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Bill Spigner's

Bowling Clinic

I have been a bowler for more than 20 years, and for most of that time I've been trying to develop a free and natural armswing. I hear a lot about the "pendulum swing," but very little, if any, information on how to achieve this. I understand that I'm supposed to keep my arm relaxed throughout my swing, but how do I keep my 16-pound ball from flying away from my hand if I don't firm up my grip and, because of that, tighten up my armswing? Can you please describe to me, in practical terms, the pendulum swing and how to achieve it. And please—no grandfather clock examples!

A pendulum is an object suspended from a fixed support that swings freely back and forth under the influence of gravity. Pendulums commonly are used to regulate various devices, especially clocks. The bowling industry *has* used the example of the pendulum for the bowling swing for many years, but unfortunately it is an oversimplification of the swing. For beginners, though, it's a good way to visualize how their bowling swing should be.

As you start to develop hand action and ball speed, a pure pendulum swing cannot generate the necessary power needed to develop those attributes. You need to use a certain amount of muscle to control the ball and to develop swing speed and hand action.

Gripping your ball takes a certain amount of control, depending on how it fits your hand. The ideal way to grip your ball is with a firm wrist, fingers, and hand. This doesn't mean putting a death grip on the ball, but you do have to have a firm grip. And you're right in stating that a firm grip on the ball will tighten up the other muscles in your arm.

Since a free-moving pendulum swing cannot develop much ball speed, muscle is needed at certain points of the swing. This can be done in various ways. First, apply some muscle to develop a higher back swing, which will increase ball speed. To do this, a slight pull backward of the arm is needed in the backswing to help the swing go higher. Secondly, open your shoulders and bend more from the waist, which also will aid in creating a higher backswing and more ball speed at release. Third, ball speed can be generated in the downswing by pulling up the arm slightly at the point where the hand starts to travel fairly parallel to the lane surface. The forward thrust provided will generate more ball speed. Lastly, a firm, consistent follow-through will increase your ball speed and give you more lift and accuracy.

Bowlers succeed with so many different types of swings it's impossible to say one

swing is best. Many players today use a bend in the arm to help achieve a stronger ball. This bend usually starts on the downswing to help get the hand under the ball, but some players have a severe bend in their arm throughout their entire swing. When they use this bend in their arm, they straighten the arm at the moment of release so they can get the extension necessary for accuracy and good hand action.

I like to describe the swing as follows: The swing starts with the backswing. Once the ball is in motion, the arm should be considered one piece from the fingertips all the way up through the upper arm. All the pieces stay connected—fingers, hand, wrist, forearm, and upper arm, which I refer to as a unit.

This should be done with a certain amount of firmness to keep all the pieces connected as one unit. There should be no hurry to force the ball to the top of the swing; as in golf, the backswing has to stop and restart. During the backswing, the unit should swing freely from the shoulder. On the downswing the unit should continue to stay connected, but as the hand starts to travel fairly parallel to the lane surface it's time to energize the swing and accelerate the movement of the swing from the upper arm.

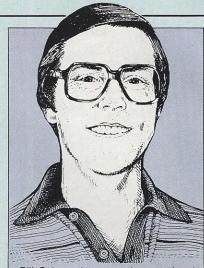
This is not done by contracting the muscles in the upper arm but by using that part of the arm for power. Using the upper arm muscles for power is much more effective than trying to use the smaller muscles of the hand. The unit should remain connected during this acceleration and connected through the follow-through. By following this formula for the swing with the wrist being straight, your fingers can provide enough lift for an effective ball.

■ I am a right-handed bowler. What causes the left top side of my thumb nail to crack? What kind of pitch should I use?

Your nail is cracking because you are squeezing your ball extremely hard. As your thumb exits the hole it's hitting the top of the hole, which causes your nail to catch slightly. This will pull your nail away from your thumb and cause it to crack.

The best way to stop this from happening is to learn to relax your grip on your ball. You will find that with a lighter grip you might lose your ball during the swing; if this happens you'll have to tighten up your thumb hole with tape or have your thumb hole plugged and redrilled to a smaller size. You can also have the amount of reverse pitch reduced on your thumb hole when you have it redrilled.

If you find that eliminating the squeeze



Bill Spigner has won three national PBA championships and seven regional PBA titles. He is co-owner of Hawthorne Lanes in Vernon Hills, Ill., and teaches at Pro Bowling Camps summer camp in Connecticut.

you apply with your thumb affects your release too much, you can try two other things. First, try and train your thumb to straighten out as you are starting to release your ball. Second, have the top of your thumb hole beveled so that the edge is rounded enough that your nail will easily slide over the edge of your thumb hole as it exits the hole. The problem with overbeveling your grip is that it shortens the span slightly and can cause you to squeeze your ball even harder.

■ I am a 6-foot, 170-pound right-handed bowler with long arms and fingers. I put decent revs on the ball, but it hooks too much in the back end no matter what angle I play. I can't throw as hard as I need to on dry lanes (and still have good accuracy) in order to get the ball to go longer before it hits the pins. Are there any types of drillings I can use to get the ball to go farther down the lane before it hooks? I am currently using a polished pink Hammer with axis/leverage weight.

You should try a three-piece, hard-shelled ball instead of a two-piece ball. The pink Hammer is a two-piece ball, and two-piece balls roll earlier than three-piece balls. Use a finger-weighted ball drilled over the label. Using a label-weighted ball rather than one with axis/leverage weight will reduce the reaction of the ball.

Bill Spigner welcomes questions from readers and will answer as many as possible in this column. Mail your questions to: Bill Spigner, Bowling Digest, 990 Grove Street, Evanston, IL 60201.