

JOHN JOWDY'S SEVEN STEPS TO SUCCESS

BOWLING

DIGEST

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Jeri Edwards
on how to start
a new season

Parker Bohn III on
today's hooking player

Interview with FIQ
president **Jerry Koenig**

Get a Grip on Pro Shop Talk

If you're thinking about buying a new ball, let
Bill Spigner explain the language of the experts

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Learn the Language of

WITH THE NEW SEASON COMING up, many bowlers will be thinking about a new ball. There are a number of choices out there—every major manufacturer has a complete line of balls that can fit your needs. There are also some great balls produced by smaller companies.

The key to selecting a ball is to accurately evaluate your personal needs. Are you looking to fill in a hole—in other words, select a ball for a specific type of condition—replace a ball in your arsenal, or just upgrade to a better ball for performance?

As you go through this process, you may find yourself confused as you listen to pro shop operators describe the balls and drilling techniques they use. This article will cover some of the most common terms used by pro shop operators.

The first thing is the **GRIP**. There are basically three types: the fingertip, the semi-fingertip, and the conventional grip—all named for the drilling procedure used.

With the **CONVENTIONAL GRIP**, the fingers are inserted into the ball up to the second joint. Beginners and bowlers who aren't looking to play the game at higher levels use this grip.

In the **SEMI-FINGERTIP**, the fingers are inserted about a quarter of an inch into the holes beyond the first joint. This grip is the least used, and I don't recommend it. It's difficult to insert the fingers the proper depth into the ball because you don't have a joint that would bend to give you control of the depth the fingers are inserted.

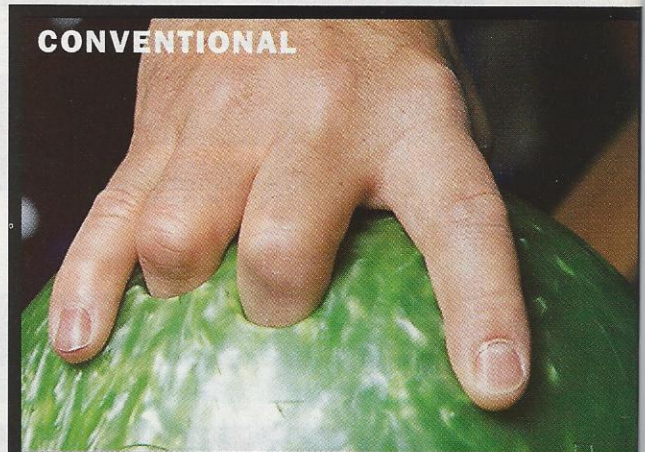
The third type of grip is the **FINGER-TIP GRIP**. This is the recommended grip

to use. With a fingertip grip, you insert your fingers into the ball to the first joint. This type of grip gives you the most feel and control over your shots. It also allows you to put the revolu-

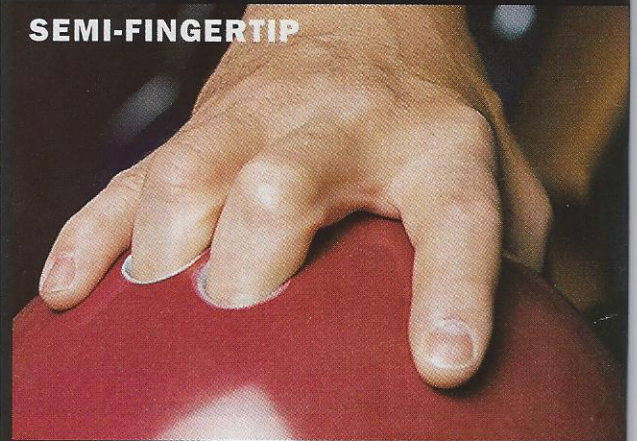


Bowling Clinic

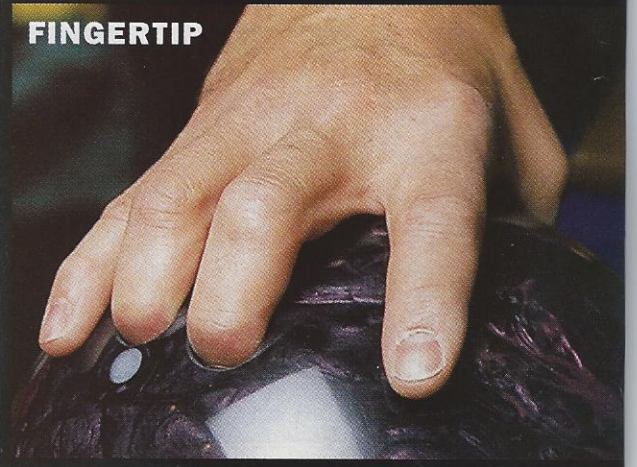
By BILL SPIGNER



CONVENTIONAL



SEMI-FINGERTIP



FINGERTIP

Need some help with your game? Bill Spigner welcomes questions from readers. Mail them to: Bowling Clinic, Bowling Digest, 990 Grove Street, Evanston, IL 60201.

DAVID DUROCHK

Your Pro Shop

tions and turn on the ball needed for a good strike ball.

With all the types of grips, the thumb is fully inserted into the ball. Once you determine the type of grip that you want, you need to have it drilled with the right span and pitches. The **SPAN** is the distance measured between the fingers and the thumb. The **PITCH** is the angle at which the gripping holes are drilled into the ball. The pitches have to complement the bowler's span and characteristics of the bowler's hand, such as flexibility, length of thumb, skin texture, and strength.

The next thing is the type of ball. Today you're likely to hear four different terms used, but they all refer to the **COVER STOCK** of the ball: the material that the cover of the ball is made out of. The four types are plastic, urethane, reactive resin urethane, and particle balls.

PLASTIC is used by beginners, and by more advanced players as a spare ball and for very dry lanes. A **URETHANE** ball is still used as an entry-level ball into the high-performance ball market. It's easy to control, grips early in oil, and doesn't hook hard in the back ends. The most common type of ball used today is the **REACTIVE RESIN URETHANE** ball. These balls slide long in oil and grip very hard on dry lane areas. The fourth type and newest entry in the ball market are the **PARTICLE** balls, which feature fillers such as glass, rubber, ceramic material, or mica added to the cover stock of the ball for more grip. Particle balls are good when you need a ball that will grip early and not overreact on the back end; they give a reaction that's similar to that the old urethanes, but much stronger because of the cores and cover materials used.

The **CORE** is the engine of a ball. Cores can be basically divided into two types: with a low or high **RADIUS**

OF GYRATION (RG). The low RG balls have dense cores with the weight closer to the center of the ball. High RG balls have the weight concentrated closer to the outer shell of the ball. The low RG will roll earlier and the high RG will go longer and break later.

The balls with the appropriately shaped cores will produce track flare. **TRACK FLARE** is a wide ball track made up of individual ball tracks. Every full rotation of the ball on the lane causes the track to move and a new track to be made. A flared ball track keeps a dry surface in contact with the lane, increasing friction and hook.

Most advanced players will form what we call an **ARSENAL**. An arsenal is having four or more balls to cover your needs for different conditions. Most tournament players would need at least a five-ball arsenal. It would include a dry lane ball, a spare ball, a "benchmark" ball—the ball that would be used first to help you get a read on the condition and the direction to take in your equipment selection—a medium lane ball, and an oily lane ball.

Your **DRY LANE** ball could be plastic, urethane, or resin. You would want a high-RG ball, very smooth and highly polished, with zero side weight and one-half to three-quarters of an ounce of finger weight with the **PIN**—the colored dot on the ball that represents to top of the core—five to six inches from your **POSITIVE AXIS POINT (PAP)**. The PAP is the spot on the ball that is an equal distance from the track all the way around the ball, which is based on the first rotation

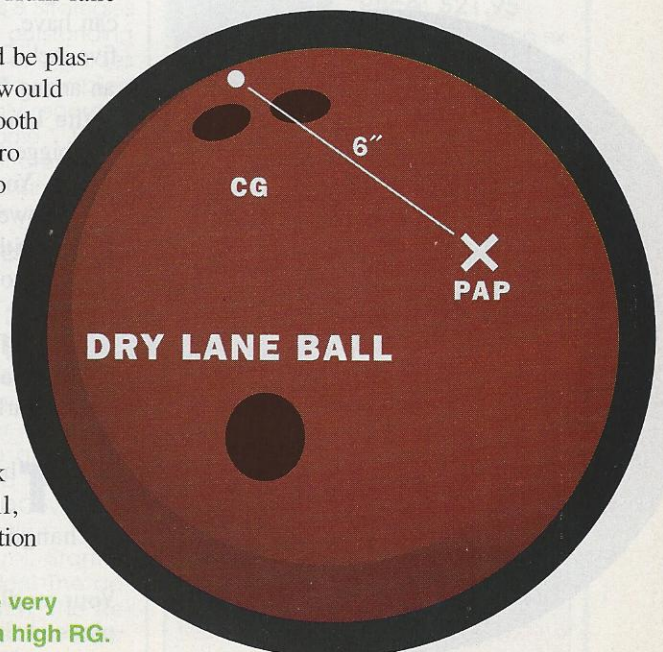
Your dry lane ball should be very smooth and polished, with a high RG.

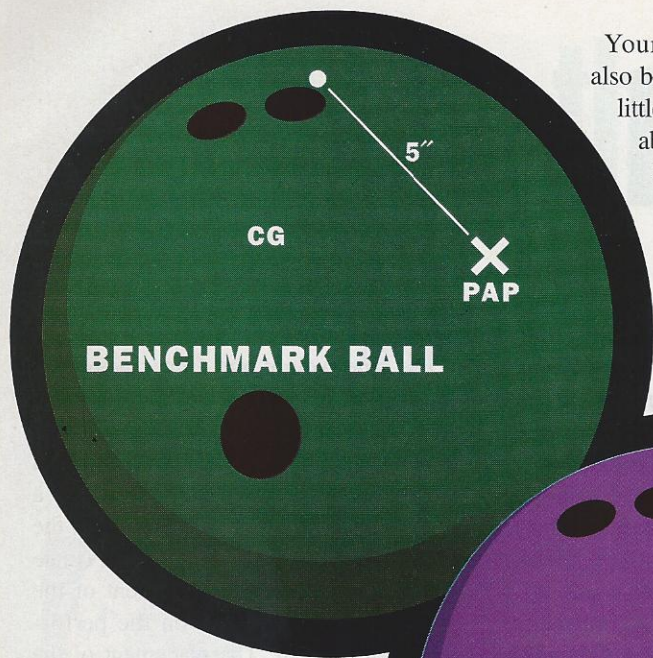
of the ball. (Don't worry—your pro shop operator has tools to measure this.)

The side weight and finger weight is determined by the position of the **CENTER OF GRAVITY (CG)** relative to the center of your grip. The CG is the spot on the ball that, when weighed out on a scale, is the static center of balance of the ball. When this point is moved you create an imbalance, and the placement of the imbalance has an effect on the performance of the ball. The placement of the CG, coupled with the pin, helps determine how the ball will roll.

There are four basic balances that the CG is used to create. They are **POSITIVE SIDE WEIGHT, NEGATIVE SIDE WEIGHT, THUMB WEIGHT, and FINGER WEIGHT**. Basically, thumb and negative side weight make the ball roll earlier and hook less. Positive side weight makes the ball hook more, and finger weight delays the break of the ball. Your pro shop operator will use a combination of pin and CG placement to get the desired reaction of the ball you need.

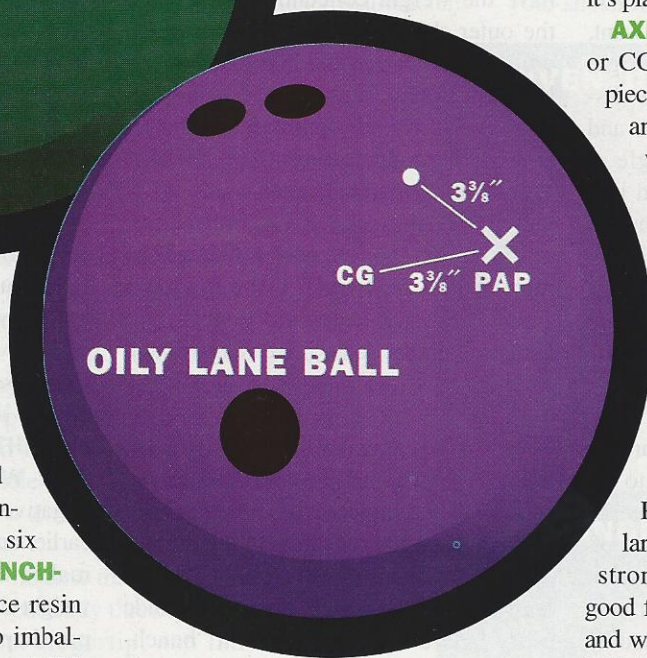
Your **SPARE** ball can be plastic or ure-





Your benchmark ball gives you the truest reaction, while your oily lane ball will roll early.

thane, high RG, smooth finish and highly polished. You should drill it with a little negative and finger weight, with the pin about six inches from the PAP. Your **BENCHMARK** ball should be two-piece resin with about a five-inch pin, zero imbalance, and medium polished—about 600 grit, which is roughly the grit of synthetic lane finishes.



$3\frac{3}{8}$ inches from the PAP is called **LEVERAGE WEIGHT**. This pin placement gives the ball the strongest hook it can have. This type of drilling with the five-inch CG will give a lot of hook with an arcing **BREAK POINT**—the point on the lane where the ball makes its biggest move.

Your **OILY LANE** ball will be a lower RG ball, sanded to 320 grit, with the pin and CG $3\frac{3}{8}$ inches from the PAP. This is called a **LEVERAGE WEIGHTED STACKED DRILLING**. This makeup will give the ball an early roll with a hard break point.

There are many adjustments you can make to the cover stock to change ball performance. Bowlers

Your medium ball should be two-piece resin, sanded to about 400 grit.

commonly use sand paper, scouring pads, polishes, and cleaners to alter their cover stock. You also can have a balance hole drilled to change the balance of the ball.

Some other commonly used drilling terms are label, axis, and axis leverage. In a **LABEL DRILLING**, the bowler's grip is located over the label of the ball. However, label drilling can take on many different looks performance-wise, depending on the distance the pin is from the CG and where it's placed relative to the PAP.

AXIS DRILLING is where the pin and or CG are located on the PAP. (Three-piece balls will have the CG on the PAP and two-piece balls with the pin out will have the pin on the PAP.) This type of drilling delivers minimum length and back-end reaction, and no track flare. It's good for flat oil, oily heads with strong back ends, and situations where you're looking for a very controllable ball reaction.

AXIS LEVERAGE DRILLING will have the CG on the PAP and the pin $3\frac{3}{8}$ inch away from the PAP. This type of drilling will have a large track flare and early roll with a strong-arching back-end reaction. It's good for oily lanes with strong back ends and when you want a continuous hooking ball through the pins.

Both axis and axis label drillings will need a **BALANCE HOLE** to take out the extra weight that's on the side of the ball. You can legally only have up to one ounce of negative or positive side and thumb or finger weight after the ball is drilled. Most axis and leverage drillings end up with too much side weight, so a hole is required.

Many bowlers mistakenly infer that if any extra hole has been drilled in a ball then the ball has been drilled axis weighted. That isn't so. The hole doesn't determine the type of drilling that is used—the hole is used to (1) bring the ball back to legal specifications pertaining to weight balance, and (2) help tweak the reaction of the ball.

Understanding these terms and how they are used will greatly help you to understand your equipment and to work with your local pro to improve your arsenal. ●

