

## **Soccer Weight Training Thoughts on Weight Training for Soccer**

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Presently many coaches are reluctant to use weights in their fitness training for fear of their players' losing flexibility. Many have mistaken weight training for weight lifting. Weight training is used in various sports in America and is slowly being accepted in soccer.

In Football Tactics and Teamwork, Charles Hughes states, "There is only one way in which to gain strength and that is by progressive resistance activities which almost invariably take the form of weight training...There is also little doubt that football managers in general do not accept the efficacy of strength training. Fears of the players becoming muscle-bound are completely without foundation."

Weight training is not dangerous unless players and coaches approach it in an irresponsible manner. There is no reason why weight training should not be done as part of in-season training.

Weight training is of great value to the soccer player. It can help injured players recover quickly and athletes to maintain a high level of fitness. It is only with weights that the overload principle may be applied to the soccer player's development of power. Power is defined as strength plus speed. Speed of movement, in every aspect (not just running) is of vital importance in soccer. To perform a skill with quickness and strength is a great advantage to the athlete.

Hubert Vogelsinger promotes weight training in his book, *The Challenge of Soccer*. He feels that strength and power are necessary components of the player's arsenal. Vogelsinger believes a player's power can be improved only by increasing the resistance or overload on the muscles. One method he uses to accomplish this is isotonic or dynamic training. Isotonic exercise is a form of conditioning in which the muscles strain against a moveable resistance. In such an exercise the muscles are subjected to stress while moving through all or part of their range of movement. For isotonic training to be effective Vogelsinger states, "A fairly heavy weight is needed for improving strength, but the repetitions should not exceed ten. If the player loses form while lifting or repeating, it is obvious that he is doing too much."

In *The F.A. Guide to Training and Coaching*, Allen Wade writes that the most effective form of isotonic training is with weights. Isotonic training is necessary to increase strength and power. Wade advocates weight training during both the pre-season and in-season. Twice a week is the most a workout should be done during the season.

Many skills in the game require power in both the field player and the keeper. They include aspects of shooting, passing, tackling, heading, diving, boxing and parrying.

The overload principle refers to weight stress beyond the present ability of the athlete. It may be applied to augment power (through rate of movement), strength (through increased resistance), or endurance (through increased repetition).

The coach may want the athletes using one another for the necessary weight and resistance. This may be accomplished through pushing, pulling and lifting one another. This certainly provides the needed overload and is also fun. Yet it is not as accurate as using weights. By using weights the athlete and coach may keep an accurate record of progression and this in itself may provide the extrinsic motivation to continue and improve.

Schmid, McKeon, and Schmid (1968), trained soccer players on weights and state: "It has been found that the average vertical jumping ability of a group trained with weights improved nearly three inches."

Many coaches try to include weights in their fitness programs, but they are not sure what exercises to include and exactly what they are trying to develop. The legs of course are of utmost importance. In the legs there should be a 60% to 45% ratio of quadriceps to hamstring strength. Their development is vital to the player not only for running, but also for jumping, kicking, and tackling, trapping and passing. For the field player it is important to develop muscles of the abdominal and lower back region, for throw-ins, powerful headers and sprinting. These areas are also essential to the keeper for diving, collecting high balls and many of the contortions he will be required to make to keep the ball out of his net. The arms and shoulders are quite important to the field player for heading, throw-ins and legal shoulder charges. They are vital to the keeper for catching, punching and deflecting. Furthermore, if the player's upper body is well developed he is less likely to be injured when contact is made with other players or the ground.

In all exercises the muscles must operate through their full range of motion (isotonic/isokinetic). Likewise, at the end of the workout perform static stretching for flexibility and jog one half mile to remove waste products within the muscles. This will greatly reduce the chance of muscle soreness and stiffness the following day.

Studies have shown that a high level of strength development can degenerate significantly after as little as 96 hours of normal activity. Therefore, to maintain or increase muscle strength during the season an athlete should continue isotonic or isokinetic work at least twice a week.

The following exercises are beneficial to the soccer player.

1. Leg Press – hip extension
2. Toe (heel) Raises – plantar flexion
3. Leg Curls – knee flexion
4. Leg Extension – knee extension
5. Bench Press – horizontal adduction and elbow extension
6. Sit-Ups – lumbar flexion (on a slant board with a weight held behind the head)
7. Back-Ups (Roman curl) – lumbar extension (with a weight held behind the head)
8. Triceps Extensors (French curl) – elbow extension
9. Latissimus Pull – shoulder adduction
10. Military (overhead) Press – shoulder adduction with upward rotation and elbow extension
11. Side-Ups – left and right lateral flexion of the lumbar-thoracic spine
12. Dips – elbow flexion and extension
13. Lower Trunk Curl – double leg hip extension

The players should workout with 50% to 75% of their maximum lift for one repetition (MR) and no more than ten repetitions should be done. There are many types of weight training devices in use today; the coach should adapt his program to what he has available.

During the season weight training should be reduced in order to allow more time to develop ball skills and individual/group/team tactics, but retained so that muscle power is maintained.