



Strength, Conditioning, and Movement for Youth Athletes During a Pandemic

April 2020
Nikia Evans, CSCS

This is a trying time for all while we attempt to restructure our new normal. For young players just discovering their passion for the game, and older players striving to reach the next level, it can feel even more frustrating. While athletics teaches young athletes life skills that can be carried over into handling challenges outside of their sport, it can be especially tough when all that focus, drive, and discipline lacks enough of an outlet during social isolation. It has been wonderful seeing (via social media and the internet) so many of our players out working on their ball skills and staying active, but we wanted to help our players find additional ways to stay ready for the coming season and improve their athletic abilities while taking advantage of any extra time around the house.

For this reason we'd like to offer the Southside Soccer Community age-specific training ideas for those players interested in leveling up while staying at home. "You don't have to get ready if you stay ready!"

PDA-U12: Play oriented & learning foundations of movement

Learn how to land and jump to squat

Yes, you read that right. The point of squats is to create lower body strength and reinforce a movement pattern that allows for powerful jumping and sprinting mechanics. This doesn't happen when squats become too shallow or when we fail to engage postural core muscles by being too bent over. Try this instead.

- **Glute activation:** Stand with feet shoulder-width apart with a slight bend in the knees and practice pulling knees outwards/apart as if stretching a band between them. **Do 10 reps.**
- **Landing:** Practice landing in a squat position from standing on your tippy toes. No need to jump but focus on the final stable squat position with chest up, knees out, weight in heels, and at least a 90-degree bend in the knees. **Do 2-3 sets of 10 reps.**
- **Jumping:** Explode up from the squat position and land back in the same position. Check stability, chest, and knee position, then repeat. **Do 10 reps.**

Once a good level of stability and proficiency is established, practice landing on one leg and then jumping off just one leg as well.

Learn how to use the core - posture, compression, and rotation

Core work is the most misunderstood concept of strength training. We often focus on activities to isolate the abdomen rather than incorporating the ability to maintain a stable trunk into complex athletic movements. The following exercises bring awareness to the importance of having a strong and stable core.

- **Hand stands against a wall:** Players can practice kicking up to a wall and then working on holding themselves as straight as possible with legs squeezed together, a straight back, fingers gripping the ground. **Try working up to 3 sets of 20 seconds.** Start with an adult spotter and then maybe move away from the wall, but be sure to learn how to fall correctly into a cartwheel! Create confidence and body awareness!
- **High plank series:** Start in a high pushup position and push the ground away. Bring the body forward, further in front of the shoulders and attempt to round out the top of the back into a “hollow-body” shape. Players can then alternate bringing each knee to touch their nose. **Do 2-3 sets of 5-10 reps for each leg while holding the posture.**
- **Wall ball drills:** Stand 5-10 feet from a wall or partner facing sideways with a ball at the back hip or shoulder, with body weight loaded into the back leg. Initiate the throwing motion through the legs and hips, while rotating through the trunk to launch the ball toward the wall or partner. Maintaining an upright and stable posture is vital during rotational movement. **Do 2-3 sets of 5-10 reps per side.**

Increase body awareness through a variety of activities

This is a great age to foster an increase in overall body awareness through a variety of activities like games of tag or other sports. Formal conditioning isn't necessary at this age, but it is very important to stay active and using a variety of movement patterns. Fun alternatives to soccer include 1v1 basketball or field hockey with a sibling or parent, frisbee football, swimming, or other creative games.

U13-U14: Building on foundations and learning efficient movement patterns

Master basic strength exercises

During this age, players achieve much of the coordination that they will use throughout the rest of their playing careers. Understanding and mastery of basic strength exercises can not only give players an advantage on the field, but also protect them from injury. Here are a few exercises that all players should learn and incorporate into their weekly routine.

Warm-Up:

- Glute bridge (2 sets of 10 reps), dead bug (2 sets of 10 reps), body-weight TGU's (3 per side)

Legs:

- Squats (2-3 sets of 15-20 reps), hinge or RDL (2-3 sets of 15-20 reps), lunge (2 sets of 10-15 reps per side)

Upper body:

- Pushups (2-3 sets of 10-15) and pull-ups (2-3 sets of 10-15)

Core:

- Pillar plank (2-3 sets of holding for 5 breaths), “boat pose” (2-3 sets of holding for 5 breaths), and wall ball drills (2-3 sets of 5-10 reps per side)

Look up these universal exercises if they are unfamiliar and break them up across the course of the week. Do the warm up prior to each strength session with either a body region focus or by choosing an exercise or two from each body region. The important thing is consistency and quality of movement, not necessarily quantity or completing all the different exercises in a single day. These exercises can all be completed and modified using one's own body-weight.

Creating athletic movement

Skipping sequences are a fantastic way to pattern explosive movements and apply the basic foundations of posture, landing, and force production.

- **Sprint walks:** Focus on correct sprint mechanics by bringing the bent knee high up to a 90-degree angle, keeping the toes of that foot pointed up in ankle dorsiflexion while coming up onto the toes of the planted foot in ankle plantar flexion, with elbows bent at 90-degrees throughout the motion. Pause at top checking form, then take a step initiated by extension of the bent knee into repeating this position on the other side. Focus on maintaining an upright posture and moving slowly with purpose. **Walk 10-20 yards.**
- **A skip:** Focus on the correct sprint mechanics described above adding a slight forward lean and the skip. Focus first on maintaining a good trunk posture and the height of each knee coming up. Then shift focus to include force production (the power that each foot is putting into the ground) by increasing the tempo and power of arm swing. **Do 2 sets of 10-20 yards.**
- **B skip:** Start with correct sprint mechanics and add a slight backward lean and the skip. Focus on full knee extension perpendicular to the trunk and the cycling motion of bringing it back next to the planted leg. Raise the leg that was originally planted high up to a 90-degree angle then repeat the motion of extending at the knee and “snapping” it back. **Do 2 sets of 10-20 yards.**
- **Skip for height:** Same good sprint mechanics focusing on vertical propulsion. **Do 2 sets of 10-20 yards.**
- **Skip for distance:** Same good sprint mechanics focusing on horizontal propulsion. Not to be confused with bounding. **Do 2 sets of 10-20 yards.**
- **Backwards skip:** Here, lean the torso forward, focusing on reaching backwards through extension at the hip. **Do 2 sets of 10-20 yards.**

Conditioning through activity

Staying active through building the duration of low intensity aerobic activity each day goes a long way at this age. Jog, bike, and hike regularly throughout the week for 20-35 minutes.

U15-U19: Optimizing movement patterns

Regimented body-weight strength training

Incorporate regular body-weight strength training 2-3 times per week. Ensuring correct form is vital before progression, and each exercise can be progressed significantly without necessarily adding any weight. Increase the difficulty of movements by using just one leg for squats/RDLs and lunging with the back leg elevated in the “Bulgarian” style. Core exercises can be advanced by maintaining posture through a greater range of movement using a towel on a slippery floor, skateboard in the garage, or furniture sliders on carpet. Try these below.

- **Slider tucks and pikes:** From the hollow-body high plank position described above, pull feet toward hands while bending at the knees for a tuck or by keeping knees straight and bending at and elevating the hips. These can also be done using as Swiss ball or TRX suspension system with feet on ball or in handle loops. **Do 2 sets of 10 reps each.**
- **Roll-outs:** From a kneeling position with hands on a slider, slowly extend at the hips then shoulders while keeping the core engaged (no sagging the hips or back) and elbows straight. Extend out as far as this correct back position can be maintained, then use core compression (as taught in the hollow-body high plank exercise) to come back to the starting position. **Do 2 sets of 5-10 reps.**
- **Bear crawl:** From a “table-top” position with hands directly below shoulders and bent knees below hips hovering 1 inch above the floor, bear crawl while keeping the trunk stable, with hips and shoulders even. Use a water bottle laid across the lower back to practice maintaining perfect back position. Crawl forward then backward over 10 yards. **Do 3 sets.** Lizard crawl is another fun variation to look up!

Increasing your speed and acceleration

Top speed and acceleration can be increased by reaching top speed and acceleration more often. Many times, however, sprint sets are only focused on conditioning of players and the opportunity to improve individual speed is overlooked. Here are sprint drills that focused on building speed and acceleration.

- **Acceleration sprint set:** Mark out start and end points 20-40 yards apart with cones. At the starting end, arrange four cones around the “start” cone, 5 yards away from it at 90-degree angles from each other. These cones will serve as directions from which players can approach the “start” cone. Beginning at a “direction” cone sprint in toward the “start” cone, decelerate, and accelerate to the “end” cone. Walk back to the start. **Do 2-4 reps from each direction at the top of each minute.** This is very important! Full rest ensures that we are using the correct energy system and reaching full capacity for acceleration. Maintain forward lean throughout beginning phase of acceleration.
- **Building up to top speed sprint set:** Mark out start and end points 40 yards apart with cones and add an additional cones 20 yards beyond the “start” and “end” cones. The player begins at the cone 20 yards before the “start” cone and gently jogs up to full speed by the time the “start” cone is reached. Sprint at top speed with focus on cycling foot strikes and upright posture until the “end” cone. Walk to the cone beyond the “end” cone, rest for the rest of a minute, then turnaround and repeat. **Do 8-12 reps at the top of each minute.**

Improving agility and quickness

Even more important in team sports is speed of transition. This is determined by many factors including speed of thought but ultimately limited or benefitted by a player’s quickness and agility. These are two areas that can be improved regardless of top sprint speed.

Ladder drills: Draw in chalk a 12 wrung ladder with 16 in x 16 in squares. Use the following movements to work on quickness and agility. **Do 3 sets each per side.**

- **Two feet run through:** Each foot makes contact in each square using arm swing in time with foot strikes. No need for high knees, this is about staying low with quick feet.
- **Modified icky shuffle:** Just like the more well known lcky shuffle but with an extra touch with the inside foot out the outside of each square. This better mimics soccer dribbling movement. Try to cover greater horizontal distance as coordination improves.
- **L/R foot disassociation:** Face forward on one side of the ladder and move forward by placing the near-side foot into then out of ladder squares. The far-side foot stays outside of the ladder throughout the drill. Repeat and pick up speed.
- **Ski jumps:** Start on one side of the ladder with the near-side foot inside of the first square. Jump up to the next square to the opposite side with the other foot as the near-side foot in the second square. Repeat and pick up speed.

Conditioning in the pre-season

Year-round conditioning should be based on building up athletes’ aerobic base. This means running, biking, or swimming for time at a conversational pace. Start at 20 mins and work up to the duration of a match. It is unnecessary to run for 45-60 mins more than once per week, but beneficial to add in 20-35 min runs 2-3 days per week. As a competitive season approaches, players can begin to add anaerobic activity back in by doing fartleks, intervals, or tempo runs. Here are two good options for anaerobic work. Do not do these more than 2-3 days per week as they require greater recovery for long-term performance benefits.

- **Fartlek:** Sprint at 90% of maximum for 20 seconds and jog for 40 seconds. Repeat for 20 minutes.
- **Interval run:** Warm up at an easy jog for 3 min. Sprint at 90% for 30 sec then jog for 1 min - repeat 4 times. Sprint for 45 sec then jog for 1.5 min - repeat 3 times. Sprint for 1 min then jog for 2 min - repeat 2 times. Sprint for 1.5 min then jog for 3 min. Sprint for 1 min then jog for 2 min - repeat 2 times. Sprint for 45 sec then jog for 1.5 min - repeat 3 times. Sprint for 30 sec then jog for 1 min - repeat 4 times. Finish with a 3 min cool-down at an easy jog.

All age groups should master the basics first before advancing the complexity of movements. Even an 18 year-old needs to learn how to functionally squat and jump before adding weight to the movement. If returning from an injury, seek consultation and guidance from our partner and sponsor, 503-Athlete. Not only are they our go-to for all things associated with rehabbing athletic injuries but they are a great resource for injury prevention as well.

Stay safe, stay healthy, and stay positive. We wish you all the best and feel gratitude for the strength of our community!

We are Southside!

Feel free to contact Nikia with any questions at nikiacatrinevans@gmail.com.