Improving Agility, Balance and Coordination Through Ladder Training

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This is a simple tool for learning to perform the most complicated dance in sports: the kinesthetic-awareness mambo. It is a ladder. You lay it flat on the ground and then you learn to move: with it, into it, out of it, along it, over it, and under it. It compels you to create movement but not random movement, rather, precise movement at ever-increasing speeds.

You can use it as a functional warm-up tool; you can make it a regular, evolving and challenging part of your training week. You can use it at the end of an exhausting scrimmage or practice to test and push your proprioceptive abilities at game speeds in the presence of fatigue.

First, a note of differentiation, while I have mentioned a ladder before, (Performance Conditioning Soccer Volume 4 #6 “The Acceleration Ladder”), this ladder is different. It is used to improve agility, balance, coordination, footwork and footspeed. Agility ladders are roughly ten yards long, with 20 rungs attached to web-strapping, forming squares approximately eighteen inches wide by twenty inches long. They are (relatively) inexpensive, and most importantly, they are portable, making them an easy-to-use addition to any training session. The ladder is not a tool for doing highknee, high-step exercises. Soccer players need to be near the ground to move efficiently and react to the game. The ladder should lay as flat as possible on the ground, and athletes (ideally) never come in contact with the ladder itself, meaning you can simply have the pattern painted on your field to get started with ladder training. (Figure 1) As I said, it is a simple tool.

Tips on Learning Ladder Exercises
1. Follow a progression, going from simple to complex, from small movements to larger movements.
2. Walk before you run, literally. Do a walkthrough for a couple of squares before you try to do the exercise with any speed.
3. “Go as fast as you can; not as fast as you can’t.” I acknowledge the practical-but-unfortunate sentence construction as my own. Don’t push your speed to the point that you cannot finish an exercise without goofing it up. Let your ability to actually complete all the steps be the limiting factor on your speed. Remember, you are training movement quality, as well as speed and quickness.
4. If you have a sense of rhythm, use it! If you (like many people) have never played a musical instrument and have no notion of meter, don’t give up. Find the word cues to the exercise and say them out loud to yourself as you do the exercise. Don’t be shy! Tell your feet what to do, and they will listen and obey.
5. Don’t stop at failure. The ladder exercises have a nice, fast learning curve. Everybody looks and feels awkward the first few times through a new exercise. Relax, follow the above advice and let learning happen.
6. Don’t try to learn too many exercises at once. Pick two or three and learn them well before moving on to others.

Begin with Four Simple Drills
1. Forward One-in: Facing the length of the ladder, move quickly through the squares, placing your feet alternately in each. (Figure 2)
2. Forward Two-in: Facing the length of the ladder, move through the rungs placing both feet in...
each square. Do the exercise leading with the right foot, then repeat leading with the left. (Figure 3)

3. Lateral Two-in: Stand with your shoulders turned parallel to the length of the ladder, and leading with near foot (right shoulder, right foot, for example). Move quickly through all the squares, placing both feet in each. Keep your feet parallel to the rungs of the ladder. Repeat the exercise, leading with the other shoulder and foot. (Figure 4)

4. Lateral Cross-step: Stand as in exercise #3, but this time, cross your trailing foot over the lead foot and continue down the length of the ladder placing the feet alternately in the squares, continually crossing the trailing foot in front of the leading foot. Again, keep your feet parallel to the rungs of the ladder. Repeat the exercise leading with the opposite shoulder and foot. (Figure 5)

**Two Soccer-Specific Drills (with Variations)**

1. 3-Count Shuffle: Stand to the left of the ladder, facing down its length. Step into the first square with your right foot, then your left foot, then step out to the right side of the ladder with your right foot. Now reverse the steps to the left moving forward to the second square (left foot in, right foot out). This is a waltz: 1, 2, 3; 1, 2, 3 and so on. You can learn the exercise best by saying the following word cues out loud as you go: “in-in-out; in-in-out.” Just make sure you begin with the foot nearest the ladder. (Figure 6)

2. 3-count Cross-Step: Begin in the same position as the 3-count Shuffle but this time cross your left (outside) foot over your right to land in the first square; then step outside the ladder to the right with your right foot and then your left. Reverse the steps toward the left (right foot in; left foot out; right foot out). This is still a waltz, but your word cues are as follows: “cross-out-out; cross-out-out.” Always begin with your outside foot. (Figure 7)

**Variation #1: Backwards!**

It’s the rule of the game: whatever you are able to do forwards, you must be able to do backwards. Here is a tip for making it work—angle your hips so the near hip is pointing (slightly) down the length of the ladder. In the case of the 3-Count Shuffle and the 3-Count Cross-Step, your left hip angles down the ladder when you are moving to your left, the right hip turns down the ladder when you move back to the right. This mimics the use of the hips in defensive marking and allows you to move without having to look over your shoulder to see where you are going. If you angle your hips correctly, the ladder will simply be there, right where you want it to be. (Figures 8 and 9)

**Variation #2: Amplitude**

Once you have the shuffle and the cross-step down (forwards and backwards) you can add a plyometric component to the exercises and improve your ability to stop, balance, and cut back the other way against increased eccentric loading. In the case of the shuffle, all you do is increase the length of your step as you leave the ladder—in-in-out), pushing the outside step at least a yard or so beyond the lateral edge of the ladder and then cutting back as quickly as you can to the right. The increased length of the step forces you to lower your center of gravity as you prepare to change direction. (Note: Don’t push the outside step too far out on the shuffle, or you will have difficulty getting back to the ladder.) (Figure 10)

The Cross-Step, on the other hand, lends itself nicely to the biggest bound you can safely make as you leave the ladder and leap out to the side. Start this exercise standing well out to the left side of the ladder with your right foot lifted off the ground. Your first step will be to place the (formerly) lifted right foot down nearer the ladder. Then you cross the left foot into the square, and bound off that foot as far as you can to land on the right foot, then repeat in the other direction. Change your word cue to this: “Step-crossbound! Step-cross-bound!” Try to land the bound fully balanced before you worry about trying to increase the speed of your cutback to the ladder. (Figure 11)

**Be Creative**

The ladder is a fun and functional training tool. The range of training possibilities it offers is limited only by your imagination. You can use it with a ball, you can sprint out of it, you can use it on a hill for added resistance/assistance work and you can create your own exercises based on movement patterns seen in the game. We are currently using at least 30 exercises or variations on a regular basis. This keeps training sessions fresh and challenging. I have had players from beginning to elite levels tell me they enjoy the exercises. This is a result of the ladder’s recognizable relevance to the game and the fact that the movements are fun to do. It is also nice to find a complex and creative training tool that allows for (relatively) quick learning, especially in a sport where many skills are acquired only after years of ap-
plied effort. In fact, ladder training will accelerate a player’s ability to acquire all the movements and skills of the game.