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The role of physical training in sports

Hoshiyar Singh
Associate Professor, College, Sikandrabad, Bulandshahar, Uttar Pradesh, India

Abstract
Aim: The aim of this paper is to realize a brief theoretical description of the physical training in sports. Physical training represents an integrated and permanent process, present at all times, in every period of the sports training. Modern team sports imply a superior physical training due to the fact that the game rhythm is steadily increasing. Defense game involves an evolved physical training. This is because the rhythm it is given by the attack team, while the defense team must adapt. Another reason that supports this idea is the movement of the ball which is faster than the players.
Conclusions: To have a better game, both in defense and attack it is absolutely necessary the permanent improvement of general and specific physical training hints.

Keywords: physical training, sports, game

Introduction

A training program is more than just an accumulation of volume or training miles. To create a successful program one must incorporate many complicated components, all of which must be combined in the right way in order for an athlete to be successful. In addition to training, an athlete's work and personal life need to be factored in for long-term success.

There is no one template or plan that will suit all athletes – this is why experienced coaches are necessary to be able to draw from each of these components to create a cohesive plan that works for that athlete at that moment in time. Coaches also need to be skilled in each of the components, and to know when to bring in outside assistance when necessary.

Physical training, the component of sports training, marks the entire training process, determines the performance of athletes both in training and in performance, and the evolution trends of the game world- wide indicate even an increase in the importance of this factor. In sports activity, the level of physical training is actually represented by the ability of the athlete to perform motor acts in different regimes of speed, strength, skill, resistance in order to achieve individual and collective actions that are part of the sports technique. (Simion, 2011) [7].

In some cases, the physical training has been the secret ingredient of sports training to reaching high level performance, because team sports nowadays are characterized by complex actions as: receiving and passing the ball on and off, steering changes, jumping, shifting the temple when running, etc.

Thus, the body of the athlete must be prepared to cope with the training requirements, to highlight an optimal evolution in order to achieve better results. The main objectives of physical training are to increase the physiological potential of the athlete and to develop his qualities to the highest level.

Physical training develops in the next session

- General physical training;
- Specific physical training
- High level of motive qualities. (Bompa 2001)

The athletes develops the first two stages during the preparatory phase, when they are building a solid base. The third phase is specific to the competitive stage, when the main objective is to maintain what they have achieved and improving the necessary qualities.

Table 1: Development of Physical Training

The phases of Preparation Development stage	The preparatory phase		Competitive stage
	1	2	3
Objective	General physical Training	Specific physical training	Specific improvement of motive qualities

The longer the first phase is, the better the performance is in the competitive stage.

Fig 1: Components of General Physical Training

From this point of view, physical training is a highly complex Process that requires a certain methodology for it´s realization.

General physical training: General physical and fitness training works towards broad goals of overall health and well-being, rather than narrow goals of sport competition, larger muscles or concerns over appearance. A regular moderate workout regimen and healthy diet can improve general appearance markers of good health such as muscle tone, healthy skin, hair and nails, while preventing age or lifestyle-related reductions in health and the series of heart and organ failures that accompany inactivity and poor diet. Diet itself helps to increase calorie burning by boosting metabolism, a process further enhanced while gaining more lean muscle. An aerobic exercise program can burn fat and increase the metabolic rate.

General physical training: in sports training, includes a unitary system of means and requirements regarding the performance of the athlete in training and competition. It enriches the general background of driving skills, ensures harmonious development without which no team sport can be practiced. From this point of view, the general physical training is done with means and methods of general character, borrowed from other branches of sport, by means of transfer phenomenon, so-called nonspecific means. The main task of general physical training is to enlarge the physical training indexes so that the athlete does not encounter difficulties in making the effort actions.

A player can reach the higher level of motive qualities only by a general physical training program. It´s very important to highlight through general physical training. For young perspective athletes, general physical training it´s about the same in all branches of sports individual or team sports. For advanced athletes, the general training correlates with the needs of the sport and with individual characteristics of the player. The means for general physical training are taken, adapted and used from many sport branches or created and adapted by specialists.

There are various exercises from athletics, gymnastics, dumb-bell that are used with frequency, and bring an improvement to the technique actions, training skills, body resistance, Functional capacity in order to adapt to different efforts, high speed and improved efficiency. With the passing of time, while the training gets better, the level of general physical training has to reach, also, high standards. At the end of the preparatory phase, the share of general physical training decreases, leaving it´s place to specific physical training.

Specific physical training: Specific physical training is built on the basis of general physical training. It´s main objective is to continue with the Players physical development according to the team sport that they have been chosen. The improvements made to physical potential of the player, leans the path to higher effort volume during training and finally in contests or competitions. Except that, having a very good base in physical training helps in recovery, which is done much quicker.

The most sport specific training that an athlete could take part in is practising the actual sport itself. Therefore, true sport specific training should be left to the sport coaches: batting coach, golf instructor, tackling coach, etc. However, strength and conditioning professionals can develop programs that are extremely valuable when it comes to training the correct energy systems, developing specific muscle groups distinct in each sport, and practicing the precise movements found in the athlete's respective activity. Unfortunately, the lines are sometimes blurred when coming up with training strategies and misconceptions arise, that when put in an athlete's training program, can actually make them regress instead of progress. An example of where training appears to be sport specific and helpful but is actually not beneficial could be a baseball player practicing their swing with a weighted bat. On the outside, this may seem to help the athlete swing faster or harder because of

the excess weight but in reality, it just requires you to develop new motor skills to adjust to the increased weight of the bat. With some practice, you might grow accustomed to the extra weight and start connecting with the ball well, but when you take that weight away during game time you will be so adapted to it that your swing with a regular bat will be thrown off. Therefore, it is better to develop the muscles being used in the swing through strength training and simply practice swinging more rather than compromising your swing by training with a heavier device. That is an example of why it is so important to understand the correct and incorrect way of incorporating sport specific training into an athlete's programming.

Within the structure of modern sports training, specific physical training has an important weight since the second half of the preparatory period - towards its end - and throughout the precompetitive and competitive period. (Nicu, 1993) The major role of this type of training is to make a decisive contribution to the quality training of athletes.

However, the only one can't saturate the requirements of improving the qualities, skills required by each sport branch, and hence the ability of the body to cope with various specific efforts. Between the two types of physical training, there is a relationship of interdependence, both of which contribute to achieving superior sporting results by increasing the performance of the athlete and adapting the body to effort. In the physical training process it is assumed that, although in very different proportions, all the motoring qualities are developing. It aims to achieve higher performance availability for each individual motive quality.

In sports the speed may be define as the ability to execute motor action (movement) under given condition in minimum possible time. In other words speed may be defined as the capacity of an individual to perform successive movements of the same pattern at a fast rate.

Like strength and endurance abilities speed is also one of the important conditional ability which depends upon the nervous system of the body. Looking into the complex nature of movement of different games and sports/event which required some distance to be covered in the cyclic manner for example 100 mt. Dash but if we thought of boxing where boxer required to perform certain movement with high speed where the sportsman do not need to travel the distance in relation to time. These types of movement are called as acyclic movement. There are certain sports movement like dribbling and jump shot in basketball where both type of cyclic and acyclic movements are required to perform a task.

In order to develop speed, at team-sports exercises will be preferred, from technical procedures and technical-tactical actions executed in contest conditions, game sequences, fast attacks, counterattacks, technical procedures, stacks, dynamic games. The breaks between repetitions have to be big enough in order to ensure a good recovery and to be prepared for the next exercise.

Athletes are themselves the most important contributors to their own development and performance. Important questions are therefore what characterizes their development and how parents, friends, coaches and teachers contribute to this development. In order to develop skills, athletes are dependent on knowing what's expected from, what skills they should develop and which stage of development they are in. Skill can be developed at younger ages. Progress is much higher than speed. The optimal periods of influence are between 6 and 10-11 years. The importance of skill lies in the following:

- Promotes effective action and action under various conditions;
- Determines the movements in optimal rhythm and tempo;
- Promotes the superior capitalization of other motor skills;
- Promotes the restructuring of the movements in the training phases high performance and in improving driving skills basic and applicative.

There are several different types of skills

- Cognitive: or intellectual skills that require thought processes
- Perceptual: interpretation of presented information
- Motor: movement and muscle control
- Perceptual: motor - involve the thought, interpretation and movement skills

How do we teach a new skill?

Various methods can achieve the teaching of a new skill:

- Verbal instructions
- Demonstration
- Video
- Diagrams
- Photo sequences

In sport training, the following measures are required, and methodical guidelines for skill development:

- The emphasis in training will be put on mastering as many numbers as possible great motor skills;
- Exercises must present a high degree of difficulty; as the subject becomes accustomed to an exercise, it will increase its difficulty enhancing the demands on the precision of the movement, full motion coordination and its components; and the spontaneity of changing the situation;
- Long enough breaks should be provided to allow complete recovery of effort
- The workload in a lesson will be small, instead it will program a large number of lessons with development goals the various components of skill;
- The most favorable periods for skill development are childhood, puberty and adolescence when the body possesses it higher plasticity than in adulthood.

At 6-7 years, it can work well on balance, joint mobility and muscle strength (local) which makes it possible to acquire a great number of skills motors.

Resistance, the quality that allows sustaining physical activity for long periods of time, is important in those sports that last longer than 1 minute. It is necessary to have a good resistance in all team sports from volleyball to football. The main advantage of resistance in most sports is that it helps the athlete to tolerate the demands of training and competitions. An athlete with a good base of resistance will cope much more easily with training, competitions, contemporary sports.

As well as the speed, the resistance - is heavily influenced genetic, because the proportion of slow and fast muscle fibers determines to a good extent the potential for resistance of an athlete. Genetic baggage and biological

structure represent up to 70% of the final performance in a sport. However, the mere fact that an athlete has natural qualities for resisting physical activities does not mean that he will always be the best performer. Ethics in preparation, determination and motivation to work hard can often fill the lack of talent.

Force is simply defined as the ability to overcome a resistance. Principles of force offer guidance for teaching sport techniques and leveraging training strategies that require the development of force--pushing or pulling. Force is the product of the mass (weight) and acceleration of an object or person. These principles and examples concern (a) general applications, (b) athlete-produced force, and (c) force dissipation.

Strength increases the level of performance and manifestation of many sports skills. All the skills that athletes have to perform to defeat different forms of resistance will gain from strength improvement. Preparing for strength not only helps the athlete to prevent injuries, but also assures a strong base for subsequent phases at high performance. A misconception about strength training is that it would be profitable only for bodybuilders and weightlifters. As demonstrated in the past two decades, many athletes have improved their performance with strength training faster than insisting on the qualities specific to the sport discipline chosen.

Power training enables an athlete to apply the greatest amount of their maximal strength in the shortest period of time. This is crucial for many sports men and women who will rarely be required nor have the time to produce maximal forces. Most athletic activities involve far faster movements and far higher power outputs than are found in maximal strength exercises. An athlete can be exceptionally strong but lack significant explosive power if they are unable to apply their strength rapidly.

Traditional strength training typically alters the top half of this equation – increasing the ability to apply a maximum amount of force. But for power to be maximized the time component must also be altered. This is the aim of power training – to reduce the amount of time it takes to apply a set amount of force.

Maximum force production occurs when the speed of movement is very low (i.e., performing a one repetition maximum lift) or zero such as performing a static or isometric exercise.

Conversely, as the speed of movement increases, force decreases and at very high speeds force production is very low. Between these two extremes is an optimal point for power development. In fact, maximal power occurs at intermediate velocities when lifting moderate loads. Peak power output is typically seen when loads of 30% one repetition maximum (1-RM) are used.

This relationship between force and velocity and its affect on power explains why an athlete can be exceptionally strong but lack significant power if they are unable to apply much of their strength over a short period of time.

Assuming an athlete has maximized his or her ability to apply force (through maximal strength training), it would be beneficial if they could train to increase the rate of force production. Increasing the rate at which strength can be generated positively alters the time aspect of the power equation above. The goal of power training is to increase the rate of force production and there are several methods that have been devised to do this.

Mobility targets the amplitude of movement around a joint. Improving mobility plays a fundamental role in the training program for the young athlete, as good mobility allows it to easily execute various moves and skills and contributes to the prevention of injuries.

The ability to perform well a wide range of moves and skills depends on the aptitude of the movement, which must be higher than it requires the specific skills of the sport. For example, to take a high kick with a ball in a soccer match, players must raise their legs to the chest level and for this they must have sufficient mobility. If they do not have so much mobility, they will not be able to absorb and perfect the various movements practiced in this sport.

Conclusion

- Physical training is one of the most important factors in athletic training in order to achieve great performance
- Developing and training the body for activities and movements with applicative character is one of the main objectives in physical training;
- Through this training process is being pursued the strength and maintaining a good health of the players, increasing the resistance of the body;
- Through physical training a player reaches an improvement of motor skills and an increased ability to adapt to any new process or any difficult situation to improve the technique and tactical action;
- The process aims for improving the physical fitness of speed, force, skill and resistance;
- It is being watched getting a general degree of training as high as possible and easier entry into sports form;
- To have a better game, both in defense and attack it is absolutely necessary the permanent improvement of general and specific physical training hints;
- With a good physical training a team can face the attacks of the opponents without losing the pace and perform at a high level;
- A good physical training helps the players to have a better recovery after effort actions, trainings, competitions and prevent the unfortunate injuries;
- Physical training must be done by qualified people, following a well-established training plan.

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