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Introduction

Lecture - 173
Systematization of Sports Training for Beginner, Intermediate and High Performance

Introduction

Sports training is a very vast area in itself. However it is based on facts i.e. it is scientific, it is systematic and follows a specific path.

Just as the life cycle follows a set pattern right from the time of inception in the womb of a mother and gradually a person ages (chronological age) similarly training too follows a set pattern. The training age of a person differs from his chronological age as training age of a person starts from the day when he sets foot on the play field. It starts from basic and ends when a sportsperson retires from it. As we are aware that sports training is the complex process of preparation of sportspersons. It is a sum total of various parts, phases, cycles, different proportions of training elements, load dynamics etc. In order to decide what part, phase, elements and load is best suited for an individual it is very essential to understand the systematic pattern that sports training follows.

Systematization of Sports Training

Sports training, considered to be a systematic and scientific discipline; the art of artistically defining and bringing out the best out of an individual, a trainee or an athlete; always follows a definite path. It starts at a certain point and continues throughout the sports life of the concerned. It can more simply be exemplified by the very sequence of the existence of a human being, whose life starts when he is first conceived in the form of a single cell in the womb of a mother, the single cell divides and thrives to finally become a foetus, after the birth too an individual passes through different ages and display varied

characteristics that are specific to a particular age group. After a certain point of time the growth of the person ceases but the process of development still continues throughout the life of the individual till death and some perceive even after that. Similarly the day an individual sets his foot in the field of play that is the day that a player is born. The training age, the training state, psychological state, level of technical and tactical knowledge, previous learning and various other factors keeps on adding to the list of variables that would be needed to be considered in the planning of the sportsperson's, athlete's or the individual's training plan. One way of assisting the trainer, coach or physical education professional in the formulation of the training plan is by **systematization of sports training.**

Yuri V Verkhoshansky, the President of the International Association of the Theory and Methodology of Training in Elite Sports in his work on "Organization of the Training Process" has described the systematization of sports training as 'involving the organization of the training stimuli'. This is the essence of the sports training theory's methodological concept, which indicates that the work load has to be considered not as a number of training means and methods, put together to solve a given problem, but as a monolithic or complete unit, in which great care has to be taken of the chronological order of the training stimuli. The unity is given by the progression of the adaptive changes that occur in accordance with the trend of the athlete's or sportsperson's morphological or functional specialization in response to a given load or work regimen. A systematic approach implies continuity, consistency and interdependence of the effects of the training stimuli on the athlete or sportsperson.

Continuity means that work and rest periods should be adequately proportioned, so as to ensure the body's constant functional activity in the conditions determined by the training stimuli. The interval between one work unit and the following one is meant for rest, recovery and recuperation but, for most of us, it is the lapse of time during which the biosynthesis processes induced by the muscular activity are developed. These processes determine the body's functional state; they are therefore, the basis for the following work load and greatly influence its training effect.

Consistency of the training load requires an accurate combination and distribution in time of the work loads, so as to ensure the desired effect.

Interdependence of the training effects implies the combination and distribution of the work loads which must be studied, so that the effect of one load will favour the realization of the following one. Also each of the scheduled work loads determines the conditions that must be satisfied by the preceding loads.

According to Yuri a systematic use of training means must be based on the following concepts:

- The training effect of a given load decreases as the athlete's special preparation level increases, due to the effect of that load;
- The body's functional reaction to a given work load and therefore, its training effect, is influenced by the outcome of the preceding load;
- The training effect of the selected work loads is determined, not so much by the sum of their respective effects, as by the way in which they are combined, their succession and the lapse of time that separates one from the other;

- A variation in the chronological order of the work loads significantly influences their training effect.

A systematized application of training stimuli, therefore, implies:

- A careful choice of the combination of means having the required training potential, i.e. those that are likely to stimulate the desired adaptive reactions;
- An adequate organization of the interaction of training loads having different priorities;
- A gradual introduction of training means with higher potential, so as to maintain the development trend;
- A rational combination of means with a high training effect (intensive method) and means with an optimal effect (extensive method)
- An adequate duration of the selected means sufficient to induce a stable adaptation.

Dr. A.K. Uppal has explained the systematization of the training process of a sportsperson on the basis of the training state of the sportsperson. The training process is simple to figure out, as it begins with the basic training and ends when the aim of sports training is achieved that is the attainment of high performance as and when required. In the light of this statement and on the basis of the training age and training state of the sportsperson, they can be categorized into the following three categories:

1. Beginner
2. Advanced (Intermediate)
3. High Performance

It is however very difficult to pin- point exactly as to where one phase ends and the other begins. It is also very difficult to say the exact age at which a sportsperson should start training for a specific sport. Examples from various fields of sport can be cited where a person reaches peak performance within a short period of time after starting training, whereas it happens that a person training since the formative years of life under the best of facilities is unable to produce results. However researches conducted by professionals indicate that the process of training should begin at the age of 10-12 years and continue till the achievement of high performance comparable to national and international standards has been achieved. The duration of training from beginner to high performer differs from individual to individual, sport to sport and the nature of the activity as well. Further, It has also been observed and established that the training process of speed dominated games are shorter than the training process as compared to strength and endurance dominated games in order to achieve high performance.

As the level of athletes or sportsperson differ on the basis of their training age hence each individual has to receive training that will be specific to his training age as well as training state. Keeping in mind the above mentioned categories of sportspersons, sports training at each level can be classified as follows:

1. Basic Training
2. Advanced Training
3. High Performance Training

Let us now discuss in detail the tasks and the content of the above mentioned three types of training:

1. Basic Training

Change is natural, however change in the performance of an individual can be natural only upto a certain extent. In order to bring about positive and notable changes in the performance capacity of a sportsperson, it is important that he involves himself in systematic and scientific process of educating the muscles of his body. Until and unless each and every cell of the individual is actively involved in the training process it is impossible to produce the desired results. Just as a seed needs to be sowed in the soil and taken care of, provided and nurtured in order for the tiny seed to grow into a plant and reap fruits, similarly the training process starts when an individual commits himself completely and devotedly in the training ground. Proper guidance and valuable inputs on the part of the coach or trainer is extremely essential for the overall development of the trainee from being a person to ultimately transform into a high performance sportsperson.

A very important principle of learning is that everything proceeds from known to unknown, from concrete to abstract, following the same principle of learning, training also starts from its first stage or step known as **basic training**.

Basic training aims at a general long term preparation of a sportsperson. This is the phase where the foundation of optimum performance of the sportsperson is laid. It forms the base for a player so as to move on to the next level. The stronger the base the easier it becomes for a sportsperson to reach the desired level of sports performance at each level in a set time frame. In addition, this level of training also aims to develop qualities of character and will, which is also an important task of sports training (also referred as Psychological Preparation).

The prime focus during this stage of training is placed on the following:

1. Consolidation of health:

   One of the most important factors that need consideration is the health of the sportsperson. In many cases health plays a dominant role in the improvement of the performance of the sportsperson. Moreover health is an important task that needs to be fulfilled and falls under the physical as well as psychological tasks of sports training. If an athlete does not have a sound physical and psychological health, there is no way that even after the incorporation of the best training means and methods and the assistance of world class trainers he will achieved the desired outcome from the training process.

2. Development of motor qualities:

   The development of motor qualities namely speed, endurance, strength, flexibility and coordinative abilities by means of multi-sided physical training so that each of the motor component is equally developed is a must for an athlete or a sportsperson. Each of the motor quality is unique in itself and also has a unique set of functions that it assists in performing. Without the development of the motor qualities the training process cannot move even a single step ahead, as it will be impossible for the athlete to perform well coordinated and balanced movements when all the motor

qualities are not equally developed. The development of motor qualities is most important in forming the base of technical training as well.

3. To develop rough form pertaining to skills:

At the entry level where a trainee has just started to train, the coach should not directly start with techniques involved in the first place, he should first make the child feel comfortable and give him an opportunity to express himself, which will not only be helpful in developing the confidence of the child or trainee but also help the coach to analyze a starting point for the training process to begin. Errors should be rectified on the spot if any or else the incorrect movement will become permanent and may hinder the progress of the trainee to move to the next stage i.e. the advanced training of a sport or an event.

4. To provide competitive experience:

In order for a trainee to give his best at the time of the main competition it is very essential on the part of the coach or trainer to provide competitive exposure to the trainee or sportsperson. The competitive experience gained by the sportsperson through these exposures enables him to learn to react and behave according to the higher demands of the competition.

The training program during basic training is more general rather than specific. As it is in this phase of training period where development of the physical and motor abilities of the sportsperson is to be completed hence, the content of training shall be as follows:

1. To ensure the all round development of athletic ability of a sportsperson a variety of training methods and means should be adopted.
2. Exercise should be selected and performed from other games and sports. A rugby player may participate in Football as similar motor components needs to be developed in both, similarly a basketball player may be involved in netball or volleyball and vice-versa for breaking the monotony and indirectly still work on similar motor components by means of involvement in a different game or sport.
3. Equal weightage should be given for the selection and application of exercises for the development of different motor abilities.
4. The ratio between general and specific training means should be 70:30.

From the points mentioned above it can be clearly understood that more focus should be given to general preparation of a sportsperson during the basic training stage of the systematization of sports training.

As mentioned earlier the exact age for starting the training process cannot be determined as it may vary depending on the nature of the game or sport. However it may be generalized that the basic training of a sportsperson starts at the age of 10-12 years which are considered to be the formative years in the life of a sportsperson. It is seen that the duration of this training period ranges between 3 – 4 years. Since basic training is the stage where the foundation for further training is laid hence the coach should be very careful in designing and implementing the training sessions and all the major and minor errors committed on the part of the sportsperson should be rectified during this training stage to avoid any delay in the training process.

2. Advanced Training

On completion of basic training the sportsperson enters the advanced level of training. As the word itself suggests the demands of the advanced level of training are higher than that of the former. All the qualities that a sportsperson develops during basic training are to be further developed and consolidated. The level of motor qualities and skills developed during the former stage is to be improved. The qualities of character and will are to be adapted to higher motor abilities and skills. As the degree of training load increases, hence the requirements of training also increases. Participation in competitions goes up. Most importantly the sportsperson proceeds from general to specific. He now focuses on the specific sport that he is going to specialize. Keeping in mind all these points the tasks that needs to be fulfilled during this stage can be summed up as follows:

1. Further consolidation and strengthening of health:

   As discussed in the earlier section of the determining role of health in the attainment of high performance, it becomes even more important to further consolidate and strengthen the health of the sportsperson at the advanced stage of training. At this stage the training load is higher than basic training and hence the health of the sportsperson is likely to be affected.
2. Further development of motor abilities:

   As the demands of training increases so does the requirement of further development of motor qualities. Focus shifts to specific motor qualities that are more specific to the selected sport. These motor qualities are more special for the selected specific sport and hence should be trained by adopting relevant training means.
3. Mastery of technique:

   As the sportsperson proceeds to achieve the desired level of performance in a chosen sport it is a must for the sportsperson to acquire mastery over the technique/techniques required for that particular game or sport. The techniques should be implemented under the guidance of experts so as to be more accurate and in case of errors the experts should rectify it on the spot or by means of audio-visual aids.
4. Readiness to undertake task:

   Readiness to participate in the training part is very essential; it not only results in realization of the goals of training but is potent in avoiding injuries as well. Most of the injuries in the playfield occur when the sportsperson is not ready or there is a lack of concentration. The coach or trainer should be aware of the psychological state of the sportsperson and also be observant that the sportsperson is fully involved in the training session with head and heart.
5. Development of self reliance on the part of the sportsperson.

   Psychological preparation also involves the development of self reliance of the sportsperson in himself, the coach and the sportsperson along with other sports scientist undergo high level of training to improve the performance but if the sportsperson does not have confidence and does not believe in himself it is difficult to get the desired results that is performance which may be average or even above average level.

Advanced training is the phase where a sportsperson prepares himself to indulge completely in the competitive setting; hence the training process should be designed accordingly. The contents of training are as follows:

1. Both general and specific training means are to be applied at the advanced stage of training.
2. Training means of supplementary sports are applied in order to improve the motor qualities of a specialized sport.
3. The ratio between the general and specific means of training should be 60:40 or 50:50.

Equal importance is given to both general and specific training during this phase. As discussed earlier the beginning of the advanced stage of training depends upon the performance reached by the sportsperson at the end of basic training. It further depends on the rate of development of physical and psychic qualities of the sportsperson. The duration of the advanced training ranges in between 2 – 4 years. However the actual duration of this phase depends on the performance reached by the sportsperson at the end of the training period. The player by the end of this training stage should be able to attain average or even above average level of sports performance.

3. **High Performance Training**

As the advanced level of training ends the sportsperson is ready for high performance training. High performance training is the final stage of the systematization of sports training. It is highly specific and aims to reach optimal performance standard in a chosen sport, which may be comparable to national and international standards, which is also the ultimate aim of sports training. The sportsperson should attain high performance efficiency at the time of the main competition or tournament or national and international championship (which can be made possible by following the process of periodisation). The sports person should develop an all round personality, good behaviour and positive attitude so as to be a good example for the youngsters.

There are certain tasks that should be fulfilled in order to achieve the aim of high performance training, the tasks are listed below:

1. Specific motor qualities specific to a chosen sport are to be developed to the optimum level. Each and every game and sport requires the development of all motor qualities to the maximum but at this stage more importance is given to the development of the motor quality that is directly specific to the chosen game or sport. For instance in weight lifting the most specific motor quality is strength, in case of a sprinter it is speed, for a long distance athlete it is endurance, for gymnastics and yoga the most important quality may be flexibility and so on.
2. The general fitness of the sportsperson should be developed and consolidated in accordance with the specific requirements. The general fitness of a sportsperson greatly influences the specific qualities of a sportsperson in a specific sport.
3. The technical and tactical aspects of the sportsperson should be developed in such a way that they do not get affected under the stress of the competition. There are no errors mostly in this phase unless there is a change in the theoretical model due to which the sportsperson has to go through relearning process.
4. Focus should also be given to the psycho-motor component of the sportsperson. The intellectual preparation should be optimum and the qualities of character and will, must be accomplished under high competitive requirements of the sport.

High performance training requires preparing the sportsperson in all the four areas that is physical, intellectual, technical and tactical to the optimum level. In addition to the training that the sportsperson has undergone during the basic and advanced level further emphasis is laid on the following two aspects that form the content of high performance training.

1. The selection and application of training methods and means depends upon the aim of high performance training and also on the individual characteristics of the sportsperson.
2. The ratio of general and specific training depends upon the chosen sport and also on the strong and weak points of the sportsperson. The ratio of 70:30 or 80:20 or 90:10 in favour or specific training is found suitable.

This stage of training being the final stage of training lasts the longest in most of the cases as the beginning of high performance training period depends upon the performance reached in a chosen sport at the end of advanced training. The duration of this stage is not fixed and depends upon the rate at which the sportsperson develops and attains the aim of high performance training that is to attain performance comparable to national and international standards.

Conclusion

Sports, today is a big industry and there is no room for errors in it. Even a tiny speck of error on the part of the coach or the sportsperson can lead to huge damage. The training of a sportsperson is a crucial part of the heavy duty that the coach/trainer/physical education professional has at his disposal. In order to guarantee optimal performance he has to be very specific of the path that he will take to lead the sportsperson to the desired level of performance. The **systematization of sports training** plays an important role as it gives direction not only to the coach but to the sportsperson as well about the journey of training that he will undertake. The end of each level of training serves as a check point for both the coach and the sportsperson that whether or not they are heading in the right direction. When the aim of each stage of training is achieved it boosts the confidence of the coach as well as the sportsperson that the training process has revealed its results. Thus systematization of sports training is very essential for the attainment of the **aim of sports training** that is **to prepare a sportsperson physically, physiologically and psychologically for a possible highest sports performance.**