As a full-time coach, I have the great fortune, opportunity and responsibility to develop new drills to help bowlers improve the key components of the physical game. I take this responsibility very seriously. As with all of my colleagues at the Kegel Training Center, I have a great passion for helping bowlers get better. For us, there is nothing more rewarding then to help a bowler improve. Accordingly, we are constantly reflecting on how we can help our students improve through the use of specific drills. Over time, these drills become refined and useful for all bowlers. In previous articles, I have written about the 5-step drill and the pushaway drill to improve your game.

This month I would like to present the Swing and Slide Drill. This new drill will help you improve several components of an outstanding physical game. This is a one-step drill that differs from other variations of the one-step. I developed this drill soon after leaving my work in Malaysia when I arrived at the Kegel Training Center.

The genesis of the Swing and Slide Drill was grounded in improving a bowler’s torso rotation, leading to an increased biomechanical efficiency and a more fluid physical game. Specifically, I developed the Swing and Slide Drill to simulate the key biomechanical motion of the slide into the finish. This includes the promotion of energy transfer from the legs through the torso to the arm. It’s designed to help bowlers develop an improved swing and finish with less unhealthy use of the ball-side shoulder.

Drills are designed to develop an improved efficiency of a bowler’s movement. Over time, through consistent practice with the drill, a bowler translates the isolated micro movements of the drills into habits of the macro-level full motion. This creates a more efficient range of motion in the full approach. Efficiency of motion is an important component of the physical game of great bowlers, and will help good bowlers become better. And, the importance of promoting the most efficient motion in the physical game can not be overstated. With an improved efficiency of motion, a bowler can simultaneously prevent injury as well as promote increased ball motion and ball speed with less effort and less muscle.

Joe Slowinski, ABD, M.Ed. is a full-time coach at the Kegel Training Center, in Lake Wales, Florida. He is the former Director of Coaching and Coach Certification for the National Sports Council of Malaysia. He was named a Top 100 Coach for 2005, 2006, & 2007 by Bowlers Journal International. Slowinski can be reached at joseph.slowinski@kegel.net. Visit his coaching site at www.bowlingknowledge.info.
Balance and torso rotation

As with other sports, biomechanical efficiency requires energy to move from the legs, through the torso, to the arm. This is a kinetic energy chain. Think about a quarterback throwing a football, a shortstop throwing to first base or a tennis player serving. To achieve a smooth and efficient throwing motion, the opposite arm is out in front. This creates a body position that promotes torso rotation, while placing the shoulder in a position that prevents over rotation. The athlete pushes off, then rotates the torso and throws with the arm.

Consequently, torso rotation is a necessary requirement for fluidity and efficiency of motion in bowling, as it is in tennis, swimming and other sports. When a bowler puts the balance arm to the side, this rotates the left shoulder back, bringing the right shoulder forward. This eliminates the possibility of torso rotation. Consequently, without torso rotation, a bowler will have increased stress on the shoulder and neck. This can lead to significant and long-term injuries of the neck, shoulder and middle back.

Through video analysis, you can see the significant difference between bowlers who have a balance arm out in front and those who don’t. When the balance arm is out in front into the slide, the bowler has more torso rotation and a more efficient throwing motion. With less torso rotation, as with bowlers who have a balance arm more to the side then out in front, there is an unhealthy use of the shoulder to throw a bowling ball.

Setting up the drill

The Swing and Slide Drill is intended to simulate a bowler moving from the top of the swing into the slide and into the finish. Great timing sees the interaction of the slide foot at the heel of the ball-side foot when the ball reaches the top of the swing and begins its decent. The Swing and Slide Drill places the bowler in a similar position from the start of the drill. Accordingly, the drill helps promote a feeling of good timing and the development of torso rotation.

To help readers begin to see how the drill works, I have included a front and side view of the drill setup. This will help you to set up and implement the drill correctly. As you read the description, review the photos closely.

To start, begin with the slide foot behind the ball-side foot. I recommend standing on 22 looking at 15 as a visual target. Place the front of the slide shoe next to the heel of the ball-side foot. As you get more proficient with the execution of the drill, you can start and target in different locations.

In the first phase of the drill, the ball will start at a location down at the side with the wrist in a very relaxed position. The bowler should bend at the waist, with the butt out and head forward.

From a front view, the balance arm should be placed in front of the
ball-side shoulder. The thumb of the balance arm should be down with this shoulder in front. This will help to relax the non ball-side shoulder. Be sure that the belly button is at an angle away from the lane. In the setup, the shoulder should be dropped with the head over the ball. Think eye over the hand as you set up. It is recommended to touch the ball to the floor as you are establishing the position. This will help to keep the ball-side shoulder down.

This setup position establishes the line in which the bowler will throw through and over. Notice how the bowler's ball-side shoulder is dropped. In elite bowlers, at the point of release, the shoulder is dropped at an angle between 138 and 145 degrees. This position promotes dropping the shoulder as the bowler throws the ball allowing the ball to remain under the head and be thrown into the lane.

As discussed in my swing slot article (July 2008), this is the position in which the ball swings. A great swing has the ball swinging under the head. By leaning to the ball-side, the bowler creates enough space for the ball to swing while remaining close to the body. Specifically, the arm should swing under the eye. If the swing doesn't swing under the eye, the bowler will not be as accurate. Great players have a swing that swings under the head with the follow-through through the face, on the swing slot.

**Beginning the drill**

To execute this drill properly, it is critically important to establish the position discussed above. Take the time to set up the same way each and every time. When first attempting the drill, take more time for proper alignment. This will insure that you get the most out of this drill. Over time, this level of discipline will provide improvement in your game.

To begin, push the ball up to waist height. After the ball reaches the height of your waist, let it fall into the swing. Specifically, let the ball swing in a relaxed manner. Think to yourself “push-relax” as you push the ball forward and up.

Let the ball swing to the maximum height in the backswing. At this point, push off with the ball-side foot, slide and finish. As you slide, let the balance arm move, like an arc, while keeping the shoulder from over-rotating. Make an effort to keep this arm relaxed, allowing the elbow to bend. Think about how a quarterback or a shortstop throws. The balance arm motion should be similar. The arm bends in a relaxed way maintaining the shoulder position and preventing over rotation. When you throw a baseball or football, you do this without thinking in a natural manner. Think about this before doing the drill.

Hold the finish position until the ball hits the pins. This level of discipline in the finish position will translate to the ability to more accurately watch ball motion. And, with this improved finish position, you will throw the bowling ball with increased consistency. Over time, the execution of the drill in a consistent and purposeful manner will help you improve significantly.

**Recommended daily**

This drill is an excellent daily practice drill as well as a warmup before league. It reinforces excellent torso rotation, slide and finish characteristics.

Start each practice with 20 to 30 minutes of this drill. This will help develop the balance arm position to promote torso rotation and improved biomechanical efficiency. Moreover, it will help you develop a better swing.

Another effective practice technique is to do three to five of the Swing and Slide drills immediately followed by a full approach. Complete 10 to 12 cycles.

Through the implementation of this drill, elite bowlers have had an improved swing slot as well as follow-through through the face, indicating a much better swing. Over time, with disciplined setup and execution of the drill, you too will improve your swing.

**Increased fluidity**

In the earlier article on the swing slot, I discussed how top players create an excellent swing. With the swing slot, these elite bowlers have an efficiency of motion that is unmatched. As an extension of that article, the Swing and Slide Drill promotes the end phase of the swing slot, which includes torso rotation and an improved efficiency of energy transfer due to torso rotation.

With an improved swing, the bowler will become more fluid with a quieter upper body and head, through the approach. Fluidity is often seen in the best our sport as to offer. We watch these elite bowlers in admiration as they truly appear to be effortless in their physical game. And, on the other side of the coin, the more a bowler exerts effort with muscle, the less their game appears fluid.

By practicing the Swing and Slide Drill frequently, you will improve your swing slot and physical game motion.