

A Simple Drill for the Enhancement of the Athletic Reaction Time, Foot, and Hand Speed

**Robert Panariello MS, PT, ATC, CSCS
Professional Orthopedic and Sports Physical Therapy
Professional Athletic Performance Center
Garden City, New York**

The athlete's ability to react to a stimulus to which they are confronted is a component of athletics that should not be underestimated. When playing their offensive game, the athlete that processes the quicker first step, or the ability to react to the rebound of a missed shot that occurs in such sports as basketball, hockey, soccer, lacrosse, etc... places the athlete in a position for continued offensive success.

Defensively, the ability to react to a hard hit ground ball, shot on goal, or pass to an opponent will assist in preventing an offensive advantage for the opposing team. An agile athlete that possesses superior reaction time, foot and hand speed will have a definitive advantage over their opponent.

To improve an athlete's reaction time, three basic components must be enhanced.

1. Reaction to a Visual Stimulus – The faster an athlete can recognize a visual stimulus, the faster they can react to the stimulus. i.e. a shot on goal, a line drive to 3rd base, a rebound in basketball.
2. Foot Speed - The athlete must place their body in the proper position so that they may confront the stimulus i.e. block the shot, catch the line drive. Movement of the body starts from the ground up. High velocity foot movement is critical to place the body in the proper position for offensive or defensive success.
3. Hand Speed – Quick hands complete the athletic movement. Once the body is placed in the proper position, the hands often complete the task of athletic success. Activities such as the steal in basketball, tennis return, and stick, glove, or hand saves in such sports as lacrosse, hockey, and soccer require fast moving hands to ensure task success.

The Wall Drill

During my 10 years as the Head Strength and Conditioning Coach at St. John's University I have used the "wall drill" to enhance the reaction time and athletic ability of our basketball players, baseball players, tennis players, goalies and many others of our athletes from a number of our Division I teams. I continue to use this drill with the athletes I presently train, as well as include it as part of the rehabilitation of many of my post-surgical/non-surgical rehabilitation athletes. This drill is simple, inexpensive, and assists in athletic success.

The Starting Position

The athlete faces a wall standing 10 to 15 feet from the wall depending upon their athletic ability. The athlete also holds their game specific athletic equipment when performing the drill. i.e. the baseball player wears their glove, the tennis player holds their racquet, the lacrosse goalie holds their stick, etc...

The Performance Coach/Rehabilitation Specialist stands directly behind the athlete holding the specific ball used by the athlete when playing their sport of participation i.e. basketball for basketball players, tennis balls for tennis players, lacrosse ball for lacrosse players, etc...(Photo 1)

Performing the Wall Drill

The coach throws the ball at a specific distance (depending upon participant athletic ability) to the right or left of the athlete. Since the ball comes from directly behind the athlete, they will probably not see the object until it hits or rebounds from the wall. (Photo 2) The athlete must then run to their right or left to retrieve/catch/block the ball prior to the ball passing their body. As the athlete improves their ability to react and move to catch the rebound of the object thrown, the coach/rehabilitation specialist may increase the difficulty of the drill by incorporating any one of the following modifications.

1. Keep the athlete position (distance) from the wall the same and throw the ball wider (a greater distance) to the left or right of the athlete. This additional distance will cause the athlete to react quicker and move faster to get to the ball before it passes them after rebounding from the wall.
2. Start the drill by placing the athlete closer to the wall. Do not increase the distance thrown (right or left)... By placing the athlete closer to the wall they will have less time to react to the object, as well as less time to retrieve the ball before it passes their body.
3. Move the athlete closer to the wall as the object is also thrown wider to the athlete's right or left. This will also increase the difficulty of the drill as this will require both increased reaction time and foot/hand speed to retrieve the object prior to it rebounding past the athlete's body.

Other modifications used to increase the degree of drill difficulty include placing the athlete on their knees or laying the athlete in a prone position prior to throwing the ball toward the wall. The drill may also start with larger balls thrown i.e. basketballs, and progressively reduce the size of the ball thrown i.e. tennis ball. This reduces the surface area (size of ball) available as well as an increased speed of the ball to be caught.

Sport specific platforms may also be substituted for the wall as a rebound surface for the object thrown. For example, with our big men on the St. John's basketball team, I would

have the athlete stand in “the paint” facing the backboard. I would then throw a basketball against the backboard or rim and have the player react for improved rebound reactive performance. The athlete is moved closer or further from the backboard depending upon the performance coach’s desire to increase or decrease the difficulty of the drill which is based on the skill level of the athlete.

The use of this drill is only limited by one’s imagination. I have found great success with this drill and I am sure many others will as well.



Photo 1 Starting Position



Photo 2 Throwing ball right or left