Strength Training

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Introduction

Strength will allow the soccer player to accelerate quickly, run fast for a long time, and be an all round stronger athlete.

Soccer players must be able to accelerate quickly, be fast, and run for a long time. Increased strength permits the athlete to: produce more powerful contractions (they can accelerate quicker due to a more powerful push-off); produce muscle contractions more rapidly (they can run faster); and do the same work at a lower percentage of his maximum strength (they can continue exercise for a longer period of time). Improvement should be sought in these three areas, therefore the soccer player should benefit from a strength-training program in the months prior to competition.

Strength training programs should be designed specifically for each individual athlete, taking into account his current strength and what improvement is sought.

To be able to accelerate, stop, change direction, and sprint well, soccer players need strong ankles, knees, and hip muscles. In short, a soccer player must be strong in many muscle groups to reach his maximum playing potential.

Weight training is an excellent way to increase strength in specific muscles or through specific movements. Several books have detailed weight-training programs which can be adapted to suit soccer strength programs.

Weight training consists of lifting weights a given number of times (or reps), then after a rest, repeating the same set of exercises. For optimal results on the field, the weight training schedule must be adjusted to the time of year and the individual athlete.

In strength training, overload can be applied by: adding more weight and continuing the same workout; increasing the number of repetitions while using the same weight and movement speed; keeping weight and reps the same, but completing the work faster; decreasing the rest intervals between exercises; or any combination of these. Muscle strength increases only through the angle at which the muscle is worked; so all exercise

should be performed through at least the range of motion the joints will cover in play. It is best to strengthen muscles through their full range of motion. This will prepare the body for any unexpected movement that might occur during the game.

Avoid strength training before an activity workout. Tired muscles predispose the joints to injury, so plan your strength workouts for the end of the day or allow at least 4-6 hours recovery time before any agility work.

If weights are not available to the athlete, or they hate the weight room, they need not despair. Workouts can be adapted to increase strength in surroundings, which may suit them better. They can try an agility routine on a sandy beach or in the shallow end of a swimming pool, or run up hills and bleachers. Push-ups, sit-ups, and step-ups can all be done in the home.

However the athlete chooses to increase their strength, they must stress the intensity of the work, increase the workload as they gain strength, and must not work to the point of physical exhaustion.

Muscles have been shown to retain their strength well; strength is lost slowly after terminating a strength program. One intense strength workout a week, lifting maximum weights, has been shown to maintain strength after an initial strength program has been completed. This is important for the soccer player as the strength gained during a pre-season or off-season program will benefit him throughout the season with few strength workouts.

The Body Weight Circuit

The Body Weight Circuit can be implement inside a gym or outside on the practice field. The great advantage is that there is no need for cumbersome equipment and it provides an excellent work out for your players, any time of the year.

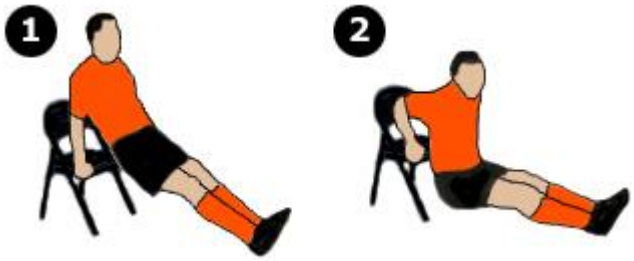
The Body Weight Circuit consists of 12 movements. The circuit can be performed in a time scheme or can be used with a repetition scheme. If the player chooses the repetition scheme each movement is to be completed for 20 repetitions and each abdominal movement in the circuit is for 90 seconds. The player is given 5 seconds to change exercises. If they choose to use the time scheme each exercise is to be done for 30 seconds with 5 seconds to change and abdominals are still 90 seconds. The circuit should be completed at least twice.

Exercise	Rest Period	Durations
1. Squats	5 Seconds to switch	20 Reps
2. BW Dip	5 Seconds to switch	20 Reps
3. Abs (90 Degree Crunch)	5 Seconds to switch	90 Seconds
4. Split Squat Jump	5 Seconds to switch	20 Reps
5. Elevated Push Ups	5 Seconds to switch	20 Reps
6. Abs (Plank Hold)	5 Seconds to switch	90 Seconds
7. Alternating Front Lunge	5 Seconds to switch	20 Reps
8. Diamond Push Ups	5 Seconds to switch	20 Reps
9. Abs (Reverse Crunch)	5 Seconds to switch	90 Seconds
10. Squat Jumps	5 Seconds to switch	20 Reps
11. Push Ups	5 Seconds to switch	20 Reps
12. Abs (Butter Fly Crunch)	5 Seconds to switch	90 Seconds

Squats

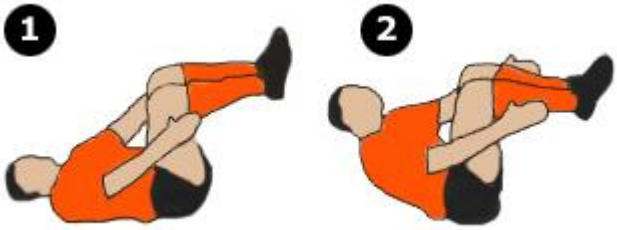
1. Keep your head up, your back straight, and your feet shoulder width apart.
2. Bend your knees, squatting down until your upper thighs are parallel to the floor. Straighten your legs and return to the starting position.

BW Dip



1. Position yourself at the edge of a chair or bench and lift yourself so that you are held erect by your arms.
2. Lower your body down as far as possible. Pause a moment and then press yourself back up until your elbows are again locked.

Abs (90 Degree Crunch)

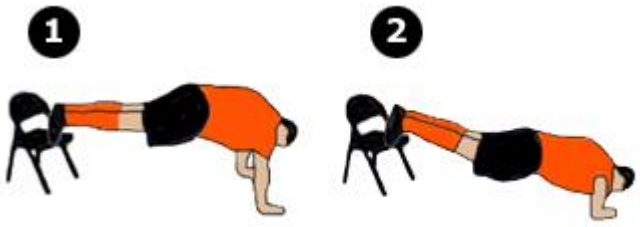


1. Lie on the floor on your back, knees bent at a 90 degree angle. Lift your head and shoulder blades slightly off the floor.
2. In a curling motion, slowly bring your torso toward your knees. Hold for two seconds and lower your torso back to the floor, knees at 90 degree angle.

Split Squat Jump

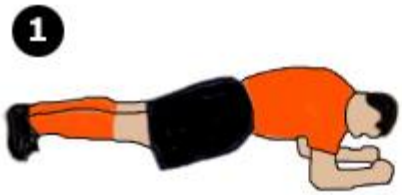
1. Assume a stance with one leg extended forward and the other behind the midline of the body as in a lunge position.
2. Explosively jump off the front leg into the air.
3. Land back in the lunge position (same leg forward) and immediately repeat the jump.

Elevated Push Up's



1. Position your hands about 24 inches apart. Your palms should be down, in contact with the floor. Your legs should be elevated on a bench or chair and your body should be straight.
2. Lower slowly to ground then press yourself upwards. Return to the starting position.

Abs (Plank Hold)

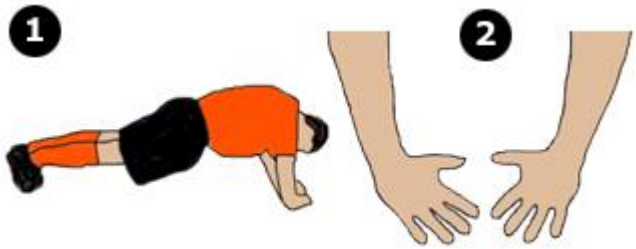


1. Lie face down with elbows resting on floor and in a pushup position with body resting on elbows. Contract the abs and keep the body in a straight line from head to toes.
Hold for 90 seconds.

Alternating Front Lunge

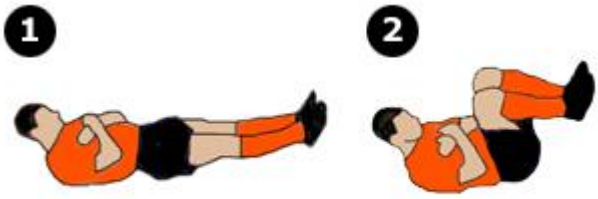
1. Stand erect. Keep your head up, trunk straight and feet shoulder width apart.
2. Step forward, bending the knees until the right thigh is parallel to the floor. Keep the bent knee in line with your ankle. Step back to the starting position.
Repeat with the opposite side.

Diamond Push Up's



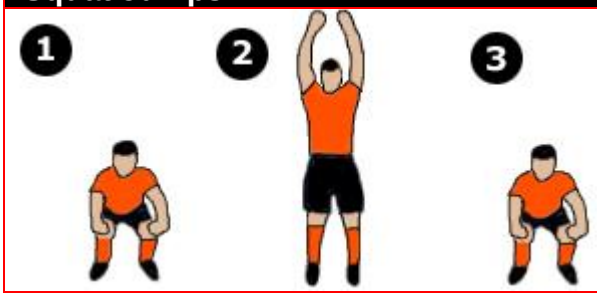
1. Lie face down on the floor and position your hands close together (as in #2). Your legs and body should be straight. Lower body then press yourself upwards, fully extending your elbows and supporting the lower body on the toes. Return to the starting position.

Abs (Reverse Crunch)



1. Lie on your back with your knees bent and your feet together six inches above the floor. Place your hands across your chest.
2. Contract your lower abs, slowly bringing your knees toward your chest and lifting your butt off the floor. Curl your lower body as far as you can, slowly lower to the starting position. Repeat.

Squat Jumps



1. Feet shoulder-width apart in a squat position. Your knees should be bent approximately at 90-degrees.
2. Explode up and jump as high as you can into the air reaching for the sky.
3. Land soft and under control, as in the starting position. Perform 20 reps.

Push Up's

1. Lie face down on the floor and position your hands 24 inches apart. Your legs and body should be straight. **2**. Lower body then press yourself upwards, fully extending your elbows and supporting the lower body on the toes. Return to the starting position.

Abs (Butter Fly Crunch)

1. Lie on the floor with your knees bent and the soles of your feet together.
Hands forward between legs.
2. Slowly curl up toward the ceiling so that your shoulder blades come off the floor.
Be sure not to bend your chin toward your chest. Pause, then slowly come back down to the start position.

Variety of Strength Exercises

Bench Press

Position your legs at the sides of the bench with your feet flat on the floor. Grip the bar at slightly wider than shoulder width and raise the weight to arms length above the chest. Slowly lower the weight to the chest. Exhale as you raise the weight and inhale as the weight is lowered. Try not to arch your lower back. This exercise can be performed with a close, medium or wide grip on a barbell, or with dumbbells.

Front Dumbbell Raise

Standing with your feet shoulder width apart, grasp a barbell or dumbbells with an overhand grip. Let the weight hang at arm's length against your upper thigh. Raise the weight straight out in front of you until it is just above shoulder level.
Lower the weight to the starting position.

Seated Lateral Raise

Sit at the end of a flat bench with your feet flat on the floor. Hold a dumbbell in each hand with a palm inward grip and your arms at your side. Raise your shoulders as high as possible. Return to the starting position and repeat.

Incline Press

Lie on a incline bench, face up, with your feet flat on the floor. Raise the weight by straightening the arms above the chest and then slowly lower the weight back down to the chest, slightly above the nipple line. Hold your elbows in close during the exercise. Exhale as you raise the weight and inhale as the weight is lowered. Do not arch your lower back. This exercise can be performed with a close, medium or wide grip on a barbell, or with dumbbells.

Up Right Row

Stand with your feet shoulder-width apart. Grasp a barbell or dumbbells with an overhand grip. With the weight at arms length and your back straight, inhale and raise the weight to just below chin level. Keep your elbows out to the side. Pause momentarily, then exhale and return the weight to the starting position.

Concentration Curl

Hold the weight in front of you, hanging at arm's length between your legs with an underhand grip.

Bend slightly at the waist and place your left hand on your left knee for support. Without bending the wrist, raise the weight toward your shoulder in a curl motion, keeping your upper arm vertical with the floor. Slowly return to the starting position. Repeat with opposite side.

Alternate Dumbbell Curl

This exercise can be performed seated or standing. Hold a dumbbell in each hand. Keep your back straight and your feet on the floor.

The dumbells should hang at arm's length with your palms facing outwards (pronated). Curl the weight toward your shoulders by bending at the elbows. Lower the weight slowly to the starting position and repeat with the opposite arm.

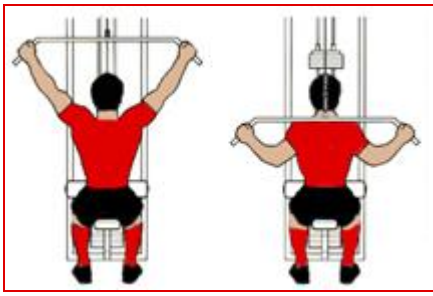
Lunge

Stand erect and place your hands on your hips. Keep your head up, trunk straight and feet shoulder width apart.

Step forward with your right leg, bending the knees until the right thigh is nearly parallel to the floor. Keep the bent knee in line with your ankle. Step back to the starting position by pushing off with the heel of the right foot. Repeat with the opposite side.

Squat

Stand with your feet shoulder width apart and your hands on your hips. Keep your head up and your back straight as you bend your knees. Lean slightly forward at the waist. Squat down until your upper thighs are parallel to the floor, keeping your knees in line above your ankles. Straighten your legs and return to the starting position.



Wide Grip Pull Down

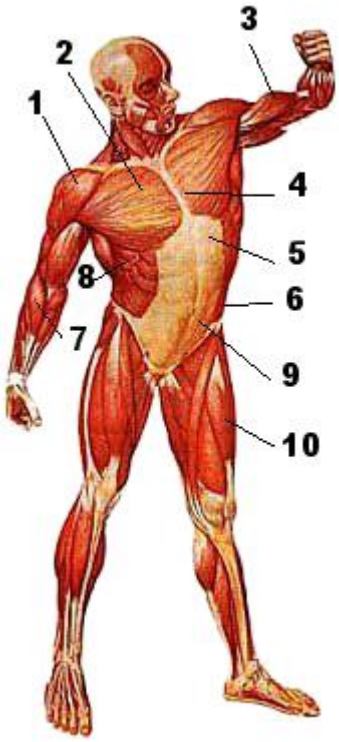
Adjust seat height. Place hand about 3 feet apart on bar. Sit and place thighs under pads. Inhale. Pull down bar until it touches back of neck. Exhale. Return bar slowly to starting position.

Repeat exercise.

Muscle Chart and Recommended Exercises

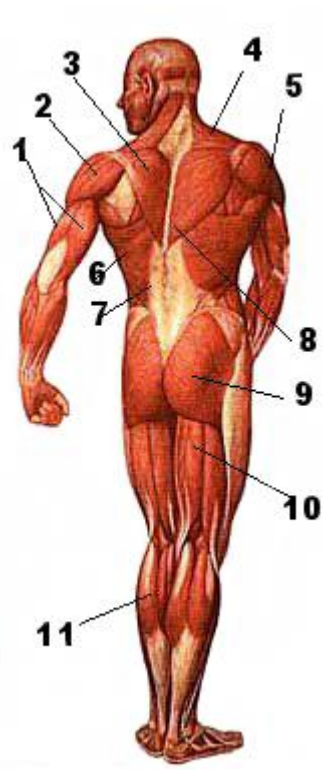
Front View

1. Front Delts
Upward Row, Front Lateral Raise
2. Upper Chest
Incline Barbell Press, Incline Flye
3. Biceps
Seated Dumbbell Curl, Concentration Curl
4. Middle Chest
Bench Press, Flye
5. Upper Abdominals
Incline Sit-Up, Crunch
6. Obliques
Seated Twist with Pole, Standing Twist
7. Forearms
Wrist Curl, Reverse Curl
8. Serratus & Intercostals
Rope Crunch to Side, Twisting Leg Raise
9. Lower Abdominals
Hanging Leg or Knee Raise, Reverse Crunch
10. Quads
Leg Press, Lunge with Dumbbells



Back View

1. Triceps
Lying French Press, Press down
2. Rear Delt
Bent-Over Lateral, Prone Incline Lateral
3. Upper Back
Wide-Grip Behind-Neck Chin, Wide-Grip Behind-Neck Pull down
4. Traps
Dumbbell or Machine Shrug, Upright Row
5. Side Delts
Behind-Neck Barbell or Dumbbell Press, Side Lateral Raise
6. Lower-Outer Back
Close-Grip Seated Row, Dead lift
7. Lower Back
Dead lift, Back Extension
8. Middle Back
Wide-Grip Bent-Over Row, Wide-Grip Seated Row
9. Glutes
Lunge, Cable Leg Raise to Rear
10. Hamstrings
Lying Leg Curl, Standing Leg Curl
11. Calves
Standing Calf Raise, Seated Calf Raise



Source by Bob Castronova

Terminology

Aerobics

A low-intensity, sustained activity that relies on oxygen for energy. Aerobic activity builds endurance, burns fat and conditions the cardiovascular system. To attain an aerobic effect you must increase your heart rate to 60-80 percent of your **maximum heart rate,** and maintain that for at least 20 minutes. Examples of aerobic exercise include running, brisk walking, bicycling, swimming and aerobic dance.

Anaerobic

High-intensity exercise that burns glycogen for energy, instead of oxygen. Anaerobic exercise creates a temporary oxygen debt by consuming more oxygen than the body can supply.
An example of anaerobic exercise includes weight lifting.

Bar

The metal rod that forms the handle of a **barbell** or **dumbbell.**

Barbell

A basic piece of equipment used in **strength training.** A barbell consists of a **bar, sleeve, collars** and **weights or plates.** Barbells can be of a fixed weight or a variable weight.

BMR

Basal metabolic rate. The number of calories consumed by the body while at rest.
It is measured by the rate at which heat is given off, and is expressed in calories per hour per square meter of skin surface.

Burn

The sensation in a muscle when it has been worked intensely. It is caused by **fatigue** by-products and microscopic muscle tears.

Circuit Weight Training

A routine which combines light to moderate-intensity weight training with aerobic training. A circuit routine typically consists of 10-15 stations set up at close intervals. The object is to move from station to station with little rest between exercises, until the entire circuit has been completed.
Collar

The clamp that holds the **weight plates** in position on a **bar.** There are inner collars and outer collars.

Contraction

The shortening and lengthening of a muscle that occurs while performing an **exercise.**

Cut Up

A body that carries very little fat and is highly muscled.

Definition

A term that describes a muscle that is highly developed, the shape of which is clearly visible. A **cut up** muscle.

Dumbbell

A one-handed **barbell.** Dumbbells are shorter and generally of a lighter weight than barbells.

Exercise

In **weight training,** the individual movements performed during a **routine.** In general, the movements required to complete a **workout.**

Failure

Being unable to complete a movement because of **fatigue.**

Fatigue

Physical weariness resulting from exertion.

Flexibility

The ability of a bone joint or muscle to stretch. Good flexibility refers to an advanced degree of limberness in the joints and muscles. Flexibility can be improved with regular **stretching** exercises.

Hypertrophy

The increase in size of a muscle as a result of high-intensity **weight training.**

Intensity

The amount of force -- or energy -- you expend during a **workout.**

Isolation

In **weight training,** confining an exercise to one muscle or one part of a muscle.

Maximum Heart Rate

The fastest rate at which your heart should beat during **exercise.** To find your maximum rate, subtract your age from 220.

Overload

The amount of **resistance** against which a muscle is required to work that exceeds the weight which it normally handles.

Plates

The metal or vinyl-covered discs that add weight to a **barbell.**

Progression

To systematically increase the stress a muscle endures during an **exercise.** Progression is achieved in one of three ways: by increasing the **weight** in an exercise, by increasing the number of **repetitions** performed in one **set,** by increasing the number of sets, or by decreasing the **rest interval** between sets.

Pumped

The swelling that temporarily occurs in a muscle immediately after it has been exercised.

Repetition, or Rep

One repetition of an **exercise.** Each individual movement of an exercise.

Resistance

The actual **weight** against which a muscle is working.

Rest Interval

A pause between **sets** that allows the body to recover and prepare for the next set of exercises.

Ripped

A term that means a body has clearly visible muscles and very little fat.

Routine

A defined schedule of **exercises,** either **aerobic** or **weight training.**

Set

A cluster of **repetitions,** performed without rest, in a weight training **routine.**

Sleeve

Part of a **barbell.** A hollow tube that slides over the **bar** and is often scored to provide a better grip.

Spotter

Someone who stands nearby to assist you when performing an **exercise.**

Sticking Point

The point in time when a muscle will resist **hypertrophy,** no matter how hard you work it. Sticking points are normal. Hypertrophy usually resumes after a short period of dormancy, or if you change your **routine.**

Strength Training

Exercise specifically designed to work the muscles and make them larger and stronger.
See **weight training.**

Stretching

Exercise which increases the ease and degree to which a muscle or joint can turn, bend or reach.

Target Heart Rate

In aerobics, the speed at which you want to maintain your heartbeat during exercise.
Find your target heart rate by multiplying your **maximum heart rate** by .6 (for 60%), by .7 (for 70%) and by .8 (for 80%). Your heart rate should stay between 60 and 80% of your maximum heart rate for at least 20 minutes.

Training to Failure

Continuing a **set** until your muscles cannot complete another **repetition** of an **exercise.**

Weight

The amount of **resistance** against which a muscle is asked to work. The number of pounds used during an exercise.

Weight Training

A form of exercise in which muscles are repeatedly **contracted** against a **weight** to reach **fatigue.** Weight training reshapes the body and builds muscle.

Workout

A planned series of **exercises.**

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