

## Sports Training and Performance

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### ABSTRACT

Sports performance in general sense that sportsmen's preparation for acquiring best performances. It is the physical, Technico-tactical and intellectual preparation of an athlete by physical load. In the training process various hours are working mainly biological educational and psychological as well as many sided knowledges of trainer and coach. The contents, the means and method as well as the organization of training becomes a binding instruction for the activity of the coach. In case of loading (outer load) if it is not appropriate or insufficient no super compensation will create in athlete's organism. In training there should be a certain relation to the individual performance capacity and loading capacity. If a coach planned to get top-level performance by his/her athletes, he/she should formulate a workout with harder tasks which is to be solved during training. A gradual increase in loading is not effective for the improvement of training condition but as an increase in form of steps after certain intervals, there will be necessary adaptation and better training conditions will be achieved. Increased training load causes contradictory reactions to actual capacity which enforce the organism to create new regulation and adaptation process.

### Keywords:

- Sports performance,
- Physical, Technico-tactical & intellectual preparation,
- Organization of training in a binding instruction for coaches,
- Appropriate loading is the only process to get better training condition,
- Training load should be increased in step form.

### DEVELOPMENT OF FUNCTIONAL CAPACITY BY SPORTS TRAINING

#### INTRODUCTION

In the field of sports and games, we understand the sport training in general sense that the preparation of sportsmen for acquiring top class performances. If we go on the particular sense of sports training it is the Physical, technico-tactical, intellectual, Psychic and moral preparation of the sportsman by physical exercises that is by physical load. In the training process different laws are practicable mainly the biological, educational and psychological as well as the theoretical knowledge of the trainer and coach. But the above laws have to be correctly utilized at the time of sports training. The task to be solved by the coach and trainer which is facilitated by the formation of generally accepted principles. The above principles are valid for all pedagogical processes and also for sports training. In addition,

following the laws of training, further principles were formulated which so far have been called principles of load.

#### PRINCIPLES AND METHODS

The principles indicates to all branches and task of training, they find out the contents, the means and method as well as the organization of training which becomes a binding instruction for the activity of the coach because they determine the conscious and complex application of the laws of uniform sensible process because of the fact that the common experiences of the successful practice are reflected by them. Standard or moderate loads lose their training effect step by step and create only insufficient or even not at all to the development of physical and psychical faculties. Interruption of loading causes stagnation of the capacity of performance for all level of athletes. The widely ratified opinion that the load after reaching high level

performances can stopped or even be reduced cannot be proved.

In training it must always be in a certain relation to the individual performance capacity and loading capacity. Top-level performance may be obtained by increasing the training load more quickly and who trained harder than former record holder's in particular sports events, according to training analysis a gradual increase in loading is not as effective for the improvement of training condition as an increase in form of steps after certain intervals. Here the increased load definitely causes real contradictory reactions to the actual capacity and it must disturb the psycho-physiological balance to enforce the organism to form new regulation and adaptation process. However exact recording of the load, permanent observation of the athletes during training and the regular checking of performance development are the essential and important pre-requisites for the realization of the principles of the increasing demand.

On the other hand, we have year-round loading principles in the training system for a continuous development of training condition. Throughout the year training guarantees a high total load which helps for performance development. Year long training should be arranged according to perspective aim, stabilization of adaptation that an athlete can able to achieve best possible results in decisive competitions of the year. In most codes of sports we can sub-divide the whole year to carry out the specific aim and objective from which tasks, the means and structure of load can be derived. Volume and intensity of outer load is a key-factor for making training schedule. The training means and methods may be variable in different countries but one should follow the theory and basics of training in regard to onward effective progression.

One has to point out that it is a definitely not optimum or sufficient if the main competitions are evenly spread over a whole year. By this the coaches and athlete's attention are directed to the subsequent competition in almost each case. Thus, the training is not satisfactory determined according to perspective aim and there is no systematic development of the fundamental that determine the performance.

For reasons of inadequacy of material pre-requisite, climatic adverseness and the organizational defects, the organizer and sports officials especially of the developing countries

may plan the training according to its capabilities and the availability of the resources. For the cause of climate and other organization, a further subdivision of longer stages into section which can be better assessable.

This is also important for better understanding of training methodical indexes; the trainer and coaches should be aware regarding methodical approach to training by the energy system.

### HOW DOES ENERGY SYSTEM ACTS IN SPORTS ACTIVITIES

If we go for sports activities & exercises in the aspect of sports biology, the prime chemical energy ATP acts first to body muscle for energy liberation in different sports. It should be the intention of sports coach and trainer to provide a training workout for his athletes on the basis of accurate scientific knowledge as it relates to the energy system. ATP the source of muscular energy (adenosine triphosphate) or more normally ATP is the immediate usable form of chemical energy for muscular activity. This is one of the most important energy compounds that stored in all cells, especially in the muscle cells. All form of chemical energy available from the food, for better understanding of training methodical indexes, the trainer and coach should be aware regarding methodical approach to training by the energy system. When we are taking food eventually it transformed into ATP form before they can be utilized by the muscle cell. The ATP molecule consists of a large complex molecule called adenosine with three simple components called phosphate groups.

The amount of ATP in the muscle cell is limited and could be depleted in 1 - 2 seconds unless recharged to maintain muscular activity. Thus, immediate synthesis of ATP is necessary. ATP supplies must be kept at peak concentration and must not fall below 60% of its resting levels for muscular activity to continue.

Let us summaries the energy system ATP must be continually produced at rest to maintain homeostatis (maintenance of internal environment) and during exercise to meet increasing energy demand. The three metabolic pathways by which the body can produce ATP that includes anaerobic (ATP – CP) energy system, the anaerobic lactate (glycolytic) energy system and the aerobic energy system. In order to get specific adaptation to each of the energy system, the coach must scientifically design workouts to challenge them. Anaerobic

## Sports Training and Performance

phosphagen speed work stresses the alactate system.

Finally, if a coach has a general understanding of the energy system and the energy continuum, the coach can more effectively design workouts that meet the specific energy demand for the events that his athletes participating.

### CONCLUSION

In sports training the coaches and trainers must be concerned with other branches of training science for example, the knowledge on sports psychology, sports biology, biomechanics and sports nutrition as well. Training is a responsibility for a coach because upcoming and potential trainees are coming to his coach with a strong conviction for developing his sporting performance, so if the coach does wrong in the methodical process in his instruction and workouts then the results will not be satisfactory or not even effective.

One should always remember that the success of the coach depends on the expected performance of his athlete.

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