning.

This is possible only by increasing the load. In sports training we want continuous improvement in performance. Therefore, we have to keep on increasing the training load from time to time periodically.

- (a) **Linear Method:** - In this method the load is increased in every training session. This method is possible only during the initial days of training.
- (b) **Step Method:** - in this method the load is increased in steps i.e., after an increase in load it is maintained for some training sessions before increasing it again.

Principle of Uniformity and Differentiation

In order to achieve best results, the sports training should be formulated uniformly but allowing for individual differences. To start with the training should be predominantly uniform for all in order to spot talent. Uniformity also means that training for all should be based on the same principles and system which have been worked out to achieve the prognostic sports performance in stages. The goals, means, methods and organization of training should be uniform. With the passage of time, however, the training should become increasingly individualized. The training of advanced sportsmen must be formulated in consideration of following training of advanced sportsmen must be formulated in consideration of following individual factors:-

- (a) Age, biological and chronological.
- (b) Sex, training age and training state.
- (c) Talent.
- (d) Psychic factors e.g., personality, temperament etc.
- (e) Nature and volume of training in the past.
- (f) Performance and rate of performance improvement
- (g) Total load and possibilities of recovery.
- (h) Social and economical factors.

Principle of progressive specialization

The term specialization in sports training means use of specific means and methods for improving performance in a particular sport. Logically speaking specific means and methods lead to faster improvement in sports performance. but in real training process, which starts in childhood and can continue up to 25-30 years of life, the predominant use of specific means and methods throughout the long term process of training does not give good results. On the contrary, it can lead to negative results. This is due to following reasons:-

- (a) Highly specialized (one sided training) is not suitable for children and youth who are still in the stage of growing. The organism incapable of tolerating the demands of highly specialized training for too long.
- (b) High performance can be achieved faster by adopting highly specific means and methods but these performances are not stable and cannot be maintained for too long period as it requires high performance training stage.

- (c) Sportsman will achieve high performance before the start of the age of high performance if highly specialized training is used in childhood. This means he will not be able to achieve his maximum potential performance.

Principle of Planned and Systematic Training

This principle, as its name suggests actually consists of two training principles which are interrelated. Sport training is a scientific and pedagogical process and for best results each and every part, phases and stage of training must be properly planned. As a result in training we have short and long term plans which form the basis of implementation and assessment of training. It is however essential to realize that planning has to be done on the basis of a system. Which has been worked out in consideration of the present available knowledge regarding best ways and means of achieving high performances through sports training. In other words correct planning of training is impossible without a thorough understanding of training's systematic.

Principle of Cyclicity of training

The process of sports training is formulated in shorter and longer cycles. The reasons for carrying out training in form of cycle are given below:

- (a) In training the different tasks cannot be tackled simultaneously.
- (b) This has to be done in a definite sequence determined on the basis of a training system. Certain tasks of training have to be tackled again and again after certain time periods in order to achieve the desired results. This has to be based on the proper sequence of load and recovery phases.
- (c) The sportsman has to participate in competitions and for successful participation he must achieve top form. Top form is developed in phases which have to be repeated after certain time period. Besides important competitions repeat themselves yearly or after definite time periods.
 - I. **Macro-Cycle:** - This is considered the longest cycle of training. Its duration can be from 3-4 months to 12 months or even longer. Macro-cycle is formed by a certain arrangement of meso-cycles.
 - II. **Meso-Cycle:** - Meso-cycle is a training cycle of medium duration. It is composed of a definite arrangement of 3-6 micro-cycles or weekly cycles. The last micro-cycle or weekly cycle of a meso-cycle primarily aims at recovery and relaxation.
 - III. It is the smallest training cycle and consists of 3-10 days. When the duration of micro-cycle is seven days it is called weekly cycle. The duration of a micro-cycle in case of trained sportsman is normally from 5-10 days.

Principle of Regulation of Training

Sports training is a goal oriented long term process of preparation of sports men for higher performance. It involves use of training means and methods for improving various performances prerequisites. Sportsmen, like other humans, are bio-social entities. During the long term period of training, different factors, in addition to training, affect sportsmen. These factors also have influence on sports training and its effects. It is, therefore, highly unwise and unscientific to lose track of the process of performance development at any point or time of the long term training process. A coach should always know what

effect the training is producing on the performance of the sportsman. If necessary the sports training should be changed or modified to ensure proper and effective development of performance. This is possible through continuous regulation of sports training.

Discussion and Conclusion:

The assessment of performance and performance prerequisites is indispensable for regulation of training. The sports performance can be adequately assessed from the completion results or results achieved in training. But it is better if the part performances are also measured/recorded and assessed. The performance capacity and the various performance prerequisites/performance factors can be measured and judged effectively through sports motor tests, training controls and standardized training programmes. In addition the investigation procedures of sports physiology, sports bio-chemistry, sports psychology and sports bio-mechanics can be used to get additional information's regarding performance capacity, performance prerequisites. These can also be used to diagnose sports performance in some sports like track and field, swimming, weight lifting etc.

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