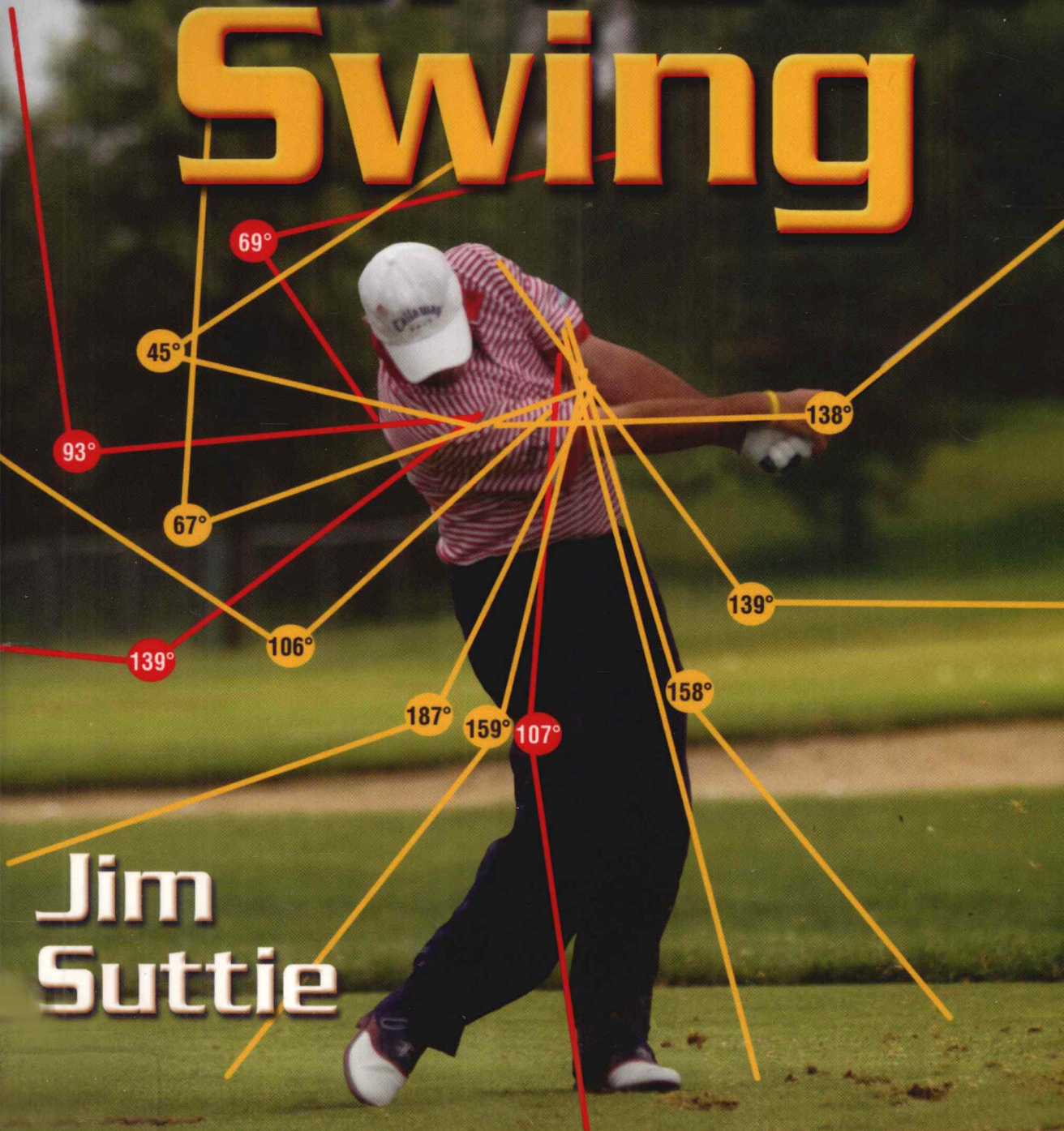


# Your Perfect Swing



**Jim  
Suttie**

**How to use your natural body mechanics for consistent and powerful ball striking**

# Your Perfect Swing

Jim Suttie



Human Kinetics

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I dedicate this book to my wife, Sandra. If she didn't continue to encourage me, this manuscript would not be printed. I owe everything to her.

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# Introduction

I'm convinced that most golfers truly want to swing better. As golfers, we sit up and take notice of the well-oiled swing of Ernie Els, the explosive power of Tiger Woods, and the laser-like ball-striking accuracy of Annika Sorenstam. I've been teaching golf professionally for over 30 years and still get a thrill from watching the swings on the golf tours. If you're one of those players who wants to change your game, make improvements, and really dig in and do the work, we can work together through the lessons in this book to improve your game and keep on improving it for years to come.

## A Unique Teaching Approach

First, you might be wondering, "How is this experience going to differ from the tips and quick-fix lessons I've had in the past, or from the other how-to golf books already out on the shelves?" Your lessons are going to be different because they are all about *you* and helping you customize and maintain your own golf swing. You won't simply be cast into the "one size fits all" golf swing method that predominates golf instruction and forces you to adapt to a single model and way of teaching.

Working with literally thousands of students over the years has taught me how to empower you as your own best coach. Learning to customize the golf swing, and becoming your own best golf coach, is working successfully for thousands of golfers around the world. The aspirations of players I work with range from wanting to win a club championship, breaking 100 consistently, or playing on one of the professional golf tours to reducing handicaps and simply getting more enjoyment out of the time on the golf course.

## The Development of the Customized Approach

The dedicated golfer is the audience I had in mind when I sat down to write this book. I realized that although top pros such as Tiger and Annika seem to be getting better over time, the dedicated, novice player seems to be standing still, or moving backward. I've learned from studying the playing statistics and from the frustration voiced by so many golfers out there that



most golfers are not improving. My teaching career has been devoted to the firm belief that it's possible for you to make dramatic improvements in relatively short order and increase your enjoyment of the game.

In fact, I've made it a lifelong career goal to learn as much as possible about all golf swings so that I could cure even your most subtle swing flaws. I even went to the extreme of completing a doctoral degree in biomechanics. My major motivation for going back to school was that I couldn't find a satisfactory biomechanical explanation for the golf swing that players could actually understand and use. Part of the problem is that golf is unique from throwing a baseball, shooting a basketball, shooting a hockey puck, kicking a soccer ball, or even tossing a football around in the back yard. A better model was needed to help adjust to the fact that golf is an underhanded game that must be played from the side of the ball. Stop and think about that uniqueness for just a second!

As a component of my work, I therefore set out to develop a biomechanical model that would help you understand a mechanically sound swing. I started my work in creating a model swing by filming the movements of the leading tour players. I filmed them in slow motion, digitized their swings, and used those digital images to create the swing of an "ideal" professional golfer. Once my mechanically sound model was generated and refined, I went about the business of teaching it to my students.

In the beginning of using this method, I had very good results—especially with beginners; however, over the years that followed I began noticing that this ideal professional swing model wasn't working for *everybody*. Many of my students found themselves falling into their same old unproductive habits after a few months away from my teaching. It was nearly impossible for many of my students to maintain the "on-plane" swing the way my model was directing them to. It took me a while to realize that my students' bodies, physical proportions, and equipment didn't match the characteristics of any ideal model I had developed—or ever could develop. I concluded that one of the game's historical teaching failures revolves around the fact that we were teaching the same swing to students with widely diverse body types and mental approaches to the game. Golfers come equipped with unique bodies, as well as individualized swing styles, thought processes, levels of flexibility, power sources, motivation, and a myriad of other influences that affect their swings and the way they play the game.

I realized I had the teaching formula backward. Rather than teaching a swing that used individual traits to a player's advantage, I'd been forcing all of the unique swing styles of my students into a rigid model. It was like trying to fit all golfers with the same size golf shoe. My teaching technique was suffering from some insurmountable disadvantages. What I figured out in the process from developing to implementing my strategy with real live students was that my computerized model had been, and remains today, an effective *starting and learning reference point* for helping players customize their swings, but not the be-all end-all answer for every golfer.

## The Customized Method and the Key Swing Models

In order to “correct” and revamp my teaching strategy, I began by identifying several model swing systems. It’s these swing systems you’ll learn to identify and apply throughout your reading here. They are the mechanically sound swing model, the pro tour model, and the customized swing model.

We start in chapter 1 with the biomechanical swing model I developed through research and computer simulation. I refer to this as the *mechanically sound swing model*. This is the swing you’ll learn to identify, work toward, and gauge your progress against over the course of your study. It’s also the easiest swing for you to maintain once you’ve learned it because it isn’t flawed by compensating moves.

In chapters 2 through 5, we’ll take a look at you as a golfer. We’ll cover the factors that influenced your past and current swing tendencies and patterns, apply some foundational concepts to position you for success, focus in on the key swing positions, and locate your dominant power source. In chapter 6 we’ll move on to studying the best players on tour. I’m going to take you through the primary swings you see on tour and help you pick out the swing and player who fits you the closest; then you’re going to further customize your swing around that particular tour pro swing model.

Then, in chapter 7, you’re going to work toward becoming your own best coach and create your own *customized swing model*. The way you go about developing your swing is key, and I’ve developed a system for helping you do just that. The system includes determining the type of swing you have right now and how you developed it, your individual swing influences, and identifying areas for improvement and change based on your new understanding and analysis. Once these concepts are under your belt, you’re going to start customizing your swing from the foundation up.

Most of the technique and drill descriptions in the book are written for a right-handed golfer. However, all of the information can easily be adjusted for the left-handed golfer by reversing the instructions.

## Your Commitment

Now that we have the introductory information out of the way, it’s time to get started with your golf lessons. During your first few lessons you’ll be figuring out exactly how and why your swing developed the way it has. By the time you have worked your way through the book, you will be ready to begin practicing your fully customized, fundamentally sound, consistent, and repeatable swinging motion through the ball. Your new golf swing will have you swinging toward the target better than ever—and you’ll be doing so more comfortably, with greater ease, and well within your physical parameters.



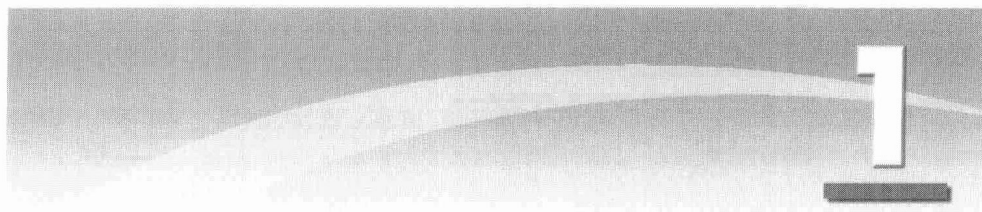
You must be willing to take the responsibility for your own improvement. You have to become your own best golf coach by managing the resources available to you. You can take heart in the fact that I'll be working alongside you every step of the way. I promise that whether you are thick or thin, male or female, strong or weak, flexible or stiff, old or young, tall or short, big or small (did I miss anybody?) that the assessment, instruction, practice drills, and playing knowledge you receive throughout this book will improve your golf swing and help *you* play better golf.

Finally, I welcome you to attend one of the programs at The Suttie Golf Academy. We offer winter programs in the south and summer programs in the north. You can find our locations on my Web site at [www.JimSuttie.com](http://www.JimSuttie.com).

Are you ready? Then let's move to the lesson tee.

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# A Mechanically Sound Swing

If you want to improve your golf swing, understand first that the image you have of your swing probably doesn't match your actual swing. Students sometimes argue with me about what's going on in their swings. For some, I videotape their swings and point out what they're doing, only to have them say, "But that's not how I swing!" In such cases I remind them that "feel is not real." Anyone who has ever watched his or her swing on video has seen the gap between the mental image of the swing and the real thing.

I once asked a PGA professional to execute a specific swing fundamental. He responded, "I can't do that. I'm a feel player." I explained to him that "feel" changes every day, whereas fundamentals and mechanics do not. The feel of your swing is not an accurate indicator of what's really occurring. In becoming your own best coach, don't rely on your perceptions during your swing. Use mirrors, videotape, and the comments of others with experience to help you understand what's occurring during your swing.

## Are You Seeing What You're Feeling?

To help you match your perception to your actual swing, try this exercise. Simply follow the instructions and then answer the questions.

### **Equipment**

You will need the following equipment:

- Camcorder
- Full-length mirror

### **Swing Check**

Have someone record several of your swings. You'll probably need to watch the tape a few times to answer the following questions, taking notes for future reference, if necessary. (Note that some of the questions are phrased for right-handed golfers with wording for left-handers in parentheses.)

- Does your swing match your perception of your swing?
- Is your takeaway wide and extended or picked up?
- How is your posture?
- How is your alignment?
- Where is your ball? Forward or back?
- Is your backswing low and flat or high and upright?
- Are you turning your shoulders a complete 90 degrees?
- Are your legs stable during your backswing?
- Are your hands ahead of the clubhead at impact?
- Is your left (right) wrist flat and your right (left) wrist bent at impact?
- Is your right (left) heel in the air at impact?
- Is your head behind the ball at impact?
- Is your right (left) elbow into your right (left) hip at impact?
- Are your hips open at impact?
- Is your swing long or short?
- Can you hold your finish for 10 seconds?
- Are your knees touching at the finish?
- Are your hips facing the target?
- Is your chest facing left (right) of the target at the finish?
- Is your head positioned over your left (right) leg at the finish?

### **Insights**

After viewing the tape, practice a few swings, checking your position in the mirror. This exercise can be eye opening; repeat it regularly to check if your swing really looks—and not just feels—like the swing in your head.

## The Mind–Body Challenge

In addition to the unreliability of perceptions, the manner in which the brain and body work as a unit creates another unique challenge to changing your swing. Changing the golf swing is difficult because of the way we're wired. The nervous system is inclined toward repetition; it creates a pattern of every repetitive action, and it is these ingrained patterns that your body has been trained to perform. So, change can be difficult. In fact, when you're trying to change your golf swing, replacing old habits with new habits is likely the tallest hurdle you face. For this reason, in most golf lessons I focus my students' attention on incorporating only one change into their swing at a time. It takes time and repetition to transfer the aspects of a golf swing from short-term memory to long-term memory (and eventually to a subconscious level of the brain). The best way to go about it is to practice the new skill on a regular basis and be patient. Once one new skill has been ingrained, you can start working on changing another part of your swing.

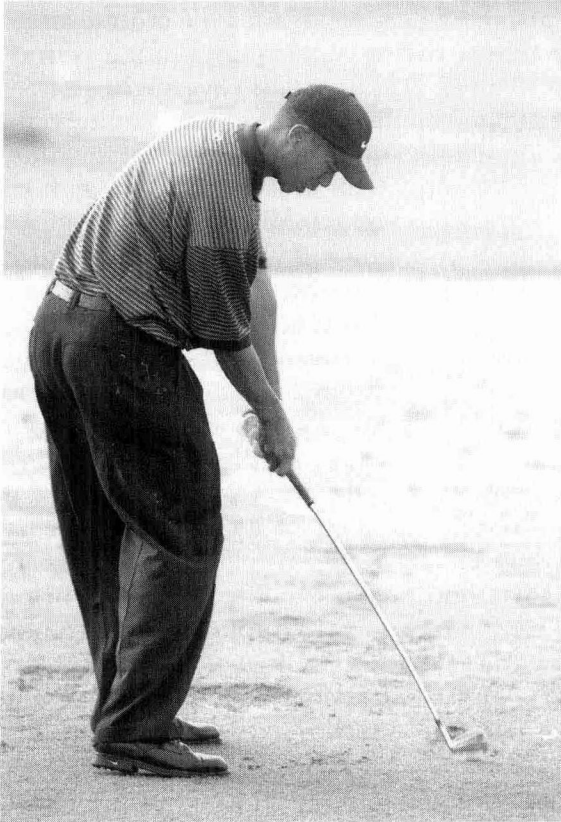
When you're rewiring your brain through practice, make sure you heed your current limitations. You need to swing within the physical capabilities you have at the time—while also working to improve these capabilities. Sometimes the distance between where you are and where you want to be is quite large, but you can't skip steps and rush things. Just as runners can't progress from running 5 miles (8 kilometers) to 20 miles (32 kilometers) overnight, golfers can't expect to gain 100 yards (91 meters) on their drives after changing only a single aspect of their swing. Swing within your physical limits at the time, accepting that change occurs gradually rather than suddenly. No matter how long or straight your ball travels, it's always better (and healthier) to remain patient than to attempt to swing outside your limits. If you try to do too much too fast, you develop bad habits that will need to be broken later. An example of exceeding individual physical limits is a golfer who tends to be inflexible in the upper body trying to make a swing that is parallel to the ground at the top. The result is a lot of off-center, inconsistent shots. There is no one test to determine the limits of your physical ability, but it's a good bet that if your swing is wild and inconsistent, you are exceeding your physical limitations.

As you try to make improvements on a skill, don't overestimate your abilities. To do so is human nature, but try to guard against it. Don't try to be more powerful or flexible than you truly are. You'll only incorporate mechanics into your swing that have no business being there. Admiring Tiger Woods' fluid swing is one thing, but trying to duplicate his shoulder turn and extension through the ball is asking for a host of compensations that spell disaster (see figure 1.1). Very few golfers in the world have any business attempting to replicate Tiger's physical moves through the shot (though, as you'll see later, there are elements of Tiger's swing you *should* try if you fit the right physical profile). But you don't need to swing like Tiger, anyway—by maximizing your strengths and playing within your limitations you will make significant improvements in your game.

Some may note that even great players with great swings like Tiger's seem to search for their swings. For example, the last couple of years, Tiger has had trouble driving the ball consistently.

Tiger originally came out on the tour with a strong left hand grip and a shut position at the top of his swing. His swing came in on the takeaway and was slightly crossing the line at the top. His swing wasn't always perfect, but he could repeat it again and again. In particular, he was able to time his swing because of his stronger grip and less open clubface. Now, he is playing with a weaker left hand grip and is also trying to keep the club more in front of his body on the backswing and consciously rotate his left arm to open the face more at the top. Unfortunately, an open face and a laid-off position doesn't work well if you have fast leg action and fast hip rotation. This only makes Tiger's club get more inside out on the downswing. To offset this, he must then slow down his lower body rotation.

So, as you can see, even a great player like Tiger tries things that don't fit his natural physical abilities and his unique power source.

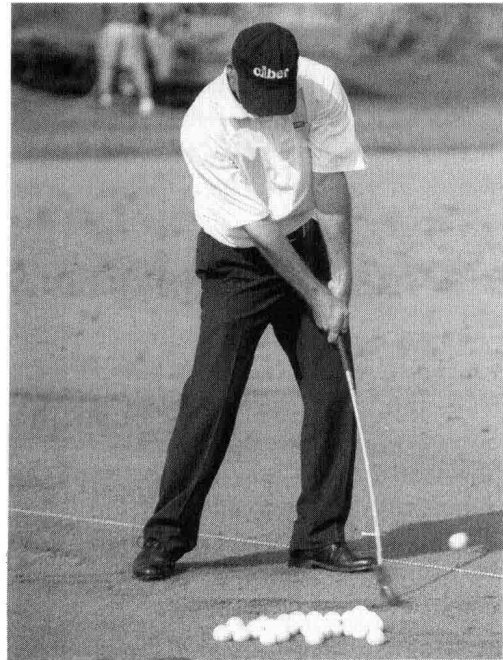
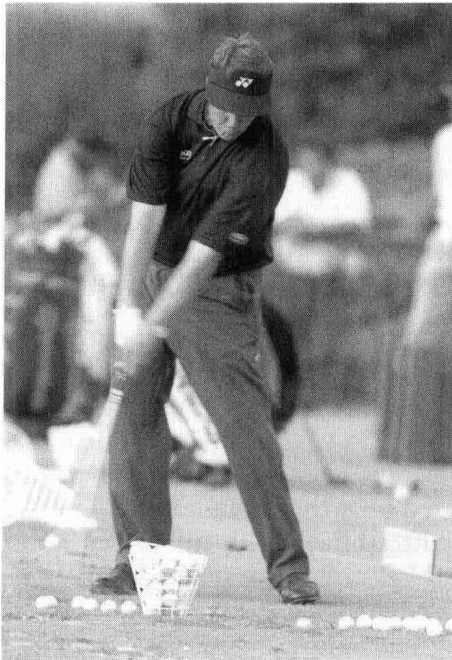
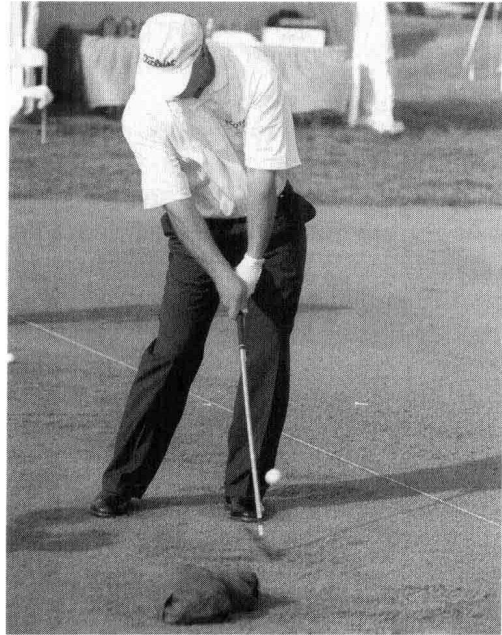


**Figure 1.1** Tiger shows a great impact position with the hips open and the arms extended.

## Defining the Ideal Golf Swing

To help you find your perfect swing, you need a standard of reference. I began my doctoral thesis with an attempt to discover which methods of teaching and learning produced the *best* golf swing for the majority of golfers. The first problem I ran into was attempting to define *the best golf swing*. Thankfully, golf is not like mathematics or physical sciences, which lend themselves to precise quantification. Discussing, teaching, researching, and learning the golf swing are complicated by the fact that golf clubs are swung by human beings, none of whom is the same as another (figure 1.2).

**Figure 1.2** (a) Mark O'Meara, (b) Phil Mickelson, and (c) Corey Pavin all have distinctive swings. Two characteristics all great ball strikers have in common are a flat left wrist at impact and a bent right wrist (or a bent left wrist and flat right wrist, in Phil's case). Although all swings look different, it's the commonalities you should copy.



b

c



I began my research with a simple question: Who are the best golfers ever to play the game? My short list included the likes of Byron Nelson, Ben Hogan, Sam Snead, Bobby Jones, Gary Player, Arnold Palmer, and Jack Nicklaus. Then I asked myself, *does any one of these golfers have a perfect swing?* If so, how can I tell? Did a perfect swing depend on the average distance and accuracy of their drives, their number of tournament wins, the amount of money they won? Clearly not. All of these players were great ball strikers, and they all got the job done on the tour—but they all swung the club differently.

The more past and present professionals I looked at, the more painfully obvious it became that no single tour player, man or woman, could help me find the answer I was searching for. There were many subjective criteria I could have used, but I needed a swing model that was measurable and objective and that would hold up to statistical analysis. I finally realized that I needed to employ a computer model to help isolate and understand the ideal swing.

As you might expect, each of the swings I entered into the high-tech computer software program was unique. Some of the pros played the game with a fade, some played with a draw, and others hit the ball straight down the fairway. Most hit the ball fairly high, but a surprising number of them hit with a lower trajectory. Each of their ball flight patterns and swing patterns was different. The only part of their swings that looked about the same at first glance was their club-to-ball impact, but with further study even this aspect slightly differed for each player.

As a lover of the game of golf, I had thoroughly enjoyed my research, which involved close scrutiny of the swings of players I greatly admired. But in the end I had to admit that not one of the swings I had studied was *the perfect swing, the best swing above all others*. Conceding this, I decided to try for a composite—to take an average of the key elements of the swings of the game's best players to come up with the most mechanically sound swing model possible.

## The Mechanically Sound Swing Model

Focusing on the full swing, I created a mathematical average of 25 pro swings (among the pros I used were Mark O'Meara, Jack Nicklaus, and Al Geiberger). Once the average was complete, some amazing discoveries emerged. I ended up with a composite swing in which all anatomical differences were averaged. All swing peculiarities, hitches, and idiosyncrasies disappeared. The computer model accepted only those elements that were similar in all swings and discarded the differences with precision. After all the calculations, a mechanically sound swing emerged that I believe all instructors and players can use as their primary model. I defined the swing as follows:

*A mechanically sound golf swing delivers the clubface through the ball perfectly square to the target line, perfectly vertical, so that only the loft of the club affects the trajectory of the shot, on the correct path, with maximum velocity at the bottom of the swing arc every single time.*

Finally, in adding this swing to my instructional arsenal, I could say with confidence that I could help amateur players swing the club and contact the ball the same way tour pros do it. My model's ball flight trajectory was average height and produced a straight shot with a very slight draw. Given the data from the model, I knew we could expect all mechanically sound swings to do the following:

- Deliver the clubface to the ball at impact in a position perfectly square to the target line, and along a swing path straight down the target line
- Keep the clubface absolutely vertical through impact so that only the loft of the club affected the trajectory of the shot
- Generate maximum clubhead velocity just past the bottom of the swing arc
- Contact the ball precisely in the middle, or sweet spot, of the clubface
- Be capable of being repeated the same way each and every time

As a golfer, if you are able to re-create the angle and path of the clubface as just described, no matter how else you swing your club, you will have an outstanding golf swing. Bobby Jones once said, "The only reason we bother with the form and the correct swing is to find the best way of consistently bringing about the proper conditions at impact."

The ideal golf swing can be defined as a side-of-the-line hitting game, because we are standing to the side of the ball. Because of the position of the ball there is an inward dimension in the swing and an up-and-down dimension in the swing. The body turn creates the inward motion and the hands and arms create the up-and-down motion. It is the synchronization of the body turn and the up-and-down motion of the arms and hands that allows us to make our best swing.

In addition to understanding the key characteristics of the mechanically sound swing, you should be aware of three other points:

1. There are *no* compensations in the swing.
2. The computer-generated golfer swinging the club turned out to fit an ideal body type.
3. The simulated golfer possessed ideal flexibility, strength, timing, tempo, and rhythm and was able to maintain balance through the entire swing.