Bill Spigner's

Bowling Clinic

■ Is there a method of shooting spares other than the 3-6-9 or 2-4-6 systems? What methods do the pros use?

The 3-6-9 and 2-4-6 spare-shooting systems are the best systems to use as a base to make your spares. These numbers need to be altered depending on what the oil pattern is on the lane surface. There are probably as many spare-shooting systems on the pro tour as there are bowlers. Mark Roth throws the ball hard and straight at all his spares, while Gary Dickinson uses only his middle finger and thumb to roll at spares. However the pros shoot their spares, most use variations of the 3-6-9 and 2-4-6 systems.

I use both of these spare-shooting systems, depending on the line I'm playing. I'll generally use the 3-6-9 system when I'm playing an inside line, and the 2-4-6 when I'm playing the outside line. I use the 2-4-6 system for the outside line because I could run out of room to move my feet to the right if I used the 3-6-9 method. It is easier to move my target left, which is the basis of the 2-4-6 system.

On tour we bowl on a different pair of lanes each game. To make the correct spare adjustments when moving to a new pair of lanes, you first have to calculate your adjustment to get the ball into the pocket.

For example, if in the 1st frame of a new game on a new pair of lanes you miss the headpin completely and leave the 1-2-4 spare, an adjustment of three boards with your feet will not get the ball to strike the pins between the one- and 2-pin to make the spare. You first need to calculate your adjustment to get the ball back to the pocket, which in this case would be about a two-board move to the right with your feet. You then add the normal three-board spare adjustment to the two-board strike adjustment and move a total of five boards to the right to make this spare.

Making spares is an art. You don't want to be guessing on spares. If you don't know how to make adjustments to get the ball back to the pocket, or how to use these spare-shooting systems, I recommend the purchase of an instructional aid called the Martin Lane Reader. Or you might consider buying "The Encyclopedia of Bowling," Volumes I and II, written by Dr. George Allen and PBA Hall-of-Famer Dick Ritger.

One thing I have found in my PBC camp and private teaching is that most bowlers are more concerned about making strikes than learning a sound spare-shooting system.

The pros earn their money by making spares. I've seen players on tour miss nine or 10 spares in an 18-game block and miss cashing by a couple of pins. You can never make up for a missed spare. Learn your spares and lane adjustments—they're the key to a higher average.

■ I've been trying, unsuccessfully, to convert from rolling a full-roller to rolling a semi-roller. How can I drill my bowling ball so that I can get the maximum hitting power from my full-roller style?

The best weights to use for a full-roller are positive weights—top, side, and finger. The reason is that all three weights will help the full-roller hook.

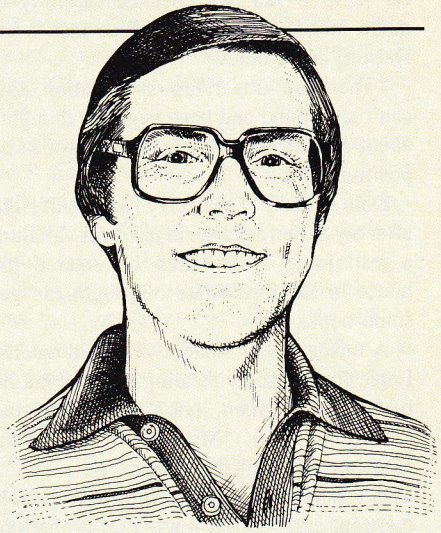
The pitches you would use for a full-roller are basically the same as anyone else would use. You want pitches that are comfortable and allow you to hang onto the ball without squeezing or having the holes too tight. There is one pitch for the thumb that some full-rollers might consider using, and that is left lateral, zero to about one-eighth inch (for a righthander). The reason a full-roller might want this type of lateral pitch is because of the slight clockwise rotation of his hand at release. It will help him get out of the thumb hole a little faster and possibly get a little more lift with his fingers.

It is difficult for a full-roller to get that big finish in the back end. Because of the release action of the clockwise hand rotation, the ball comes off the pads of the fingertips, which produces an end-over-end roll. You can get plenty of revolutions on a full-roller, but the *direction* of the rotation is what's important. The ball should travel down the lane in a slight right to left rotation so it can hook. An end-over-end rotation doesn't hook, it only rolls. The full-roller tracks between the finger and thumb hole and covers the whole circumference of the ball. A semi-roller tracks outside the finger and thumb holes and only covers about three-quarters of the ball. Having the track cover less of the circumference of the ball puts more of the ball weight on the side of the ball heading towards the pocket, causing more hook.

To change from a full-roller to a semi-roller, you have to stay behind the ball longer, and at release point, have a slight counterclockwise rotation of the hand. At release, it's a good idea to try to lift with the sides of your fingers, instead of lifting with the pads of your fingers.

You can also try a lot of right lateral pitch in the thumb, three-eighths to one-half inch. This pitch will help turn your hand around the ball in the counterclockwise rotation.

It takes time and work to get out of a full-roller release. It took me two and a half years to get the semi-roller down. At first I felt like I was turning the daylights out of the ball, only to have the ball bounce over the thumb hole all the way down the lane.



Bill Spigner is bowling in his 12th year on the PBA Tour. He's won three national titles and seven regional tournaments. He also is a head teaching pro and instructor at PBC Bowling Camps.

Have patience—give it time. Your scores initially will be erratic, but with a semi-roller they will get better in the long run.

■ I've been bowling for 12 years and still have a 165-168 average. I've had to cut down on my number of leagues because of the cost, but I still practice whenever I can. When I do practice, how many games should I bowl?

The quality of your practice is more important than the number of games you play or the score you get. Unfortunately, most people start keeping score when they practice and forget about working on their game. If you play golf you don't go to the driving range to keep score, you go to practice. The same principles should be applied to bowling. Practice should be devoted to perfecting your skills so you can perform better in competition.

When you practice, you should set up a system based on devoting a specified amount of time to each segment of your game. You might have three areas that you want to concentrate on, so you can devote maybe 15 minutes to each one. For example, 15 minutes on your footwork, 15 minutes on getting your swing loose, and then 15 minutes on your finishing positions. Have a pro in your area pinpoint your problem areas and devote your practice time to solving them.

You should find a center that rents its lanes by the hour. It is usually cheaper than paying by the individual game. When I practice, I roll about 100 shots per hour. Another way to decrease your cost would be to ask the manager or proprietor if you can buy a block of games for a reduced price.

■ **I am a left-handed 14-year-old who averages 136. I have the problem of throwing my ball too fast, and I would like to know if there is any chance of me slowing it down?**

Taking into account your age and average, I would have to say your ball speed should be the least of your concerns. You should learn to develop a good approach and work on your timing, leverage, follow-through, and consistent footwork. Learn how to make spares and play lanes.

One of your assets is that you throw the ball hard. If you work on developing a good physical game, your speed will help. Most of today's stars on the PBA Tour roll the ball hard—Mark Roth, Joe Berardi, and Ricky Sajek, for example.

As you develop your physical game, you will find that your ball speed will be an asset, not a detriment. If you want to slow down your ball speed, slow down your steps.

■ **I average 170 and bowl twice a week. I purchased an Ebonite Magnum 12 and had it drilled with a half ounce of side weight. It works great on medium-oiled lanes, but on heavy oil I can't get it to hook. I read in Mike Durbin's column that positive weight will not allow the ball to grab on tight lanes. I was going to buy a Gold Angle or Gyro I and have it drilled zero weight. The pro shop owner claims that if I can't get the ball to hook with the Mag 12 and positive weight, that a new ball with zero weight won't hook either. What should I do?**

First off, let me explain what positive weights do. Positive weights will make the ball slide down the lane and hook hard in the back end. The less you go with positive weights, the earlier the ball will roll, and the less hook it will give you in the back end. You must realize these weights do this if you are using *one* brand of ball on *one* type of lane condition. When you start changing the type of equipment you are using and bowling in different centers, then the *shell* of the ball becomes a major factor in how your ball is going to react.

For example, your Mag 12 works better on medium-oiled lanes than heavily oiled lanes because the ball will go long before grabbing the lane. There are two things you can do to that ball to get it to roll better on heavy oil. One is to drill out the side weight and put zero or some negative weight in it, which will make the ball roll earlier. Second, you can sand the ball to take the shine off the surface, which will make the ball roll sooner.

The amount of hook that you can get on the ball is determined more by the rotation and revolutions on the ball than by weights.

If your ball has an end-over-end roll on it, you should be more concerned about how far down the lane your ball is sliding rather than worrying about getting a bigger hook. Many times bowlers are overly concerned about getting more hook on the ball. It's much more important to perfect what you have. You do need a slight hook, but if you look at many of the top money winners on the tour, they roll the ball straight—players such as Mike Durbin, Gil Sliker, and Ernie Schlegel, to name a few.

One more thing, if the lanes are tight, you should not try to hook the ball. Line up much tighter to your target and play the straight shot. You don't want to fight the lanes—you want to play them the way they are telling you to play them.

■ **I would like to know about the different types of lane finishes and what type of ball you would use on them. For example, if a lane has a lacquer finish would you use a plastic, urethane, or rubber ball?**

There are three types of lane finishes: urethane, lacquer, and waterbase, but there are many different kinds of each of these three types. There are several manufacturers of lane finishes, and each company makes its finishes slightly different. It would take a book to describe each individual finish.

The most common finish used these days is urethane. It is a hard finish and extremely durable. It has little porosity, so it tends to be an overreacting surface. In other words, if too much oil is applied to it, the ball slides too much; and if there is little oil, the ball will hook too much. Also, the oil moves around a lot on urethane, and lane conditions can drastically change during the course of an evening of bowling. Watch closely the next time you are bowling on urethane and you'll notice the lanes getting tighter as you bowl. The characteristics of the urethane surface causes the oil to carry down from the front end to the back end and makes the lanes tighter. After this initial transfer of oil, the lanes will start hooking more.

Lacquer is a softer, more porous finish than urethane. Being porous, the oil stays where it is put on a lacquer finish for a longer period of time. But being softer, lacquer finishes wear out quicker. Lacquer was the most widely used lane finish until urethane started taking over in the early '70s.

Ball play is also different on lacquer than urethane. When the track area wears into a lacquer finish, it forces the bowler to throw the ball on a much straighter path to the pocket. If you miss to the right of this track area, you go into a lower friction area and the ball will seem to slide all the way down the lane. This could cause you to miss the pocket by more than you may have missed your target. On lacquer, these lane characteristics determine where you have to play the lane. This is the opposite of urethane finishes, where the oil pattern dictates the best playable area.

Waterbase is sort of a cross between lacquer and urethane. This finish was made because many proprietors wanted a finish that had the characteristics of lacquer, but the durability of urethane. Waterbase is not as durable as urethane, but holds up better than lacquer. The ball reaction is similar to lacquer. The oil doesn't move down the lane as much on waterbase as it does on urethane.

What ball should you use on what type of lane finish? The theory used to be to use rubber balls on lacquer, and plastics on urethane finishes. But that was just a theory, because bowlers began using whatever worked for them that day, with no concern for the type of lane finish. Now we have urethane balls and they are used on all types of lane finishes.

Ball selection is not determined by the lane finish, but by the oil pattern on the lane, and by the ball that gives you the reaction you want.

■ **While watching the pro bowlers on TV recently, I noticed Pete Weber was wearing something on the fingers he put into the ball. What is it, and where can I get it?**

Pete wears the middle and ring fingers of a golf glove. His fingers were blistering and he was in pain. Pro Joseph Groskind suggested Pete give it a try, and the cut-out fingers have eliminated his problem. Pete also claims he gets more revolutions on the ball while wearing the glove fingers. If you want to wear the cut-out fingers, you will have to drill your finger holes one or two sizes larger.

■ **Because of an injured middle finger, I had to resort to using my ring and pinky fingers for my fingertip grip. I throw a full-roller and average 195. What finger pitches do you recommend?**

Assuming your grip is not a stretched fingertip, I would recommend a pitch of ⅜″ right lateral and ⅜″ forward for the ring finger. For the pinky finger, a pitch of one inch right lateral and zero forward would be best. These pitches will be comfortable, and the pitches in the ring finger will enable this strong finger to do more of the work of lifting the ball.

■ **How wide should the bridge between the finger holes be?**

I've seen bridges ranging from ⅛″ to ½″, but almost all ball drillers will make the bridge ¼″. The width should be what feels most comfortable to you.

Bill Spigner welcomes questions from readers and will answer as many as possible in this column. Mail your questions to: Bill Spigner, Bowling Digest, 1020 Church Street, Evanston, IL 60201.