

Soccer Fitness and Nutrition Guidelines

"A champion is someone who does not settle for that day's practice, that day's competition, that day's performance. They don't live in the past. You can't step out onto the field and expect anyone to roll over because of what you did a year before. Champions think about that every day. You need to stay on the edge of your game. You need to get better every year. You need to leave them in the dust and leave no question of who is the best. That's what a champion is, that person who perseveres and doesn't ever get satisfied with what they have done in the past."

-- Brianna Scurry, 1996 Olympic Gold Medalist

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"Somewhere behind the athlete I've become - many hours of practice, hundreds of games, coaches who pushed me, and fans who cheered for me - is the little girl who fell in love with soccer and never looked back. I play for her." -- author unknown

1. What is fitness?

There are different definitions of fitness actually means, but one common way it is described is as the 5 S's

- Speed
- Strength
- Stamina
- Suppleness
- Skill

Two other S's sometimes associated with describing fitness are

- Specificity (what do you need to get fit for)
- Spirit (psychological aspect)

One key element is specificity, in that what you want to be fit for, determines which of these S's has the most weight or importance. For example, a golfer would not need much speed but would need a lot of skill.

A 100m sprinter, needs speed, strength, but not much stamina, a gymnast needs strength, skill, suppleness and stamina. However this stamina is different from the type of stamina that an endurance runner needs.

Team sports like soccer make it even harder to determine what areas of fitness are required. The types required will depend upon positions and role in the team, but one key area is skill and specificity. Soccer players should be soccer players first and athletes second. This doesn't mean that their athletic areas of fitness, speed, strength, stamina etc. are not important, because they are, but skill and specificity and perhaps spirit are the most important.

Having said that, a very skillful player who cannot last the whole match due to lack of stamina, or cannot get to the ball due to lack of speed, is not as useful to the team as the player who has slightly less skill, but more speed and stamina.

There are two specific types of stamina that we are interested in and these aerobic and anaerobic.

Aerobic

Aerobic fitness determines the level at which you can take in and use oxygen to perform an activity. An activity like walking doesn't put much stress on your body and most people can cope with this aerobic activity. Aerobic activities are activities like jogging, where you can continue without getting too tired. You work at a rate which means you don't get completely fatigued or out of breath. Aerobic training will increase the level at which this fatigue takes place, and will make your heart and lungs more efficient for exercise. You will be able to run further and faster before getting tired.

Anaerobic

Anaerobic fitness determines the level at which you can work at a high intensity. This usually means short bursts of activity, where you will often be out of breath. You are working at a level where your body cannot provide enough oxygen and your muscles need to get energy from glycogen. You can only work for a short time at this level before you get too fatigued and go into something called "oxygen debt". An example of anaerobic exercise is sprinting. Anaerobic training, will make your body more efficient at using glycogen as a stored fuel and also help it deal with oxygen debt. One effect of oxygen debt is the buildup of lactic acid, which is felt when your legs for example, feel a burning sensation at the end of an intense long sprint. This lactic acid needs to be removed from muscles as quickly as possible and anaerobic training helps make your muscles more efficient at coping with lactic acid and better at removing waste products from muscles.

Soccer fitness

Soccer players need a combination of aerobic and anaerobic fitness due to the nature of the game and the fact that there is continuous movement with lots of short bursts of more intense activity. Some positions require higher levels of anaerobic fitness than others, some require more aerobic fitness. A midfield player, is required to cover a lot of ground during a game and needs a good aerobic engine. A striker on the other hand requires short bursts of repeated activity and requires more speed and anaerobic fitness.

One key aspect of fitness that soccerfitness.net recognizes is that each player is different and has different training requirements dependent upon their inherent physical abilities, their desire to train, age and position played. Soccer is a team sport and as such, players train together as a team. This is important for many reasons, but it also means that not all conditioning type sessions or activities have equal benefits across all players.

Where time is available to test and analyze results, it is much better if programs can be tailored for each player or group of players with the same requirements. I feel this is important from around the age of 13 and up, when the effects of training have much more of an impact. Conditioning and speed training at 10-13 years has less impact. A recent FA coaching report, suggested that players 10-12 benefit from training in that it prepares them physically and mentally for training when they are older. Their motor skills develop and they learn skills like how to run fast, as well as obvious ball skills when carrying out normal soccer skills training.

Once past puberty, speed endurance and strength, speed sessions will have more impact. Before that stage, sessions should not be too intense, involving shorter sessions with little emphasis on stamina. Plyometric and strength building activities should be carried out with great care pre-puberty. Soccerfitness.net prefers to use low level strength and Plyometric exercises with younger players, only to get techniques right, and prepare the body for more intense training when they get older.

At all times, however, speed and conditioning sessions are secondary to work done with the ball. Individual skills and team play are the key elements to successful, but having fitness can only make a good player better.

2. Pre-season Preparation

This initial phase of conditioning takes place in the early stages of pre-season and is designed to build up your base fitness, it is important that effort is steady and continuous. Do not start too hard and find yourself too tired to continue. You need to pace yourself so that you get the most out of each session.

Most sessions are designed to take place on a soccer pitch or other type of sports field. It is better to take the first two or three sessions at an easier pace and then build up the intensity as your body and mind gets used to this type of training.

Allow one day of rest in between each session.

11 and 12s should aim at between 2 and 3 sessions a week.

13s and up should aim for 3 to 4 sessions a week.

If you are doing other activities or sports during pre-season, then you will not need as many sessions per week.

Examples

Each session has a name e.g.: 1A, this is the session name that you record in your training log.

Each session begins with the warm up and ends with the warm down.

After the main part of the session, before the warm down, you need to take your heart rate and recovery rate.

Warm Up

- 5 mins easy jog
- 5 mins stretching
- 2 mins jog

Warm Down

- 2 mins easy jog
- 5 mins stretching

All sessions should take place on grass with runners rather than soccer boots. Where “laps” is referred to, this means laps of a soccer pitch or similar sized area of grass “Jog” means slow, easy jog, not walk! If you have to walk at any time, then you are working too hard in the effort phase.

Remember to log your heart rate at the end of the main session and your recovery rates.

BT1

- Warm up
- 20 mins steady run
- Heart Rate Check
- Warm down

BT2

- Warm Up
- 5 mins fast jog
- 8 laps, work hard on lengths, jog recovery on widths.
- Heart rate check
- Warm down

BT3

- Warm Up
- 5 mins fast jog
- 2 laps – work hard on lengths, jog widths
- 2 laps – work hard on 1 length and width, jog diagonal back to start
- 2 laps – work hard on 1 length, width and length (3 sides), jog width
- Heart rate check
- Warm down

BT4

- Warm Up
- 5 mins fast jog
- 10 lengths – work hard ½ length, jog ½ length
- Heart rate check
- Warm down

BT5

- Warm Up
- 5 mins fast jog
- 6 laps – work hard on 1 length, width and length (3 sides), jog width
- Heart rate check
- Warm down

"The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather in a lack of will" -- Vince Lombardi

3. Aerobic Sessions

This second phase of conditioning takes during the season and it is recommended that players 13+ do at least one of these types of session a week. For players that require more aerobic conditioning, two to three sessions a week is advised, providing these sessions can be fitted in around team sessions and matches. It is important that these sessions are continuous, so don't start too hard and find yourself too tired to continue. You need to pace yourself so that you get the most out of each session.

Most sessions are designed to take place on a soccer pitch or other type of sports field.

Examples

Each session has a name e.g.: 2A, this is the session name that you record in your training log.

Each session begins with the warm up and ends with the warm down.

After the main part of the session, before the warm down, you need to take your heart rate and recovery rate.

Warm Up

- 5 mins easy jog
- 5 mins stretching
- 2 mins jog

Warm Down

- 2 mins easy jog
- 5 mins stretching

All sessions should take place on grass with runners rather than soccer boots. Where “laps” is referred to, this means laps of a soccer pitch or similar sized area of grass “Jog” means slow, easy jog, not walk! If you have to walk at any time, then you are working too hard in the effort phase.

Remember to log your heart rate at the end of the main session and your recovery rates.

S1A

- Warm up
- 5 mins fairly hard, followed by 5 mins easy, repeat twice for 11/12s, repeat 3 times for 13s and up
- Heart Rate Check
- Warm down

S1B

- Warm Up
- 3 mins fast jog
- 4 laps, work hard on lengths, jog recovery on widths.
- 3 mins fast jog
- 4 laps, work hard on lengths, jog recovery on widths.
- Heart rate check
- Warm down

S1C

- Warm Up
- 2 laps – work hard on lengths, jog widths
- 2 laps – work hard on 1 length and width, jog diagonal back to start
- 2 laps – work hard on 1 length, width and length (3 sides), jog width
- 2 laps – work hard on lengths, jog widths
- Heart rate check
- Warm down

S1D

- Warm Up
- 5 mins fast jog
- 10 lengths – work hard 1 length, jog 30 seconds recovery
- Heart rate check
- Warm down

S1E

- Warm Up
- 5 mins fast jog
- 8 laps – work hard on 1 length, width and length (3 sides), jog width
- Heart rate check
- Warm down

4. Anaerobic programs

Introduction

These sessions are guides and as players or coaches you can either use them as outlined, or adapt them to follow your own requirements.

This anaerobic phase requires, intense effort on the running/sprint part and usually a jog recovery. Each run is not flat out, as this would prevent you from jogging the recovery and running another repetition. For a definition on fitness and anaerobic means, take a look at the fitness page.

This phase should start once some base endurance sessions have been completed, 6-8 weeks will give you a good foundation on which to start these more intense sessions. These sessions can be done on their own or at the start of a soccer session, remembering to always have a good warm up.

For all fitness sessions during this phase, the effort needs to be greater than with the previous phases, with more time given to the recovery phase, in order to maintain quality.

Following the warm up, each session will take between 5 and 15 minutes.

Examples

All sessions should begin with:

- 5 mins light jog
- 5 mins stretching
- 5 mins fast jog/easy run

Follow all conditioning sessions with some light jogging before they begin soccer specific sessions. Make sure you finish all sessions with slow jog and stretching.

S2A

Pyramid Run

Sprint for period, jog 30 seconds recovery

- 10/11s - 5, 10, 15, 20, 15, 10, 5
- 13/14 - 5, 10, 15, 20, 25, 20, 15, 10, 5
- 15/17 - 5, 10, 15, 20, 25, 30, 25, 20, 15, 10, 5
Repeat 3 times. 2 mins walk, 1 mins jog, 1 mins walk between sets

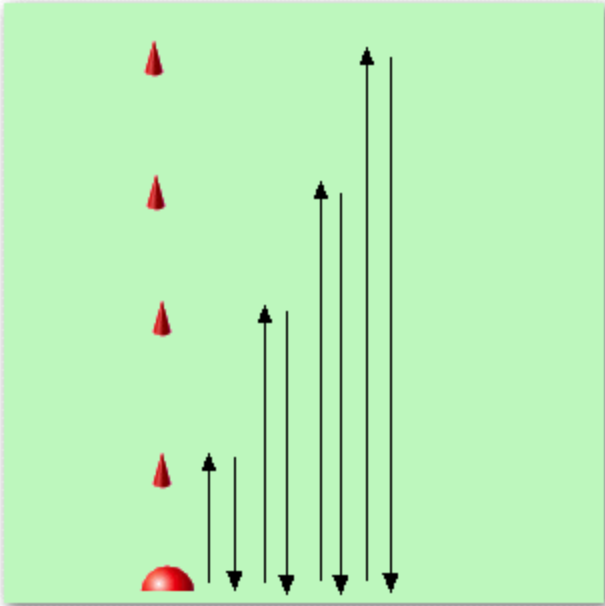
e.g. sprint for 5 seconds, jog 30 seconds, sprint for 10 seconds, jog for 30 seconds etc.

S2B

Shuttle Runs

Place cones at distances of 10, 20, 30, 40 meters

Sprint to cone 1, turn, run to start, turn, run to cone 2 etc. At the end cone, 3 mins walk recovery

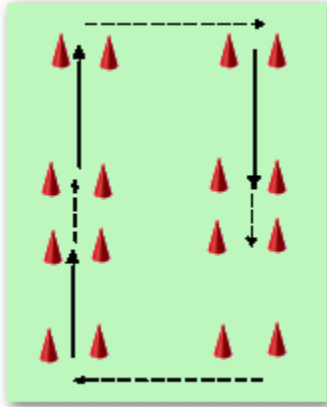


- 11/12s - 2 sets
- 14/15s - 3 sets
- 15/17s - 4 sets

S2C

Intervals

Split pitch length into 3 sections – middle section about 20 meters.



Players fast run (not quite sprint) run hard for first section, ease off middle section and then sprint hard 3rd section.

Walk across 30 meters and repeat.

- 11/12 – 3 circuits – 3 mins walk – 2 circuits
- 13/14 – 3 circuits – 3 mins walk – 3 circuits
- 15/17 – 3 circuits – 3 mins walk – 4 circuits

S2D

Hills 1

Find a grassy hill that's not too steep, that will allow you to run at a fairly fast pace (not sprint) for around 30 seconds. The idea is that you try to consistently run up the hill in roughly the same time for each repetition and then jog the recovery in a minute.

It's important that you work hard on the recovery as well as up the hill.

- 11/12 – 6 hills – 30 seconds up, 60 seconds jog back recovery
- 13/14 – 8 hills – 30 seconds up, 60 seconds jog back recovery
- 15/17 – 10 hills – 30 seconds up, 60 seconds jog back recovery

S2E

Hills 2

This session requires a steeper grass hill (if possible). One that allows you to sprint up for 20 seconds. Place a target cone on the hill that will allow each run to be around 20-25 seconds. The recovery is 90 seconds walk/jog recovery. The key here is intensity on the up phase, if the recovery does not allow the quality to continue on each hill run, then allow a longer recovery.

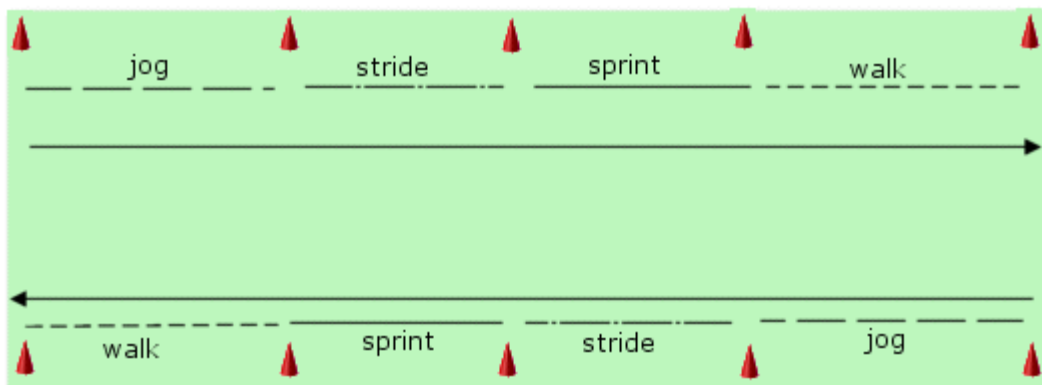
It's important that you work hard on the recovery as well as up the hill.

- 11/12 – 5 hills – 20-25 seconds up, 90 seconds walk/jog back recovery
- 13/14 – 6 hills – 20-25 seconds up, 90 seconds walk/jog back recovery
- 15/17 – 8 hills – 20-25 seconds up, 90 seconds walk/jog back recovery

S2F

Acceleration intervals

This is a good session for mid-fielders and those requiring speed endurance training. Mark out 4 sections of a field, approximately 25 meters apart. Split your players into two groups, one group rests, while the other group trains. The players jog the first 25m, stride (75% effort) the second 25m, sprint the third 25m, and then walk the last 25m. Then turn around and do the same, which would be two repetitions. Key factor here is that each sprint is a true sprint and that the turnaround is quick.



- 11/12s – 3 sets of 4 repetitions
- 14/15s – 3 sets of 6 repetitions
- 15/17s – 4 sets of 6 repetitions.

5. Speed Sessions

Introduction

These sessions are guides and can be used by coaches and players to help develop speed and agility. The sessions I run always start with technique drills that are supervised to ensure correct, relaxed technique, these drills are followed by a specific speed session.

The speed session could be very short but intense, working on explosive, high quality speed, or it could be aimed at more speed endurance, where the runs are a little longer, still intense with adequate recovery. At the start of the speed training, early season, the sessions are high quality, but not flat out, with walk/jog recovery.

Once the player has had a few weeks of this level of intensity, the quality of the sprints can increase to flat out effort with longer walk recovery. It is important that a player has adequate recovery to keep the intensity up when trying to develop speed. The sessions should also be done at the start of a soccer training session after a good warm-up, or as a session on their own. Do not do these sessions at the end of the training session and do not attempt them if muscles are sore or strained.

Examples

All sessions should begin with:

- 5 mins light jog
- 5 mins stretching
- 5 mins fast jog/easy run

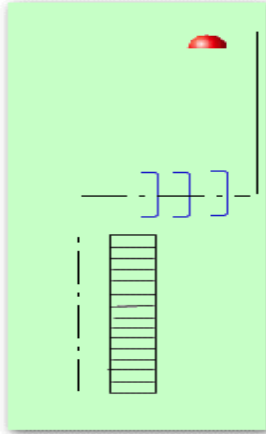
Follow all conditioning sessions with some light jogging before they begin soccer specific sessions. Make sure you finish all sessions with slow jog and stretching.

Most of these drills can be run as competitions by laying out multiple cone/ladder/hurdle combinations and having players run against each other. One caution with this is that when competing, players will often forget about technique. Use competition runs once you are happy with your player's technique, especially fast feet techniques over ladders and hurdles.

SSA

Fast Feet 1

Use a fast foot ladder technique (e.g. 2 feet in each rung), then two foot step over each hurdle and sprint to cone.

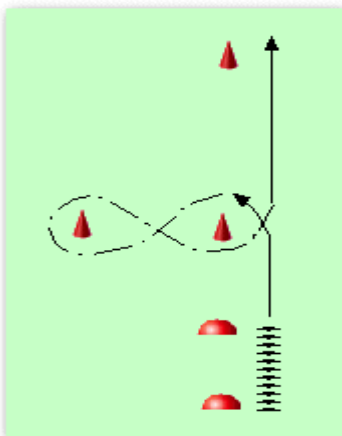


Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs.

SSB

Agility

Start with a backwards run, sprint forwards at the second cone, at the first witch's hat, step side to side across to the other witches hat, around and back around the first witches hat, then sprint to the final cone.



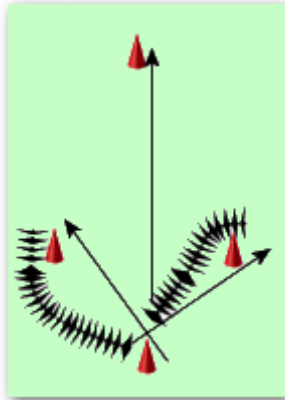
For short, sharp speed work, place cones 2 to 5 meters apart, with 10 meters to the last cone.

Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs.

SSC

Explosive Speed

Sprint to the witches hat on left, go round and run backwards to starting cone, sprint to witches hat on right, go round and run backwards to starting cone, now sprint forwards to last cone.

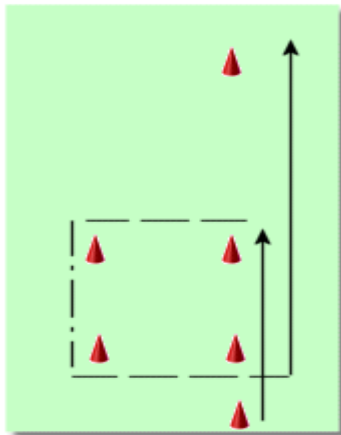


Place left and right cones 2 to 3 meters away from start cone and last cone 5 to 10 meters from start cone.

Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs.

SSD

Speed and Agility 1



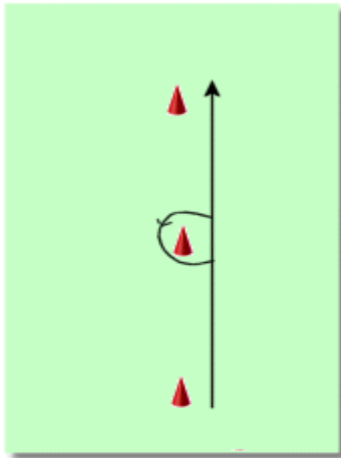
Start on first cone, sprint forwards to third cone, side to side left, run backwards, side to side right, then sprint to last cone. Should be facing forwards at all times. Aim is to keep close to cones and not run too wide, move quickly at all times.

Place start cone 2 to 3 meters away from cone square and place all other cones approximately 5 meters apart.

Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs with a very slow jog recovery.

SSE

Speed and Agility 2



Start on first cone, sprint forwards to middle cone, go round the cone (facing forwards all the time), and accelerate to last cone.

Place cones approximately 10 to 15 meters apart.

Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs with a very slow jog recovery.

SSF

Wind Sprints

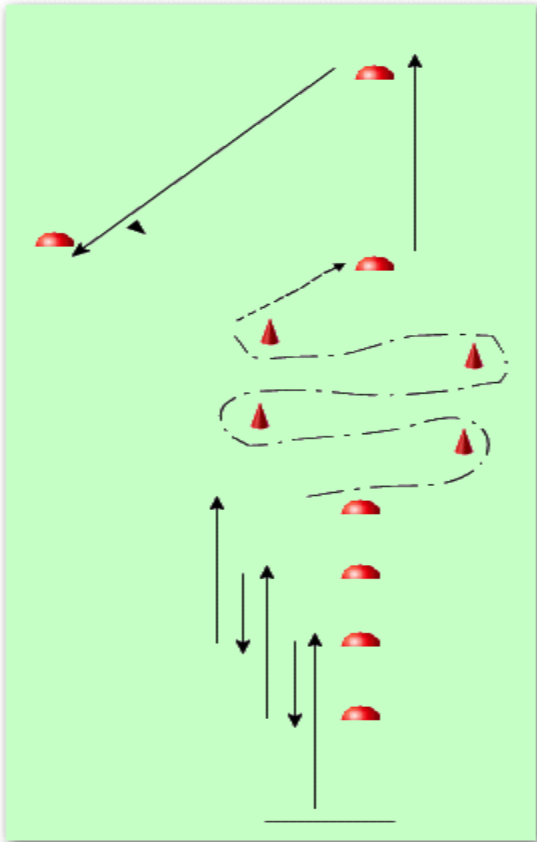
Place cones, 20 meters apart, allow players a slow run in, then fast sprints over 20 meters. Make sure players do not pull up sharply at the end of the sprint and allow time to slow down.

Early part of speed training phase, do 6-8 runs with a fast walk/jog recover, later in speed training phase, do flat out runs, 2 sets of 4 - 6 runs with a very slow jog recovery.

SEA

Speed Endurance

Shuttle runs through first set of cones (place approx. 10 meters apart). Then side to side round witch's hats, jog to cone, sprint to last cone, then sharp turn and sprint to final cone. This is a hard session if quality kept up. Aim for 8 repetitions with jog recovery.

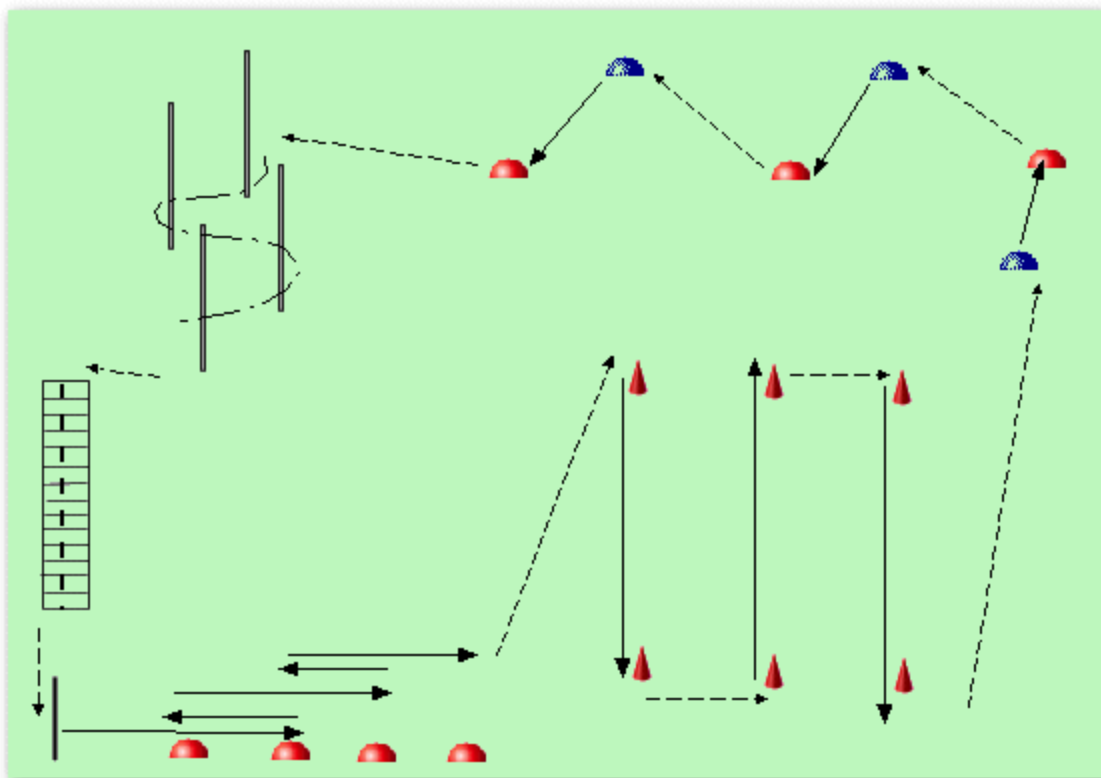


SEB

Speed Circuit

Place cones around pitch or similar sized area, each station represents an area where the player works hard, then jogs to next station. It is important that the player works hard at each station; there should be distinct differences in effort between work done at a station and the jog recovery. Do not run too hard on the jog recovery as it will take away your ability to work hard at the next station.

At early part of speed endurance phase, (pre-season, or early season), aim for 5 mins continuous run with 3 mins walk recovery, repeat 3 times. During later stages of speed endurance phase, during season for example, aim for 3-4 mins circuits, with 3 mins recovery.



6. Mentality

What characteristics does a state of peak performance have?

- **Feeling relaxed.** It is a common mistake that we should be "psyched up" to play at our best, but research shows that this is not true. The best state of arousal is slightly above normal, that is relaxed, but with a feeling of energy.
- **Confident.** There is a feeling of expecting to succeed, not hoping or wishing for success, but expecting it. There is no fear, and a trust in instincts and intuition.
- **Complete focus.** There is a feeling of being in the present, of being totally absorbed in the moment, with no sense of time.
- A feeling of that everything is **effortless.** Movements are smooth, even graceful, with the mind and body in perfect harmony. The game feels as if it requires little or no effort.
- **Automatic** actions. In other words, there is a feeling of being on autopilot with no interference from thoughts or emotions. Athletes perform better when apparently no conscious thoughts are involved. A footballer needs to be able to think about tactics, and who is around him, but the idea of not being distracted by emotions applies.
- Being in **control.** You feel in control, so that what you think will happen does happen.
- **Fun.** A sense of enjoyment. Peak performance is not obtained when we are bored. This is one reason why it's important for coaches to make training as interesting as possible.

"I approached practices the same way I approached games. You can't turn it on and off like a faucet. I couldn't do it during practice and then, when I needed that extra push late in the game, expect it to be there. But that is how a lot of people approach things. And that's why they fail. They sound like they are committed to being the best they can be. But when it comes right down to it, they're looking for reasons instead of answers. If you're trying to achieve, there will be road blocks. I've had them; everybody has had them. But obstacles don't have to stop you. If you run into a wall, don't turn around and give up.

Figure out how to climb it, go through it, or work around it." -- Michael Jordan

7. Nutrition

Soccer: Energy for Tournaments

By MICHELE MACEDONIO, M.S., R.D. L.D.

Nutrition consultant and freelance writer, Nutrition Strategies (Loveland, OH)

Tournaments present unique opportunities and challenges for the individual soccer player and the team as a whole. One of the most important challenges is supplying adequate fluid and food to fuel the athlete participating in multiple matches throughout the tournament period. What makes the challenge especially complex is the two-fold nature of the dilemma, that of supply and demand.

Multiple matches mean increased demand for energy

A single soccer match may deplete most of a player's fluid and nutrition reserves. During a tournament, matches may be as close as an hour apart, leaving little time to rebuild fuel stores. Consequently, fatigue sets in sooner; speed, skills, accuracy and concentration are compromised; and the risk of dehydration increases. In warm environments, the degree of dehydration and its associated dangers are even higher.

Planning ahead will ensure an adequate supply of "sport-friendly" foods

Immediately after a match, the hunger sensation may be blunted so it is crucial that foods or beverages consumed at this time be high in carbohydrate (CHO), the preferred fuel for the physical demands of soccer. In order to store those carbohydrates as muscle glycogen, the body also needs sufficient fluid.

Tournament concession stands offer limited selections, often with many high-fat foods. Fast food restaurants may be an option but careful selection is necessary to ensure adequate amounts of carbohydrates. When possible, the best bet is to bring a supply of "sport-friendly" foods and beverages to the tournament. Even when traveling far from home, there are some simple tips for ensuring a supply of portable foods and fluids that meet the high-energy demands of soccer tournaments.

Beverages and Carbohydrate-rich Foods that Power Soccer Players and Travel Well

Beverages

Choose a sports drink. Gatorade supplies 14g CHO per 8 oz, a good choice for quickly replenishing fluids and electrolytes lost in sweat and supplying carbohydrates during exercise. Follow these guidelines from the National Athletic Trainers Association:

- 17 to 20 oz fluid 2 to 3 hours before the match
- 7 to 10 oz fluid 10 to 20 minutes before the match
- 28 to 40 oz fluid per hour during the match (7 to 10 oz fluid every 10 to 15 minutes of play)
- 20 oz fluid per pound of weight lost during the match, within 2 hours of finishing the match. Players should weigh themselves before and after several games to estimate weight loss during matches.
- **Water alone doesn't cut it alone.** It blunts thirst and doesn't supply needed nutrients to fuel the body.
- **Skip the soda.** The carbonation makes it harder to gulp down enough fluid plus carbonation can bloat the stomach causing indigestion.
- **Cut the caffeine.** Caffeine is a diuretic increasing fluid loss, impairing rehydration.

Carbohydrate-rich Foods

To quickly restore lost muscle glycogen, soccer players should consume 2g CHO per kg (.9g CHO/lb) body weight within the first 2 hours after a match. Pre-game meals should be eaten 2 to 3 hours before a match to allow food to empty from the stomach. Frequently, the interval between games may be too close to digest a standard high-carbohydrate meal. In that case, athletes are wise to select easy to digest, carbohydrate-rich foods that will provide quick energy for the next match.

Try combining several of the items below:

- Energy or fruit Bars
- Fresh fruit
- Fruited yogurt
- Bagels, muffins, cereal mixes with dried fruit and nuts

If an athlete feels uncomfortable eating solid food between matches, consider these convenient liquid options:

- Carbohydrate-rich drink
- Liquid meal

The importance of proper nutrition and hydration with regard to the Soccer can not be overlooked.

Performance can drop as much 15% with as little as 1% of body fluid lost.

Good Nutrition can improve performance by as much as 15%

Hydration

It needs to be stressed to the players the importance of getting plenty of fluids when training or playing in hot weather. Important that players drink plenty of fluids in the days leading up to a hot weather game, however players should also be advised about the importance of game day hydration. Get them to drink fluids en-route to the game. Don't wait till the game is under way and then have to play catch up to the fluid drain.

Practice and Games

If players are feeling tired, drained or weak during practice and games, a handful of clear candies, Jelly beans, skittles, gummies, etc, during a water break or half time can give a welcome energy boost.

Days prior to competition

The most important food the girls can eat is not on the actual weekend of competition, but the 2-3 days before competition starts. It is vital that the players increase the fraction of their total diet that is carbohydrates. This will help the muscles load up extra Glycogen (the main fuel for muscles) for the games.

Studies show that soccer players with the most pre game muscle glycogen run the farthest at the fastest speeds during a game!

Foods to Eat:

Baked Potato, Pasta, Bread, rice, cereals, jams, spaghetti, and oatmeal.

Day of Competition

Most pre game meals are eaten 3-4 hours before competition, important to realize that the food eaten will have little to do with the energy expended in the game, that comes from what was eaten in the 2-3 days before the game. Remember the more calories (i.e. Fat & Protein) in a meal the slower the food leaves the stomach. Carbohydrates are always the best choice over sausage, egg, gravy, fries, burgers or most other choices on the menu at a fast food place.

Foods to Eat:

Fruits, cereals, juices, pancakes, waffles, baked potato, sandwich, pasta, bread, lean meat (turkey/chicken), clear candies, jelly beans, gummy bears, skittles etc.

Foods to Avoid:

Fast Food, Dairy products, fried food.

Eating after the Game

Exercise uses muscle glycogen (carbohydrate) so it must be replaced. Muscle is most receptive to carbohydrate replacement in the first two hours after exhaustive exercise. **Important that the girls eat carbohydrates between games.** If time permits they should try to eat the foods recommended for the day of competition.

Eat high glycemic foods in the first hour after training or competition. Foods like this include Cheerios with skim milk and raisins, peanut butter and jelly/jam on bagels or sourdough bread, graham crackers and cottage cheese, Chex mix, Nutri-Grain bars and lo-fat vanilla wafers. Later meals should include moderate glycemic index foods like bananas, orange juices, corn, pita bread, oatmeal cookies, and pasta. The goal is 8-10 grams of carbs per kilogram of body weight in 24 hours. An acute supplement of a high carbohydrate drink can be effective in adding some alternate fuel to help save glycogen for late in the game.

Any suggestions for soccer players when choosing foods to eat?

- Choose foods with the highest carbohydrate and lowest fat count. Carbohydrates should make up 55-65% of the diet. Choose, for example, bagels over sliced bread, baked potato over french fries, a high carbohydrate cereal over a low carbohydrate cereal (read those labels!).
- A teenage or adult athlete should eat 450-600 grams of carbohydrate a day (spread it out over 24 hours-think you can eat that amount of spaghetti in one sitting? That's over 2 dry pounds of spaghetti!). Younger players would eat less because they are smaller. The rough formula is 7-10 grams/kg/day.
- If you make poor food choices and train regularly, you can't refill your glycogen levels before tomorrow's practice. Thus, glycogen levels stair-step down as the week goes on. Ask any trainer of a team training daily - most injuries happen late in the week. Wonder why? It is important to eat plenty of carbohydrates during training, not just for matches.
- Your muscles are the most, thirsty, for glycogen right after exercise. So try to eat a good supply of carbohydrates within the first 2 hours after play. Don't wait. Have carbohydrate rich foods available right after a game. This is especially important if you are playing in a tournament with many games in a short time. Give yourself every advantage and refuel for the next games. Pack food and stay away from the drive through window. Pack fruit juices, carbohydrate replacement drinks (see recovery-part 3 for suggestions), bagels and jam, fresh or dried fruit, PB&J sandwiches, pasta salads, uncooked Chex Mix. If candy is acceptable, choose clear candy like gummy candy, jelly beans, etc. (chocolate-based candy has too much fat and calories). Stay away from the chips, burgers, fries, nachos, etc.; too much fat and not enough carbohydrates.