

Golf

How To Go about Learning and Practice

**By Gary Battersby
Bob Toski**

New golfers who are introduced to modern swing technique often get the impression that the swing is a series of unnatural and strenuous positions. Even established golfers experience this struggle. No matter their level, so many golfers become bewildered and find that improvement takes too long. All too often they walk away from the game.

On our team, Gary has spent countless hours studying how the brain works in athletic movement. The brain doesn't see and direct the body as separate parts, but as a whole. Once there's intention to strike something, like a golf ball, the brain creates complete internal models of the action before the player moves a muscle. The moment the player visualizes the shot, the brain has already begun readying the rest of the body to support the action of the hands, which naturally lead the motion.

Bob has been described as "old-fashioned" in his teaching. He has been criticized for not subscribing to the modern notion that the golfer should control the swing—and the club

—with the large muscle and joint groups: the shoulders, the back, the hips. But research on how the brain works doesn't support that criticism. The hands are the most evolved and sensitive parts of the human body, the parts that communicate most effectively with the brain. As such, they must be front and center in any athletic movement.

Much of modern teaching also declares that the conscious movement of the hands creates an unstable action that's difficult to time and control in pressure situations. Because of this claim, many teachers seek to eliminate any conscious movement of the hands. The common contention is that the hands contain small muscles and joints and have too many variations in movement for the golfer to rely on them in striking the ball.

This thinking is wrong, and again, brain research proves it. As the most advanced part of the body, the hand is capable of detailed and refined motor movements. So instead of taking the hands out of the golf swing, we should train them to perform correctly. Concentrating on the role of the hands during the swing results in a more intuitive, athletic action and better shots under pressure. The golfer who does this is more in tune with the club throughout the swing, especially at impact, and will perform at a higher level with greater consistency. — *With Roger Schiffman*

THE SCIENCE BEHIND DEVELOPING A HAND-CONTROLLED SWING

Our reading of neuroscience research indicates that fine-grained hand awareness is the heartbeat of the swing. Hand action in golf is a skilled motor movement similar to cursive handwriting, playing a musical instrument, and the action in any stick-and-ball sport. But when we speak of hand control, we're not excluding the movement of the rest of the body. In our work with golfers, the brain shows an extraordinary ability to organize the movement in those large muscle and joint groups implicitly. The brain conducts a symphony of motion through the hands.

A deeper dive reveals two properties of the brain and nervous system that the body relies on to develop and control movement: plasticity and proprioception. Plasticity is the concept that your brain is not hardwired—it's plastic. Your brain can change itself. The cliché "You can't teach an old dog new tricks" is simply not true. Your brain does not need to be a slave to your genetics, either. This is good news for established golfers who want to improve their swings.

Proprioception is a property of the nervous system that gives the brain feedback from the muscles and joints that describes the body's relative position in space.

A person cannot improve movement without proprioception. If we didn't have proprioception, we'd have to watch our feet when we walk to avoid falling.

Because most of the swing takes place out of the golfer's sight, he or she needs to develop a high degree of proprioception to swing the club in a consistent manner.

The hands have the highest volume of motor representation and proprioceptive feedback to the brain, and because

they're the golfer's only connection to the club, they provide the best opportunity to feel its movement.

Maximizing feel and brain-to-body coordination increases the golfer's control over the swing and the shots it produces.

Feel the force; don't force the feel. Focus on the momentum of the swinging club. – Bob Toski

HOW TO SPEED UP YOUR LEARNING

Your environment and what you do in it plays a major role in how your life unfolds. The same goes for your golf game. That's because every experience or new movement is recorded in your brain, and strong patterns are formed through repetition. If you change the way you handle and control the golf club, and if you practice through accurate intention and repetition, you will improve.

A successful golf lesson is really just a wake-up call to feel your swing accurately. To improve your feel through proprioception and change what your brain relies on to hit the ball, try closing your eyes during the swing and begin to recognize how your hands feel on the club and how they're directing the action. You'll be pleasantly surprised by how well you do. You'll be feeling at a higher level. Your hands—your most sensitive tools—will be communicating with your brain as only they can.

This plasticity of the brain is encouraging for golfers taking up the game—at any age. And it's exactly why we never draw conclusions prematurely about a student's potential. Older students introduced to our program for the first time often

start playing better than they have in 20 or 30 years. They are experiencing plasticity at work, with improved proprioception. But here's the catch: You must learn in a manner that allows your awareness to surface on a consistent basis. If your hands are activated and in tune, you will perform well, and you will become more confident in what you can do.

One more major concept here. Rhythm, the synchronized pulse of movement, is a critical part of motion, especially in the golf swing. In modern swing technique, rhythm has been glossed over and replaced by a focus on body and club positions. The golfer who learns to time the release of energy in the swing through proper hand action will enjoy control and power for a lifetime.

A ounce of touch is worth a ton of brawn. Develop your control on short shots.

PUTTING YOUR HANDS TO WORK

We believe in simplicity. We have a saying that describes our method in one sentence: "If the club is OK, your swing is OK!" If your hands move and function properly, your swing will be effective because the clubface mirrors the hands. This is a simple concept that's true for any problem that might arise in the swing.

When most golfers practice these days, they have no plan for how they're trying to improve. For example, control in a golf swing does not begin by making full-motion, full-speed driver swings, as we see so many golfers doing on the practice tee. At high speeds, the brain performs only what it already

knows, so no change or improvement is taking place. This type of careless practice simply ingrains the problems you're having.

Remember this phrase: An ounce of touch is worth a ton of brawn. Developing control over the club should start with the simple swings on and around the greens. You must crawl before you walk and then possibly run. Beginning with small swings will help you feel the momentum of the club. Learn to associate the swing with an ease of movement and flexibility, a simple flow back and through. Start with a balanced grip, the club in your fingers and your grip pressure light. As an overall thought, control the motion with the lead hand; the brain will direct the trailing hand to support the lead hand implicitly.

On these shorter swings, notice also the rotation of the clubface as it swings back and through, and how the momentum of the club hinges and unhinges the wrists. You're learning rhythm and an awareness of the hands and clubface during the swing. Modern teaching prefers a stiff-wristed short game, but that only makes it harder to develop proper hand action. Feel the force; don't force the feel. Focus on the momentum of the swinging club, especially on these early swings. When you go back to hitting driver, your hands will bring along this education.

BREAKING THE BIG-MUSCLE MYTH

It's difficult to understand why the game has been driven away from feel and sensory-based learning. In tournament

golf 40 years ago, you rarely saw a player in contention hit a tee shot 50 yards off line. That happens almost every week on tour today. Psychology aside, this lack of control under pressure is directly related to the fact that these great golfers have ceded control of their swings to a positional, large-muscle system.

If you listen to TV commentators, you'll hear that they, too, have been seduced by the modern method. For example, they talk about always making a full swing, avoiding the partial shot. In the eyes of the modern player and teacher, that's safe. Today's pros often lay up farther from the green to hit a full wedge rather than a half- or three-quarter shot. They've been brainwashed into believing anything less than full requires a dangerous reliance on the hands. The top players of the past could feather an 8-iron or smash a 9 or squeeze a 6 low into the wind. The punch shot that so many of them played with great success is a dinosaur today.

If you want to improve your golf game, learn to be creative and intuitive. Avoid swing technique that has devolved into a robotic endeavor. Good golf is about relying on a developed touch in the hands for impact. Then the angle, loft, spin and energy for the ball flight can be felt through the club and into the hands. You'll improve faster and enjoy the game at levels you never thought possible.

A FEW FUNDAMENTALS

Train your lead hand first—and most

We love this quote from Bobby Jones: "The hands form the connecting link by which the forces brought to life in the player's body are transmitted to the clubhead." Or, as we say it, the hands take hold of, to take control of, the club. And the left hand is the leader.

Start with the grip in the fingers and palm of the left hand, with the left thumb on top of the grip (*above*). As you swing, allow the clubface to rotate open going back, the toe of the club turning upward. Through impact, think of the knuckles of the left hand turning down to the ground (*below*). That's the feeling of delofting and squaring the face. Take another look at that photo on the first page: Richard is doing it beautifully there. Remember, the lead hand is the director, and all other motion flows from what that hand is doing.

Bob Toski, who will turn 90 on Sept. 18, has been one of golf's leading instructors since the 1960s. Gary Battersby, his teaching partner, has studied neuroscience in golf for 30-plus years. Here, they're holding a homunculus ("little man"), a model that represents how the brain views the sensitivity in the hands compared to the rest of the body.