Doing the Moves

Brent Callaway, the performance manager at Athletes’ Performance in Carson, Calif., and AP trainer Roy Holmes exclusively provide five hand-eye coordination exercise videos.

To intensify a session, Callaway advises trying to catch more balls in the same time frame. “This gives you a target to focus on and the ability to set achievable goals,” Callaway says.

Clip 1: This exercise focuses on peripheral vision and proprioception as it's impossible for the eye to track two objects simultaneously. The drill improves peripheral vision because the eye can't track two objects simultaneously and improves proprioception because the eyes are kept at the peak and not staring at where the balls land. Perform 3 sets of 6 catches in a row.

Clip 2: Reaction time during sports is slowest when reacting to a verbal cue.
and processing the necessary movement. As this athlete (Coach Roy Holmes) must process which hand to catch with in the short amount of time that it takes the ball to get out of my hand and into his. (Not understanding this sentence—it’s very wordy. Is it a complete sentence?)

Perform 3 sets of 10 balls.

Clip 3: Peripheral vision and proprioception are needed in this one and it is evident by where Coach Holmes keeps his eyes during the drill. He never looks at the balls. Reaction cues are purely visual, since there’s no longer an auditory cue. Use golf balls for longer sets. Perform 3 sets of 6-8

Clip 4: This exercise integrates agility work, while catching further distracts from all three training points. Here, we see the only dropped ball of the afternoon. Perform 3 sets of 10 seconds.

Clip 5: Integrating neural activation training while catching is very difficult. These short line drills should be done as fast as the person can execute them. Perform 3 sets of 3-5 seconds.

Train Opposite Legs, Arms
Like any other athletic endeavor, repetition is paramount. MacMillan explains that the body develops a response to the series of information taken in through the eyes. “To make it a conditioned response, you have to do it multiple times—hundreds and thousands of times,” MacMillan says.

Ultimately, playing sports regularly will help develop the hand-eye coordination required for that sport. Yet you can take your hand-eye development to a new level by executing a set of exercises devoted to it. MacMillan says the body’s neurological system can be sharpened by coordinating opposite limb exercises.

Each side of the body working opposite one another is already natural—walking, for instance, in which each arm swings back and forth with each leg. Given how the body’s neural pathways help control hand-eye coordination, exercises dedicated to improving neurological responses are fundamental for improvement.

MacMillan recommends tapping your left foot and right hand, or right foot and left hand. Do that at various points every day and follow it up with afterwork games of ping pong, which requires fast-eye movement. It’s necessary to stay upbeat, even if the movements may not come naturally.

“No let the initial frustration or the inability to do something get you to stop doing it,” MacMillan says.

Unlike exercising your limbs or torso, you won’t be able to gauge your training’s effectiveness by looking in a mirror. Improved hand-eye coordination will become apparent when drilling a baseball or smashing a soccer ball happens more consistently.

About the Writer
Kyle Stack is a New York-based freelance reporter who also writes for ESPN the Magazine, Wired.com and SLAM.