



Plug in to the circuit!

Part 1: Circuit training for ages 10 to 14

by **Christoph Anrich**, athletic coach, German youth national team

Circuit training — you may remember it from high school gym class: First, the teacher set up a number of stations (boxes, ropes, poles, medicine balls, etc.), handed out scoring sheets and divided everyone into pairs. Then he got out the whistle and stopwatch, and away we went! Depending

on our individual motivation (and how carefully our partners were monitoring us), we spent 30 to 45 seconds at each station sprinting, jumping, climbing, crawling or doing chin-ups. Our partners wrote down our scores, and then it was their turn to sweat.

Circuit training is still around, but the stations and activities are a little different these days, as Christoph Anrich shows us. In this two-part series, he transforms the old-fashioned circuit into a modern strength-training program adaptable to any age or ability level.

Strength training

Station training for strength is familiar to many players and coaches from workouts at the gym. But you don't have to join a health club to create a soccer-specific strength circuit for your players. The exercises in this series require minimal setup: one mat per player, a resistance band and a couple of balls and ropes.

In spite of its simplicity, this setup still allows you to train every important muscle group and structure at its stations (see Table 1). Intensity is generally high (60 to 85 percent), while durations are short, as training for longer periods tends to build endurance more than strength.

Circuit training saves time

In circuit training, every part of the body gets a workout, from head to toe. The training methods mentioned above allow players to improve both general and soccer-specific strength, either individually or in pairs.

All players are constantly active. The variety of exercises provides individualized training, even for teams containing a wide range of ability levels. This insures that each player trains at his or her proper level.

When you create your circuit, you should arrange the stations so that each one trains a different muscle group than the one before it. Players move through the circuit in small groups (two to four players per station). The sequence should be arranged to minimize waiting times between stations. The regular alternation of activities gives individual muscles and muscle groups time to rest before their next workout.

Balancing rest and exertion

The effectiveness of training is primarily a factor of intensity. You'll find recommended levels for this age group in Table 2. After a circuit training session, we recommend allowing 24 to 48 hours for regeneration. A properly balanced and diversified sequence will motivate players to stay "on the ball," even when the going gets tough.

A side note: Some say soccer players are vain. A casual mention of the fact that circuit training is a great way to build muscle definition can do wonders for your players' motivation!

With circuit training, you can combine elements such as jumping power, coordination and orientation in a single session.

© AXEL HEIMKEN





TABLE 1 AFFECTED MUSCLE GROUPS, JOINTS AND PASSIVE STRUCTURES

Muscles	Joints	Passive structures
● calf, shin/foot muscles	● foot, ankle	● bones, joint capsules
● leg biceps	● knee, lumbar spine	● relief of patellar tendon
● abductors, quadriceps	● hips/pelvis	● relief of spinal discs
● abdominal muscles (transverse, oblique, lateral)	● pelvis/spine	● iliotibial band, kneecap
● back muscles (lower, middle, upper)	● lumbar spine, torso, shoulders	● vertebrae
● arm/shoulder muscles (deltoid, trapezius)	● shoulders, upper torso	● joint capsules, rotator cuff

How to run circuit training

After you've explained each station and demonstrated the exercises, you should be constantly monitoring players' execution, making corrections and adjusting difficulty levels as necessary.

Tip: Put a diagram at each station giving a brief explanation of the exercise.

Typical objectives

- preventing injury
- correcting muscle imbalances
- building soccer-specific power reserves (basic/intermediate training)
- training both maximum and takeoff power (advanced training)
- general fitness (condition training)
- health
- building muscle definition, aesthetics

Target groups and levels

- small children
- youth
- adults
- intermediate training
- advanced training

Training methodology

- intense and motivational workouts
- positive experiences for all players
- individualized training
- performance monitoring

Exertion levels

These should be adjusted whenever necessary, but as a general rule:

- more intense exercises should be shorter, with longer rest periods
- less intense exercises should last longer, with shorter rest periods

Recommended intensity levels

- four repetitions 90%
- six repetitions 85%
- eight repetitions 80%
- 10 repetitions 70%
- 12 repetitions 60%
- two to four sets
- conclude with regeneration, cool-down, mobility exercises

Tip

Make a CD or tape with music tracks corresponding to your training intervals. The "workout" music should be distinctly different from the "rest" music. This frees you from having to constantly give your players commands ("switch stations," "break," "next exercise," etc.). And using energetic music your players like helps increase their motivation as well.

TABLE 2 SUGGESTED PARAMETERS FOR STRENGTH TRAINING

Objective	Intensity	Duration	Break	Repetitions
power reserves	medium to high	30-40 seconds	45 seconds joint stabilization	2-5
maximum power	high	20 seconds	60 seconds gentle activity	2-3
general condition (U6-U12)	medium	30 seconds (playful/age-appropriate)	40 seconds exercises	2-4
general condition (U12-U18)	medium to high	25 seconds (easy pace)	50 seconds	2-4
general condition (adult)	medium to high	20 seconds	40 seconds gentle activity	2-4
maximum and takeoff power (adult)	high	15 seconds	60-90 seconds explosive activity	2-4



CIRCUIT TRAINING FOR AGES 10 TO 14

1 Windshield wiper



▶ 1

Starting position

- Lie on back with arms extended straight out from shoulders and palms flat on floor.
- Clamp ball between feet and extend legs straight up.



▶ 2

Execution

- Gradually lower ball to one side, hold briefly in this position and then return to vertical; repeat on other side.

Note

- Ball/feet must not touch ground.

Targets

- Abdominals, back, abductors, adductors

© AXEL HEIKEN (ALL PHOTOS)

2 Coaster hop



▶ 1

Setup

- Randomly scatter a number of coasters on the floor (approximately 12 inches apart).

Execution

- Hop on one foot from coaster to coaster.
- Start with the weak foot.



▶ 2

Note

- Heel of hopping foot should never touch ground.

Targets

- Primarily feet, calves, thighs

Variation

- Players hop on soft objects, e.g. foam squares (still keeping heel off ground).





CIRCUIT TRAINING FOR AGES 10 TO 14

3 Orbiting planets



▶ 1

▶ 2

Starting position

- Lie on back with knees raised slightly.

Execution

- Raise hips and slowly pass ball around them.

Targets

- Back, thighs

Variation

- Harder version: On balls of feet (heels off ground).



4 Ball crawl



▶ 1

▶ 2

Setup

- Put out two boxes five yards apart, each with five or more tennis balls lying next to it.
- Players start out on all fours next to a box.

Execution

- Pick up a ball, crawl with it on hands and feet to the other box and throw it in. Then pick up one of the balls by the second box, etc.

Targets

- Torso muscles, pectoral girdle, arms



CIRCUIT TRAINING FOR AGES 10 TO 14

5 "Log roll" with ball



Starting position

- Lie on side with ball clamped between feet.
- Lower arm is extended "upward"; upper arm may be placed on ground in front of body for stability.

Execution

- Pick up ball and move it back and forth (write your name in the air, etc.).

Targets

- Lateral abdominal muscles, back, abductors, adductors

Variation

- Clamp ball between feet and roll over to other side without letting ball touch ground.



6 Ball press



▶ 1

Starting position

- Lie on back with ball clamped between feet. Raise legs and bend knees so that calves are parallel to floor.
- Place palms flat on floor beneath lumbar spine.
- Raise head.



▶ 2

Execution

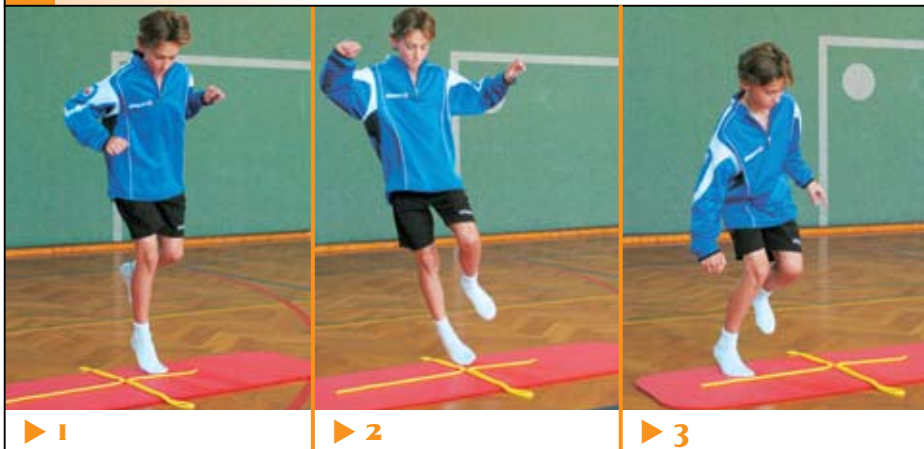
- Gradually extend legs, "pushing" ball forward until lumbar spine lifts off ground; then pull back.

Note

- Lumbar spine should constantly press against hands (self-regulation).



7 Rope hopscotch



Setup

- Lay out two ropes on a mat to form a cross.

Execution

- Hop on one foot in each quadrant of the cross without touching the rope.

Targets

- Foot muscles, calves, thighs

Variation

- Do a 90-degree turn on each jump.

Note

- To maintain balance, keep eyes focused on a spot on the floor while jumping.



8 Hot sand



Starting position

- Lie on stomach with arms and legs extended. Hold one ball between hands and another between feet.

Execution

- Raise arms and legs off ground as though lying on burning hot sand.

Targets

- Primarily back muscles, shoulders, buttocks

Variations

- Raise arms and legs and wave from side to side.
- Pause briefly before lowering arms and legs (count to two).

Note

- Breathe evenly; don't hold your breath!





CIRCUIT TRAINING FOR AGES 10 TO 14

9 Shoulder circles with ball



▶ 1

Starting position

- Stand with arms extended to sides and a ball in each hand.

Execution

- Circle both arms simultaneously: one forward, one backward.

▶ 2

Note

- Always keep arms at shoulder level.

Targets

- Shoulders, arms, upper back

10 Spider stand



▶ 1

Starting position

- Get into push-up position and raise hips slightly.

Execution

- Gradually “walk” hands and feet outward, away from each other.
- Briefly hold maximum extension, then “climb” back to starting position (spider climbing a wall).

▶ 2

Note

- Maintain tension while keeping movements smooth and controlled, not jerky.

Targets

- Arms, shoulders, back, legs