

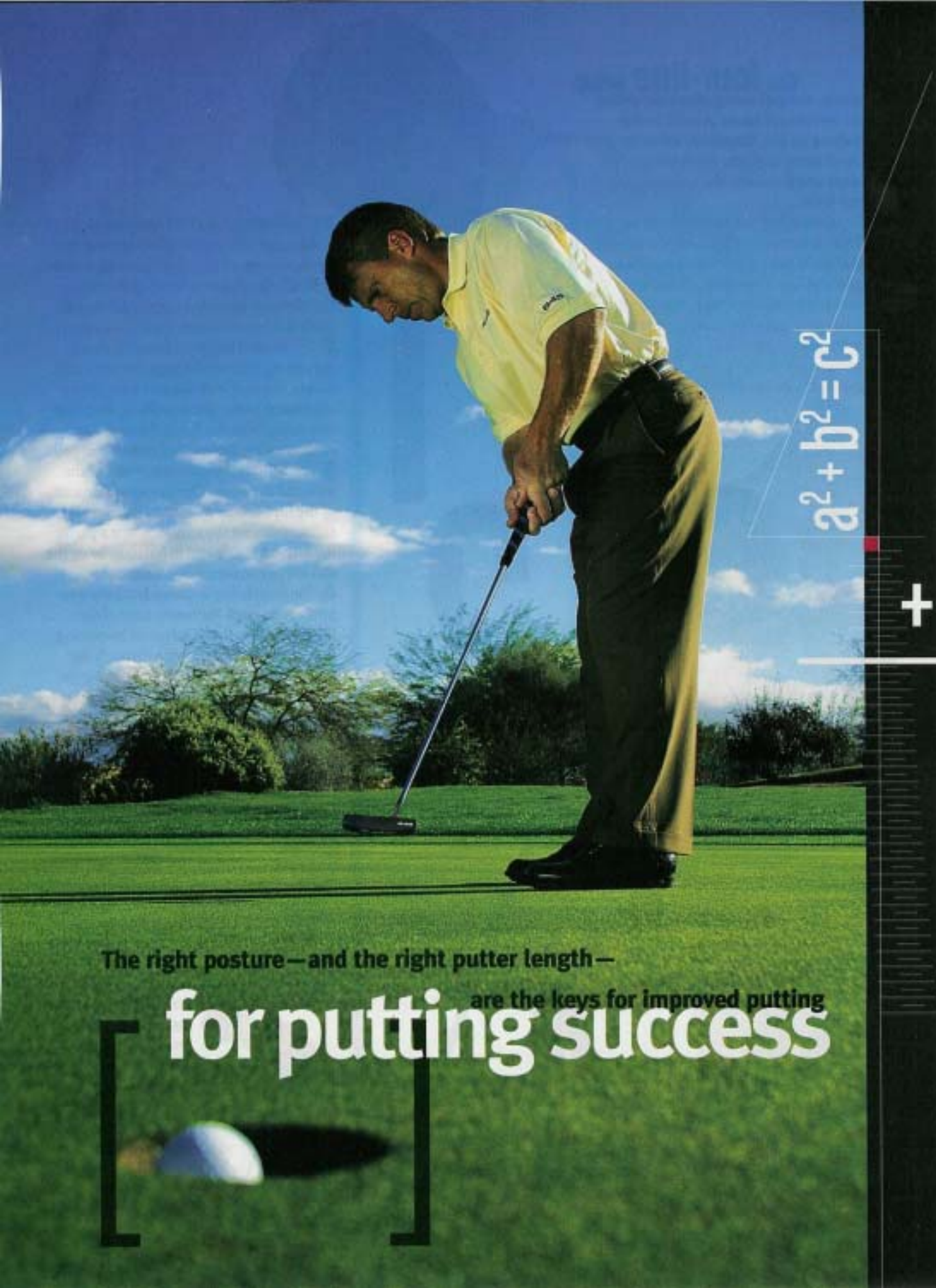
Set

By Todd Sones Photos by Warren Keating

The last thing a Tour pro wants to think about during a round of golf is putting mechanics. However, if you observe the top players, especially those who perform consistently well on the greens, you'll find that their mechanics are fundamentally sound and, more importantly, natural.

The question that begs to be answered then is how do these golfers arrive at the point of having a sound, repeatable stroke that they don't have to think about during the course of play? Some contend that it takes hours of practice for years on end to hone a putting stroke that can be trusted in competition. In my opinion, developing a sound, repeatable stroke shouldn't require that much work. In fact, all it requires is a knowledge and understanding of the correct putting setup. If you can set up appropriately, your motion will almost automatically take care of itself.

Up



$$a^2 + b^2 = c^2$$

+

The right posture—and the right putter length—

are the keys for improved putting
for putting success



the four-line setup

Unlike the golf swing, there are almost no centrifugal forces at work in the putting stroke. Therefore, whatever you do at address pretty much determines what you'll do with the putter during the stroke.

In studying the best players on Tour, it's easy to find common denominators in both their setup positions and strokes. Obviously, there are exceptions to every rule, but for the most part, common traits run rampant in the setup positions of great performers on the green. Four lines define these commonalities.

1 The first line runs from the eyes to the inside edge of the golf ball. When the eyes are in alignment over the inside edge of the golf ball, the player is better able to line up the putter to his or her target and visually track the line on which the ball will travel.

2 The second line runs from the shoulders straight down through the arms and hands. When the hands and arms are in alignment under the shoulders, the player can swing them back and through naturally, creating the optimal putterhead path.

3 The third line bisects the center of the hips and the heels. The proper alignment of the hips and heels creates balance and stability during the stroke. When a player is centered, stable and in balance, he or she can attain consistent, solid contact.

4 The fourth line is drawn from the puttershaft through the inside edge of the forearms. This line is achieved by placing the grip of the putter more through the palms than in the fingers. By aligning the shaft and the forearms, a single lever is created, resulting in optimal control during the stroke.

The four setup lines can become difficult to achieve if your putter is the wrong length. Most golfers own putters that are too long. When a putter is too long for a particular player (top photo), he or she must find ways to accommodate the extra length, often by standing further from the ball and pulling the arms into the body. If your putter is too short (left), similar compensations must be made as well, the most common being to bend too far from the hips and to stand too close to the ball.



tri-measure putter fitting

There have been many attempts to fit players to putters, but none so far have attempted to fit players to facilitate the creation of the correct putting posture. Over the past two years, I've devised a formula to accomplish exactly that: The Tri-Measure Putter Fitting System. The system is based on a simple geometrical formula, with the key values determined by the Tri-Measure Fitting Tool. The tool first measures the distance from the hands to the ground while the golfer stands in the correct posture and with the four setup lines intact. This is measurement "A." The next measurement is the line that runs from where the eyes intersect the golf ball—indicated by their reflection in the mirrored surface of the fitting tool—to the point on the ground directly below the hands. This is measurement "B." A and B are basically two sides of a right triangle, with the hypotenuse representing the length of the shaft. As you may remember from high school, $A^2 + B^2 = C^2$. The square root of C is the proper length for the player being measured.



a

c

$$a^2 + b^2 = c^2$$

length and setup

If your putter is too long or too short, you'll be forced to accommodate the error in length, invariably at the expense of a solid setup and the establishment of the four key setup lines.

The first setup compensation for a putter that's too long is to set the hips back, with too much weight on the heels. From this position, the tendency will be to cut across the putt, resulting in either a pull or added sidespin. Other ways a player may deal with too much putter length is to pull the arms into the body (destroying line #2) or set up in the proper posture, but allow the eyes to line up well inside the golf ball (destroying line #1).

The most common compensation for a putter that's too short is to bend too far from the hips. Often, the golfer with this type of setup will straighten up during the stroke to regain balance, causing pushed putts (pictured). Other compensations include allowing the arms to hang inside the shoulder line or with the eyes past the golf ball (destroying lines #2 and #1, respectively).



b

After measuring many students with the Tri-Measure Tool (left), I've found that most require putters that are shorter in length than to what they're accustomed. Upon hearing this, many simply grip down on the handle or cut down their putter to make them play shorter. What these players don't realize is that when the putter is cut down, it decreases the swingweight. And if a putter's swingweight becomes too light, it will tend to have a negative effect on tempo. A putter that's too light also makes it difficult to allow the putterhead to swing naturally on the proper arc.

The key is to make a putter shorter, yet maintain overall weight and swingweight. To accomplish this, as well as to make the Tri-Measure Putter Fitting System available to a wide range of consumers, Tommy Armour Golf Company developed the Tri-Measure line of putters. Each of the three models is available in three different weights: 335, 350 and 365 grams. This system allows a player to be fit into the proper length and weight so that the putter not only fits the player, but also maintains its natural balance and feel.

stroke motion With the right knowledge, the putting motion itself can become a natural reaction caused by the correct setup position. Because of this, there has been a change in the way golfers think about their strokes. Only a few years ago, a majority of Tour professionals strived to move the putterhead straight back and through. Today, many players are

arc of success

Don't believe the theory that states the putting stroke is a "straight back and through" motion. The fact that putters feature lie angles dictate that the head naturally moves on a slight arc.

working toward "releasing" the putterhead rather than keeping it square along the target line post-impact. After this year's Players Championship, Jay Haas mentioned how he has worked on releasing the putterhead and that it has improved his putting. Tiger commonly says he likes to feel the putterhead "pass" his hands. The bottom line is that many players are allowing the putter to swing

in more of an arc rather than on a straight line.

This makes sense when you think about how the putter sits in relation to the ground. If a putter sat perpendicularly to the ground, the natural movement of the putterhead would be straight back and through. However, because putters are built at an angle to accommodate the golf ball being positioned in front of the body, the natural flow of the weight of the putterhead is on an arc. To take the putterhead straight back would require manipulation and force, resulting in unnatural movement. Anything other than a natural movement will require a player to be conscious of mechanics during the stroke, leading to unwanted tension, poor focus and inconsistent results. Another problem that occurs when a putterhead is forced straight back is that the further the putter goes back, the further it has to move off the ground, in effect de-lofting the face in relation to the ball. This movement requires a re-leveling of the putterhead on the forwardstroke to contact the ball with the right amount of loft, often yielding inconsistent results.

Conversely, when the putterhead is allowed to move in a natural arc, it stays closer to the ground while maintaining a consistent loft in relation to the golf ball, resulting in inconsistent roll and speed control.

Keep in mind, however, that the arc of the putting stroke is minimal to the point of being unnoticeable on short putts. A putterhead must travel three to four inches back before the arc appears. It then returns to square to the target line at the point of contact. This position allows the ball to roll straight off the face toward

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swingweighting

As length decreases, so does swingweight, which can destroy tempo. The Tri-Measure line of putters are offered in three different gram weights (indicated in red) to maintain appropriate swingweighting regardless of length.



PUTTING SUCCESS

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the intended target line. It's also important to understand that the club-face remains perfectly square to the arc, or path, throughout the stroke.

Once set up properly, the actual movement of the putter is nothing more than allowing your arms to swing underneath the shoulders. On longer putts, you might feel a slight shoulder rotation. The head should remain still and the body should remain balanced and stable.

Once set up properly, the movement of the putter is nothing more than allowing your arms to swing under your shoulders.

The bottom line is that any great player will tell you that his or her goal is to have a free and clear mind to focus on the speed and the line—anything but stroke mechanics. Building a repeatable, trustworthy putting stroke that yields consistent and predictable results is what leads to that kind of clear focus.

■ *PGA professional Todd Sones is recognized as one of the top 100 teachers in America. He operates Todd Sones Impact Golf, a top-25 ranked school, at White Deer GC in Vernon Hills, Ill. (www.toddsones.com). For information on the Tri-Measure System and the family of carbon- and stainless-steel Tri-Measure putters, visit www.tommyarmorogolf.com.*