How to Keep Your Team Healthy During the Soccer Season

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A challenge for many coaches during the soccer season is to keep their players emotionally and physically healthy for league and tournament participation.

The goal of this article is to provide players, coaches, managers and parents with some helpful information in the hope that the player and ultimately the team will stay healthy as the season progresses.

The information presented is based upon several lectures I attended in Atlanta, Georgia at the US Youth Soccer Symposium in February 2002. Speakers included presentations given by Brett Barnes, MD, Orthopedic Surgeon, Council Bluff, Nebraska; volunteer to the National Team. Kristine Clark, Ph.D., R.D. Director of Sports Nutrition at Penn State University and Don Kirkendall, Sports Exercise Physiologist of Chapel Hill, North Carolina. In addition, I have utilized one of my favorite books, an outstanding soccer resource book written by Lauren Gregg with Tim Nash, titled "The Champion Within."

Preparation and prevention are the two primary components of a teams' health and participation success.

Preparation include:
- Pre season exam
- Health Insurance coverage
- Pre season conditioning

Prevention includes:
- Nutrition and Hydration
- Maintaining Conditioning activities
- Warm up and cool down activities
- Recovery
- Proper Equipment

<u>Preparation</u>
In order to participate in soccer, players need to be physically and emotionally fit for the game. Per Dr. Brett Barnes, it is important that players have an *annual physical exam* by their physician to ascertain their overall state of health as well as determine their state of physical fitness.

The average soccer player in Minnesota is not playing year around and yet they are expected to get in shape within a few short weeks for games. The player goes essentially from a sedentary lifestyle to a physically demanding routine of soccer practice including skill development and running for several hours, sometimes 5-6 days/week. This is over and above the athlete's school, work and home routines. This change in routine can be shocking for some athletes, making them prone to increased stress, sleep deprivation and potential for increased illness as their body adjusts to the increased activity and physical demands upon their body. It is imperative that the athlete start out his/her season healthy…in order to stay healthy.

In addition, ***health insurance*** is a must for athletes. Parents should check their policy for adequate coverage in anticipation of an injury and/or illness. With older players and those who have graduated from high school, there may be requirements that the player be a full time student in order to maintain their health insurance coverage. An injury requiring emergency medical assessment, intervention and treatment can be costly, especially if the injury involves ambulance transportation, emergency room and/or hospitalization, medication and after care services such as physical therapy. Some insurance plans do not provide all of the above coverage at 100%.

All MYSA registered participants are provided secondary accidental medical insurance by MYSA. This coverage picks up most additional charges your primary policy does not cover. It is imperative that MYSA registered players file their initial injury paperwork within the required time allotment of 30 days. This paperwork is available by contacting the MYSA office.

Pre season conditioning is a key factor that is often overlooked in importance by the player. Player's need to make the choice to be fit and to do whatever is necessary to accomplish the goal of fitness. In addition, players need to recognize the physical demands of being a soccer player. With this is mind, player's need to train themselves to meet this demand. A knowledgeable coach or a trainer should oversee a quality-conditioning program. Player's should keep a training log and write down all of their activity. There should be a systematic approach to training, which includes a balance of training, competition, recovery, and rest. Conditioning includes aerobic and anaerobic exercise activities. Aerobic training is the endurance component; it is the conditioning base. It involves longer, more consistent and steady activities such as a 20-minute run. Anaerobic training refers to shorter, more explosive activity such as sprints. It is unrealistic to expect that a player during the start of the season be able to run 4-5 miles with his team when he/she has not accomplished a 1-2 mile run. Conditioning is a process of development, which lays a "base" for successful participation and fitness for a player. Conditioning includes position-specific training, strength training, weight and flexibility training, speed training and recovery training. Soccer fitness is a player's ability to recover quickly from performing an activity.

Since soccer players' use different types of running during the game, the player must train for them all. The game is a balance between sprinting, cruising, jogging, walking and recovering. Don Kirkendall, Sports Exercise Physiologist, Chapel Hill, North Carolina has studied the demands of the game upon the female player. Understanding the demands of the game is important to helping the athlete to train what the game requires of a player. He points out that the game is generally divided into five speeds.

1. Walking: Two-thirds of the game is spent walking or jogging.
2. Jogging: Two-thirds of the game is spent walking or jogging.
3. Sprinting: 800-1000 meters out of six miles, or a half-mile out of six miles is spent sprinting in multiple sprints of ten to forty or so yards.
4. Cruise: One-and-a half miles is spent cruising.
5. Backwards: A small amount.

"An important thing to understand about these training concepts is that you train your ability to run at a particular speed and lower. In other words, if you train at a jog you get proficient at a jog and at walking. If you train at a cruise, you get good at a cruise and walking and jogging. So, it is important to say, "I'll train at a cruise so I will improve my ability to cruise, jog and walk."

An athlete has a better chance of success if they schedule their training into their daily schedule, find a training partner to hold each other accountable, keep a training journal and trust the process.

Mental conditioning pre and during the season can be an asset to an individual player and team. (For information regarding "Psychological Skills Training and Mental Preparedness", refer to separate article written by Lani Hollenbeck, in this edition of Soccer Times).

Athletes who implement conditioning as part of their routine pre-season have an advantage over other players in that they are more successful on the field in endurance and recovery. In addition, they can focus on skills and game tactics without worrying if they can "keep up."

Prevention

Nutrition and Hydration are areas that have a direct impact upon performance. Kristine Clark, Ph.D., R.D., Director of Sports Nutrition at Penn State University offers the following 5 Tips for more energy and rapid recovery.

1. Carbohydrates energize muscle cells! Carbohydrate rich foods or beverages should be part of every meal or snack. Examples include fruits, vegetables, dairy products, and fruit drinks. Specific food suggestions include whole grain and iron enriched cereal, bagels, low fat crackers, pasta, salad, raisins, bananas, oranges, sunny delight, yogurt and low fat milk.
2. More calories mean more energy! More energy is everyone's goal. Choose foods or beverages rich in carbohydrate and protein to boost calories. More calories will boost energy levels. Drinking fruit drinks, eating applesauce and peanut butter are great ways to add nutritious calories to the player's diet. Specific food suggestions include doubling up on portions of all the good foods the player eats. (Cereal, pasta, turkey, chicken, bread, and bananas)
3. Eat foods and beverages with protein and calcium for growth, recovery and bone health. Protein and calcium are nutrients that support muscles after exercise. Protein speeds recovery of stressed muscle cells while calcium strengthens bones to reduce stress fracture risk. Calcium also plays a role in muscle contraction and may reduce risk of cramping. Calcium-fortified rich foods like pasta, cereal, and Sunny D are useful ways to boost calcium, carbohydrates and calories.
4. Carbohydrates AFTER exercise make more glycogen-the muscle's internal fuel source. After workouts, muscles are exhausted. Hundreds of carbohydrate calories were used for energy. It is now time to reload carbohydrates to prepare for the next day. Eating carbohydrates soon after competition increases the chance of building a special storage fuel, glycogen, much faster. Any carbohydrate rich food or beverage can make glycogen. Try these ideas after exercise for stocking muscles with glycogen. Sandwich (any type), Sunny Delight, banana, yogurt, cereal and milk, fruit salad, graham crackers and milk.
5. Drink more fluids—dehydration equals fatigue! Athletes are known for not drinking enough. Drink more fluids, sports drinks or plain water. Fluids that contain carbohydrates will energize and hydrate!

   Drinking rules:
   16 oz. before exercise
   4-6 oz. for every 15 minutes of exercise
   16 oz. for every pound lost during exercise

Research shows that athletes will drink more volume if the beverage tastes good and is flavored. Sunny delight is a refreshing orange drink that provides energy and a big boost of calcium for bone health and muscle contraction. Gatorade is a favorite sports drink for athletes with balanced amounts of easy to digest carbohydrate and water.

In conclusion, athletes should eat a variety of foods, with over half of their total intake from carbohydrate sources.

For additional information regarding nutrition for athletes, refer to the article titled "Fit For The Game" http://www.mnyouthsoccer.org/programs/fitforthegame.htm

The value of *warm up and cool down* is another area overlooked in importance by the coach and players. Coaches need to plan time for these activities pre and post league games and during tournament play. The results will make a difference to your team.

The purpose of warming up is to allow energy systems to speed up and to get ready for the work they will do. Warming up allows muscles and connective tissue (ligaments and tendons) to be stretched to their working lengths and reduces injury potential. Warming up allows players to go

through the motions of their skills and to allow the player an opportunity to focus on the task at hand. Warm up elements should include activities to raise the heart rate, game specific movements and stretching.

Cool Down objectives include the important removal of waste products from the muscles after exercise and an opportunity for stretching work. Cool down activities should include game specific movements, which maintain blood flow and assist in waste removal. Longer hold stretching, limb shaking, and rehydration can achieve cool down objectives.

Recovery is as important as training. Recovery methods include rest, cross training, stretching, the two-hour window of carbohydrates after exercise and competition, massage and periodization.

Players need adequate amounts of rest pre and post training and competition. This can be hard to accomplish during tournaments and/or when traveling out of town. Coaches can set their team up for success by evaluating each tournament on their own merit, evaluating the necessity of out of town travel and adequate hotel/travel arrangements. Coaches need to carry an adequate amount of players on the team to tournaments and provide for rest breaks away from competition.

Cross training is the use of non-sports specific activity for pleasure or exercise. Examples include bike riding, roller blading, racquetball or basketball, swimming, volleyball.

Periodization is a systematic approach to training within a week, during the season and over the course of a year that provides the necessary balance of training, competition, recovery and rest periods.

Massage does not have to be preformed by a professional masseuse. Players can partner up and rub each other's legs and assist one another in stretching. An excellent Self-Massage Therapy article, authored by Steve Slain is located on page 73 of book, "The Champion Within," authored by Lauren Gregg with Tim Nash.

Players need to listen to their bodies and take of injuries through prevention, treatment and rehabilitation. Being injured is a not an excuse to get out of shape.

Player equipment can add to the success or detriment of a player. Players should have quality shin guards that ideally cover the shin. While the best shin guards generally weigh more, they offer the most protection. Shin guards containing air cells is the preferred equipment.

The most expensive shoe is not necessarily the best shoe. The soccer player's shoe must fit the player's foot. Players cannot play with shoes that are too small or with the expectation that the player will grow into the shoe. Shoes should be purchased with the soccer sock on the player's foot at the time of purchase. Blisters and calluses are indicative of poor fitting shoes. Long-term problems, such as plantar fasciaitis can also develop.

In conclusion, individual players do have the ability to contribute or take away from their teams' success in staying healthy during the season. I encourage coaches and managers to sit down with players and their families' pre season and have an open discussion of team goals and expectations for implementing a plan for players to stay physically and mentally fit and healthy during the season.