

BioSwing

THE GOLF SWING OF THE FUTURE



By Cameron Strachan

BIOSWING THE “THE GOLF SWING OF THE FUTURE”

Have you ever wondered where power comes from in the golf stroke? Or what about how to start the club down correctly? Or has the golf swing been a source of confusion and frustration for you?

If so, then BioSwing has the answers. Based on a comprehensive biomechanical study, BioSwing presents golf swing instruction like you’ve never seen it before.

Simple and easy to understand, BioSwing has been translated from complicated science into easy “golf speak”. Once and for all learn how to swing the club correctly and start hitting the ball more powerfully and with laser like precision.

By Cameron Strachan

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INTRODUCTION

“Damn it!!” I had just made another poor swing and watched my ball sail hopelessly into the trees. Another bogey and another wasted round.

Why is golf so difficult? And why is the golf swing so complicated?

These are the questions I kept asking myself. I didn’t have the answers and the more I looked the more questions I had.

And the golf world couldn’t help me. I had just spent the previous ten years having weekly lessons and practicing what I was being taught. Despite this, my game hadn’t improved and I was getting more frustrated by the minute.

To be honest I felt like a weekend beginner. My game had gone nowhere and I was playing worse not better.

Does any of this sound familiar? And what is the way out of these golfing doldrums?

Science.

I wanted the answers. I didn’t want stories or ideas or perception. I wanted the truth. I wanted to know what the real secrets of the golf swing were.

And a chance encounter with a sports scientist started the ball rolling. He was a keen golfer and had a multi-million dollar research facility at his fingertips.

I'll spare you all the details (some of them are quite boring) and get straight to the good stuff. BioSwing was the end result of nearly 12 months of research, field testing and analysis with some of the smartest sports scientists on the planet.

BioSwing is the golfer's version of the research. There's no complicated data or swing theory to process. It has been broken down into the basics with golf friendly language you can apply right away. The last thing I want to do is add to the already confusing golf instruction that exists today.

So this is an easy to read manual. There's also lots of pictures to guide you through the technique. BioSwing contains the essentials for building a better golf swing. Including,

- How to grip the club
- How to build the perfect stance
- The correct way to start the golf swing
- The scientifically correct way to reach the top of back swing position
- How to start the club down so you almost guarantee yourself a longer and straighter shot
- How to apply effortless power so you can hit the ball longer while using less effort
- The ball striking secrets that allow the pros to make the game so easy.

BioSwing really is the simplest and easiest golf swing model devised and is the reason it has been referred to as the "Golf Swing of the Future".

The goal here isn't to bombard you with a million bits of information. BioSwing was (and still is) devised to make playing golf as simple as possible. And "playing golf" is the keyword here. Thinking about the swing, working on your technique and doing drills are all part of the learning process. Playing the game is what it's all about. It's where fun lives and where true satisfaction can be found.

I have also included a bonus section at the end of this book that offers deeper learning ideas and training ideas.

One last thing. This book is for all golfers of all handicaps. For ease of writing I have written it as though I'm speaking to a right-handed male golfer. If you're a left hander (I am) or a female golfer or even a left handed female golfer, I'm sure you understand the reasons.

Good golfing,

Cameron Strachan

Sunshine Coast, Australia, 2015 (Revised edition. First published in 2004)

THE GOLFER'S MIND EXPLOSION

The image below was how I used to play golf. My poor little brain was overloaded with thousands of swing thoughts and concepts each time I played.

A round of golf became an exhausting exercise; each shot required me to think about a part of my swing and make sure I swung correctly.

If I played well it wasn't too bad, I was able to manage my game. But if I played poorly (which happened more often than not) I was in trouble. I tried hard to work out what I was doing wrong but would end up going around in circles looking for the perfect swing thought.



Does your golf game feel like this?

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If nothing else, BioSwing helps remove the confusion and gives you an easier and better way of playing.

It helps reduce the amount of noise and gets you out playing golf. And this is an important point. Golf should be about playing the game – getting outside hitting shots and realizing your potential. If you're always thinking about your swing and not playing your best, then BioSwing will help you.

So lets go. You're about to discover the scientific truth of the golf swing.

GOLF GRIP

The number one consideration of the grip is to be able to swing the club with speed. If you can move the club quickly through the ball then your grip is perfect.

Thoughts of grip pressure and knuckles become a thing of the past. All you need to think about is being able to move the club quickly.

There are two fundamentals that will make this easy for you.

1. Place the club across the palm of your right hand. When the club is placed across the palm (at the base of the fingers) you'll be able to move the club as fast as possible.



The club should rest across your palm for maximum power

2. Have your hands close together. And it doesn't matter if you use a Vardon, baseball or interlocking grip, they are all equally effective. Your job is to choose the most comfortable. Do not under any circumstances split the hands. (please note that children may use a split grip when first starting out, they will gradually move their hands closer together as they get older).

GET A LITTLE ADVANTAGE

Want to know a little secret and gain an advantage? Try using slightly larger grips on your clubs. Here's why,

Larger grips are generally more comfortable, easier to hold and are similar to other implements that you are used to holding, like hammers. This allows you to swing more powerfully, which is the single most important objective with your grip.

I have found that once you go to a larger grip you'll never go back to thin grips. They are so much more comfortable that you'll wonder why you've taken so long to change over. Give it a go, you may surprise yourself with how good they feel.





BEWARE OF THE MUTANT GRIP!

This is a serious warning. Please read carefully.

In recent times there has been talk of a radical new method of gripping the club. The proponents (and there are more than one) claim that this new grip allows the golfer to swing the club in a powerful and consistent manner.

The main theme of this grip is that the club should be placed in the lifeline of your right hand with the shaft and forearm forming a straight line.



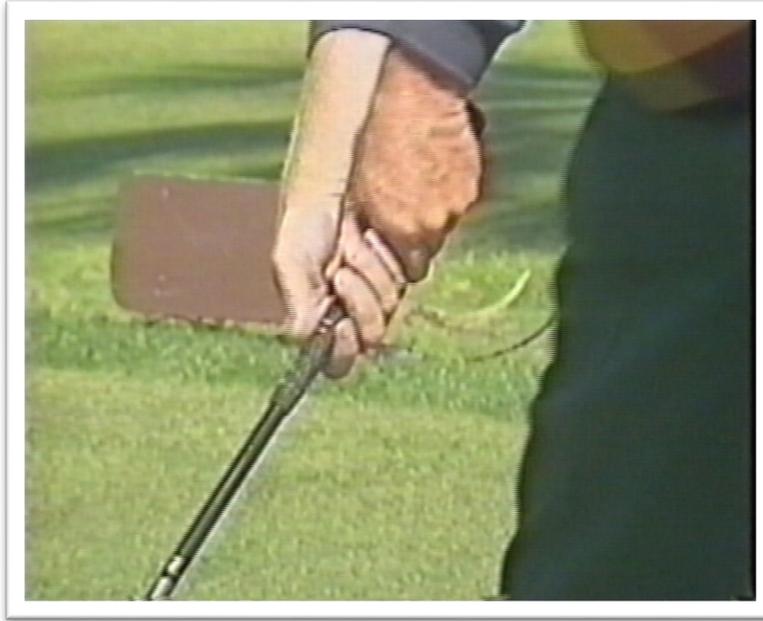
Moe's perceived palm grip position

The grip theory is supported by the claim that Moe Norman (pictured above), considered by many to be the greatest ball striker ever, used this grip. Unfortunately there is no evidence to support this theory.

If a golfer places the club in the lifeline of the right hand, he loses any chance he has of producing power (speed) in the stroke. Remember? This is your single most important objective. When you can't produce speed the grip must be rendered useless and be replaced.

Moe Norman was no different, even though he was led to believe he used this palm grip, his hands were placed on the club in what could only be described as a 'conventional' grip. The photo below is his actual grip he used when striking the golf ball. The photo above his is perceived grip...as you can see there is a difference between what he thought he did as to what he actually did to hold the club.

In the photo below his left thumb is jammed tightly into his lifeline of his right hand. There is no possible way for the club to be there too! You'll also notice that the club is resting as close as possible in the fingers of his right hand.



Here's reality. His thumb is in the lifeline so the club can't be!

It's actually impossible to keep the club in the palm (lifeline) of your right hand. The club needs to find a more natural position if speed is to be found.

You can test this for yourself by placing the club in the lifeline of your right hand and attempt to swing the club normally. After a few tries you will see how futile your efforts will be. You may need to tape the club into the palm, as it is extremely difficult for it to stay there of its own accord.

Leading anatomists have viewed this grip and all conclusively say that a palm grip, lifeline grip, single axis grip and hammer grip are not viable options for effective stroke mechanics.

I do not tell you this to be controversial, but rather, allow you every chance of playing the best golf you can. I have seen too many golfers ruined by this type of rubbish. I hope you will not be misled by marketing hype and incorrect perceptions by a small percentage of the golf industry.

The good news is that learning a grip that will give you power and accuracy is very easy. It does not have to be complicated and doesn't take much time.

Place the club across the base of your right hand, and then link your hands in a way that feels comfortable, making sure there is no large gap between the two hands. Your grip will then be perfect and you will now be able to swing with maximum club head speed.



A perfect hold on the club

Interesting snippet: You can even use a reverse or "cack" handed grip to good effect. There are a handful of golf professionals using this grip and it's quite common amongst children when learning the game. The reverse grip ticks all the boxes when it comes to the ultimate fundamental – swing with speed.

GRIP DRILLS:

There are two drills that are ideal for learning a perfect grip.

DRILL #1: THE ONE ARM SWING.

Get a golf shaft or turn a club upside down and swing it as quickly as you can with your right hand/arm only. You should notice that the more you have the club across your fingers the faster and harder you can move the club.

For a laugh you can place the club in your palm and see how you go. It should become apparent that the palm grip is not a viable option.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

DRILL #2: THE MINI CLUB.

You can practice your grip anytime or any place with the mini club. It's the perfect tool to develop *your* grip while watching TV or in the office. A few minutes a day of fiddling with the mini club will have you well on your way to owning the ideal grip for your game.



Cut down an old club and use it to practice your version of a powerful grip

THE STANCE

I'm not a fan of traditional golf instruction relating to the stance. Here's why,

At one point I spent 18 months working with a well know coach and every lesson had a heavy emphasis on the stance.

My spine angle was wrong and we tried to fix it

My hip position was out and we tried to fix it

My alignment wasn't where he wanted it to be so we tried to fix it

And for 18 months I was twisted and prodded into all sorts of directions. I worked hard to do everything asked of me, the last resort was to head to the gym to try and change my body shape. But nothing worked. The coach was too inflexible to change his coaching style and my body wouldn't cooperate, no matter how hard I tried. In the end I gave up, I couldn't get my body to do what the coach wanted.

So we reached a stalemate. I left the coach and went down my own path and haven't looked back.

Interestingly, the scientific data supported me over the golf coach.

Here's the deal...

... a comfortable stance is almost always the best option when it comes to standing to the ball. While the golf industry are obsessed with angles and symmetry, you'll be far better going with what is comfortable to you.

The fact is you're going to have a hard time changing your body position. Your body knows best and you should respect it.

Here are the key elements to a better stance.

1. Square alignment: If you have been playing golf for a while you will understand the need to stand squarely to the target. This is essentially good advice. It does not matter if your stance is a little closed or open, just don't over do it. Your brain is extremely effective at adjusting for minor errors in your alignment. It is not essential to spend large amounts of time working on a perfectly square alignment. You have better things to do!
2. Posture: Many modern coaches are obsessed with body posture. They want to mold you into a visually pleasing position they believe is correct. But experience tells me that changing your posture is extremely hard. It's almost impossible unless you're very patient and prepared for some hard work.

So I wouldn't worry about your body posture too much. Chances are your natural stance will be more than good enough for you to play your best golf.

3. Width of stance: A modern trend has been to widen the stance. The belief is that it gives you a more stable swing. But there are two main problems with this thinking;
 - a. It places too much strain on your back and lower body (especially at the top of the swing)
 - b. This extra strain makes achieving a good backswing position difficult.

Try it. Take a wider than normal stance and make a backswing. Can you feel the extra strain this places on your body?

So you want to use a stance width that accommodates balance and power.

In most cases for a driver this will mean that the stance is about shoulder width apart. As the clubs get shorter so will the distance between your feet.

Again, it's important to remember the comfort factor, don't go too wide or too narrow. Just find a stance that is comfortable and you'll be fine.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

4. Weight Distribution

Time to get a little specific. You want to make sure you place more weight on your heels than your toes.

A good guide is about 60%. When you do this you'll automatically push your hips back. This aids in balance but more importantly helps locks your hips. As you'll find out later, this locking of the hips is a key ingredient for assisting the downswing.

If there is too much weight on your toes it's not possible to have your hips locked. It's then too easy for your hips to spin and rotate and you'll be in a very weak and unbalanced position. This is one of the most common faults in the amateur game today – it almost seems many golfers are scared to get into a “powerful” position. So stick your butt out a little and you'll be in a better position.

You should also now be standing ever slighter further away from the ball. This gives you plenty of room to make an effective downswing and have all the necessary room. This is a subtle difference, do not over do this and stand so far away from the ball that it feels uncomfortable and awkward.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

THE TAKE AWAY

The take away is essentially a function of the hands and arms. Why?

Because you have tremendous ability to control movement with your hands and arms.

Lots of modern instruction places too much emphasis on your body (big muscles). A popular drill has been to place a club into your stomach and then make a swing.



This kind of drill typically gets your body over rotated

The problem with this drill is it can get you turning too much too early. When you turn too much the swing becomes difficult to control and disjointed – the swing can sometimes “feel” powerful but you have a hard time hitting the ball consistently.

It's also common for you to continue with “over turning” as you reach the top of the backswing position. Every part of your body is stretched and strained as you falsely attempt to start the club down.



A big backswing is not always a good idea

A much easier way to start the swing is with a smooth action of the hands. The hands lead the swing and the body follows. This is correct sequencing and places the body and club naturally in the right position.

The swing begins with a gentle and smooth motion of the hands and is quickly followed by the arms, shoulders, sternum, hips and legs. This is natural, comfortable and far easier to do than a body dominated swing.

Using the Swing Trainer will teach you the ideal way to start the swing. If you over rotate you'll hit the inside sponge. If you manipulate the backswing in any way you'll likely strike the outside sponge.

If you make the correct back swing the club will glide past the sponges and you'll be in the perfect position to continue your swing.



An emphasis on the hands goes against many modern instructors, including some famous ones. A typical argument for the body dominant swing goes like this,

“To prove that your body is incredibly important in the golf swing, sit down on a chair, lift your legs into the air and try and perform a normal golf swing”

It seems like a fair argument. But my comeback is this,

Stand up, get into the most powerful position you can, get a friend to tie your hands behind your back and then try and perform a golf swing!

The fact is your entire body is important in the swing. You need all parts working correctly to become successful. While the body dominated swing appears a little “sexy” and has a growing following, by focusing too much on your body makes the swing overly complicated. Why?

Because you don't have as much control over your "big muscles" as you do your hands. Try it. Make a few practice strokes by trying to turn your body back or through versus a swing with your focus on your hands.

The best advice I can give is to start the swing with your hands and let the body follow. You'll find this way easier than any other method you've previously tried.

Drill #1: Practice your back swing with the Swing Trainer. This is the simplest and fastest way to learn a back swing.

Drill #2: Exaggerated backswing. Start from an exaggerated position and let the club flow gently into the swing. For added effect use a tennis ball to help promote a smooth and controlled take away.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

SWING PLANE

There has been a lot of instruction in the last 50 years on swing plane. Complete learning systems have been based on swinging on plane. If you have a video lesson with a coach, chances are he'll draw lines on the screen and show you where and where not your body and club should be. This is all swing plane based instruction.

Swing plane instruction started with that famous image of Ben Hogan with his head through a pane of glass.



Ben Hogan's famous swing plane image

Now there is elbow plane, shaft plane and shoulder plane. It all gets very confusing.

Golf manufactures have invented laser lights, plane boards and massive constructions from pipe to help the golfer learn correct swing plane.



An example of a swing plane tool. In my opinion they cause more harm than good

If you ask a bunch of golf professionals about the correct swing plane you will get a whole range of different answers. The confusion continues. The fact is,

Concerning yourself with swing plane has no positive effect on your golf game.

Scientific study has shown that the downswing plane closely matches backswing plane. The difference is so subtle that it is beyond the normal proprioception for any human being to consciously think about.

Another way of saying this: You do not have enough time, skill or awareness to make a golf swing and try and swing the club on the correct plane.

The good news is if you stop worrying about swing plane and make a swing controlled by your hands (and let the body follow) you'll naturally find a swing plane that will allow you to deliver the club to the ball with power. Confusion gone.

If you can't resist swing plane thinking then attempt to match the same plane both back and through. But do so at your own peril!

CASE STUDY:

A former client of mine is obsessed with swing plane. If he wanted, he could talk all day and night about the importance of swinging plane. He believes that swing plane is the answer to all of his golfing problems. He believes if he works on it long enough his game will suddenly transform into mastery status.

I can tell you he has been working on this swing plane stuff for a long time now and his golf swing is still tight, controlled and powerless. It doesn't look like changing anytime soon.

To be honest with you, he has an ugly swing. He has a pretty boring game too. He's so obsessed with swinging the club "on plane" that he has forgotten to hit the ball.

Don't make the same mistake, forget about swing plane!

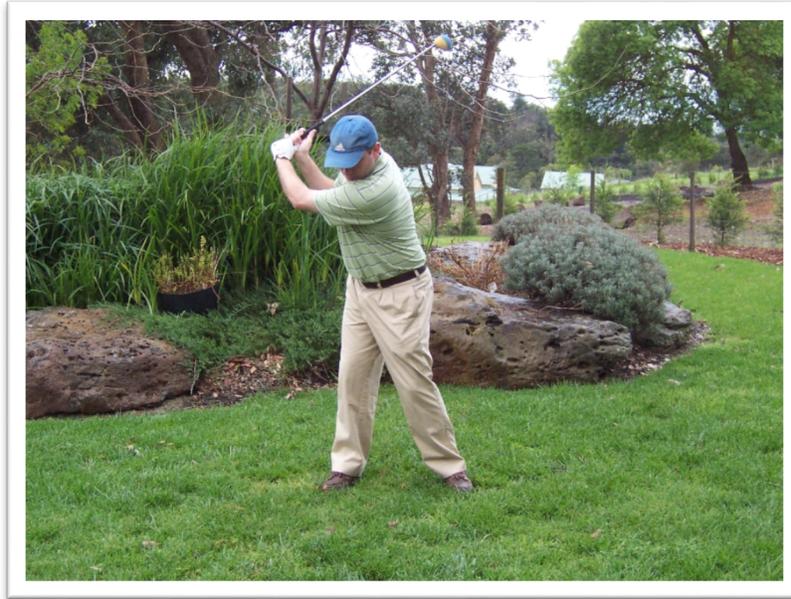
Do you think tennis players worry about the plane of their serve? Or what about a hockey player with a power shot? I don't think so...

Golfers have fallen for the trap of over analyzing something that should come naturally to them. **BioSwing** is all about simplifying the mechanics, not making things more difficult.

Interesting snippet: I'm not a big believer of any training aid that has you resting the club on a pipe or board. When the club is resting on the device you are not learning anything. Your system is not being challenged to actually learn the correct motion. By resting the club on a pipe for example, and then making a swing, you are getting exercise, not improvement. You are not learning a motor pattern for better play.

TOP OF BACKSWING POSITION

Here's a simple and comfortable top of back swing position that will make golf easier for you. It will also reduce stress and strain you place on your body.



A relaxed and comfortable backswing position

Can you see how relaxed and comfortable this position is?

There's no excessive turning or winding

There's a relaxed left arm position

There's a short, almost $\frac{3}{4}$ back swing position

There's a comfortable turning of the hips and shoulders

This position can also generate massive club head speed. More than enough to hit the ball past your golfing buddies.

Golfers have been told for a long time a key element to a powerful swing is to twist the body like a spring so they can generate maximum power. We're told that at the top of the backswing we should have maximum shoulder turn, with the hips resisting this turn. Modern theory describes this position as 'X-Factor'.

Science showed that we don't need a backswing with X-Factor. There is circumstantial evidence to show that X-factor contributes to excessive strain and stress on your body, it is also a complicated move to do.

There's no getting away from the fact that a $\frac{3}{4}$ position is much simpler way – less effort just for a start. And when you learn how to use this simple position and still produce maximum power, you'll have a better golf swing.

With BioSwing, big backswings are out, and a simple, easy and safe $\frac{3}{4}$ position is in.

Let's look at the position in some more detail.



The $\frac{3}{4}$ backswing. Nice power. Lots of control

The left arm: There is a definite softening of this arm. There is no need to have a ramrod straight arm. A soft left arm position is easier to do, reduces strain on the shoulder joint and gives you a mechanical advantage.

What's the mechanical advantage? The slight bend allows you to start the club down towards the ball more quickly. There is reduced resistance at the top so you'll have more speed starting down. More speed at the top equals more speed at the bottom. This gives you greater distance without trying harder. It's a true mechanical advantage.

Drill: Sit down on a stool and make a backswing. In the first swing have a straight left arm and make a big backswing. Can you feel the tension? Is it easy or hard to do?

In the second swing allow your arm to bend. Can you feel how much easier this is to do? Can you feel how relaxed it is? This is the position that will give you the perfect backswing position.

Shoulder turn: In old-school coaching you were told to turn the shoulders at least 90 degrees. This is not always easy or possible for everyone. With BioSwing we are after something more comfortable. And this may mean your backswing has less than 90 degrees of turn. Don't worry too much, comfort and a mechanical advantage will make up for any lack of flexibility.

Hips: I wouldn't worry too much about your hips either. They will come along for the ride and will follow behind the shoulders. Again, you don't need to feel too much tension in your hips, there may be some, but not enough to cause you stress.

Feet: There has been a trend to limit the amount of movement in your feet. Most coaches don't like to see the left heel rise in the back stroke. This belief comes from thinking that with limited moving parts the swing will be simplified.

But if you limit a part that really does want to move then you complicate the motion. Here's the thing.

If you want to allow your left heel to rise in the backstroke then do so. You will find this gives you greater freedom and reduces tension even further. Plus, by letting the heel raise you give yourself an advantage in starting the down swing. More on this shortly.

Still not sure about the feet?

Jack Nicklaus, the greatest golfer in history, allowed his heel to rise at the top of his backswing. He had such a consistent downswing move his ball striking was a major reason why he was so dominant in his prime.

TIP

If you do allow your heel to rise on the backswing ensure that it happens as a result of the turn of your shoulders and hips. Do not lift your heel early in the backswing just because you think it is a good thing to do. The heel raise should happen towards the end of the backswing because it will get pulled up to help ease the tension the turn of the body produces.

Wrists: The right wrist must be fully cocked (back on itself) with the left wrist hinged sideways. In conjunction with a SLIGHT bending of the left arm you are now in a position to produce maximum club head speed.

Interesting snippet: During the biomechanical testing I asked the researchers to test a $\frac{3}{4}$ swing. Why? Because I had known for a while that many golfers make a great swing when they swing to the $\frac{3}{4}$ position. I had also observed that there was very little difference in the distance.

The testing found some interesting things. With a $\frac{3}{4}$ swing there was no loss of distance. Also, the subjects all had much more relaxed body positions at the top of the swing. There was way less stress and strain.

And the most interesting fact was their back swings in reality were as long as their normal position. The relaxed nature of this swing meant shoulders and hips could relax into position, rather than being forced there. So the end result was a better (and safer) swing.

This also helps explain those “amazing” golf swing you make every now and then. Like when you’re in the middle of the fairway and “swing easy” but watch in amazement as the ball sails 25 metres over the back.

I call these “perfect” swings. And they are almost certainly adhering to the principles of BioSwing,

- shorter backswing
- comfortable positioning
- arm dominated swing

HOW TO START THE CLUB DOWN CORRECTLY

We're now getting into the really good stuff. What you've read previously is interesting and will help your game if implemented correctly.

If you get the downswing move nailed, you'll overcome any earlier errors and almost guarantee yourself a quality golf shot.

Prior to getting involved in scientific research and the subsequent development of BioSwing, I had no idea how to start the club down. It was a complete mystery to me and it wasn't surprising that my game lacked consistency.

Part of the learning process is getting good information. With quality instruction, you give yourself every chance of making progress. And with the downswing being a critical component of the swing, it's imperative that you get the right data.

So how should you start the downswing?

It might be easier to start with what you shouldn't be doing.

And that's to spin or rotate your body aggressively. If you do you're almost certainly going to be in trouble.

Here's the thing.

In a good backswing you have unknowingly created torque (force) on your left hip. To release this torque the hip will want to spin violently towards the target. This is a normal reaction but can get you into a fair bit of trouble.



Yuk! Over-rotated and the club has come over the top

The problem with this is that you will spin out and cause the club to come over the top. This is the reason why most golfers slice the ball or play with a weak pull-fade.

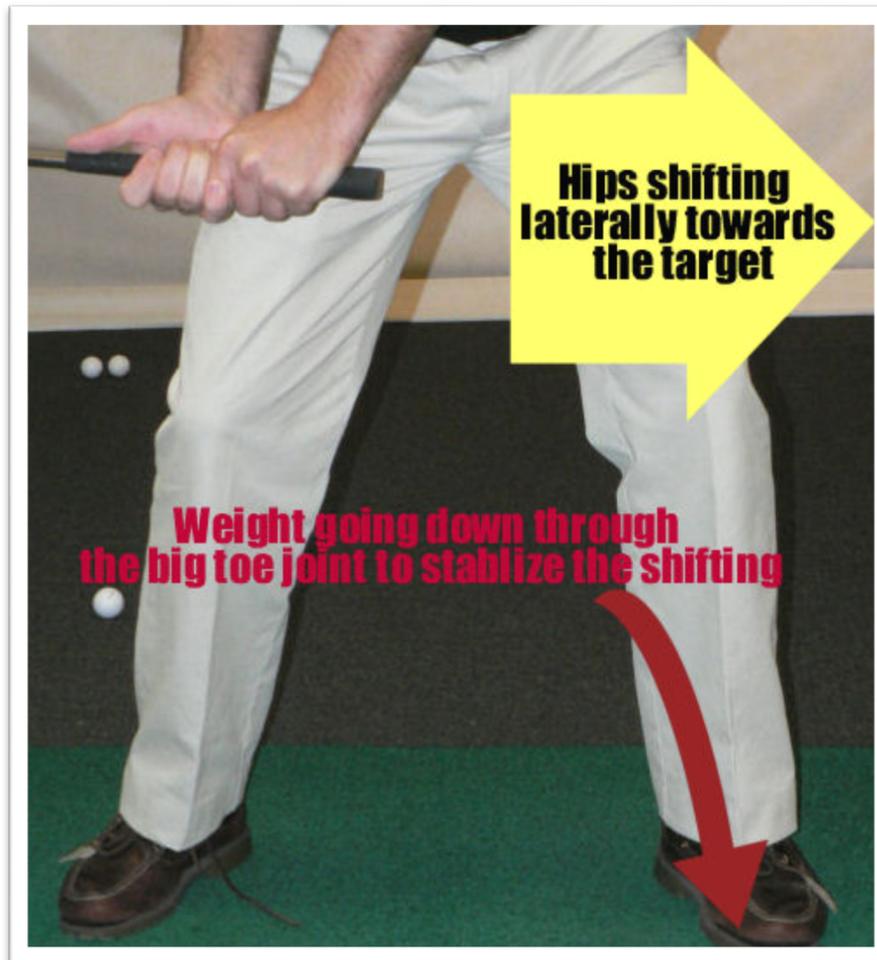
The trick here is to avoid spinning out. You've got to resist the torque and not let it do what it's forcing your body to do.

And this is where the scientific data came out with some interesting ideas. Here's what we found.

The best players resist this torque by using their right leg in a mysterious way.

Their right leg holds the hips from spinning by applying force in the opposite direction. Let me say this in another way.

At the start of the downswing the rear leg is turning away from the target. This is not a visible move because this turning of the rear leg will cause the hips to slide laterally towards the target.



And this is what you want. The rear leg move causes your legs to separate (a squatting position) and slide laterally towards the target. There is no turning or spinning out, only a lateral slide.

This is where your set up position is important. Remember how we wanted the weight back into our heels and the hips locked? This locking position is important because it aids in reducing the unwanted hip turn.

When the hips are not pushed back they are free to spin uncontrollably on the way down. This is the last thing you want. But when they are back you have much more control.

A controlled body at the start of the downswing allows the club to drop into an ideal position (the experts would call it “on plane”). This is a move that gives power and accuracy. There is no “over the top” move. There is no awkward and unnatural position that you’re fighting to recover from. It’s a clean position that delivers the club powerfully.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

There are some other important considerations.

THE AMAZING TRUTH ABOUT YOUR BIG TOE

The second phase of the downswing is to limit the amount of lateral slide. If you overdo the slide you'll end up sliding onto the outside of your left foot. From here you'll lose balance and control. If you've ever seen a lunging golfer you'll know how awkward this can be.

So the next step is to stabilize the downswing by forcing the weight down through your big toe joint on your left foot. The toe acts like a kind of brace, stopping the sliding and putting you into a powerful late hit position.

And it's this position that every great golfer gets into. It doesn't matter what their grip, stance or backswing position. Every golfer who can hit the ball powerfully has worked out a way to get into this powerful position.



The ideal downswing position

The golf instruction community has understood the importance of this position but not known how to teach it. It's been a mystery because the forces at play are hidden, they can only be detected by biomechanical testing/observation and fancy equipment.

So how can you learn to achieve this downswing?

I need to point out that the downswing happens so quickly that you can't think about these moves on the golf course. You have to train yourself away from the golf course and then go play.

Let me say this again because it's important: If you attempt to consciously apply these techniques into your game while you're out playing you'll be in trouble. Our brain and learning system do not work this way. Over-thinking on the golf course is a sure game wrecker. So learn your technique away from the course, then go and play the game.

HOW TO LEARN THE DOWNSWING MOVE

To get a sensation of the correct feel you should make some practice swings and attempt to feel that your rear leg is staying very still at the start of the downswing. Once your downswing is under way the rear leg is free to move and catch up with the rest of the body.

The benefit of this technique is that it virtually eliminates the possibility to slice the ball. Golfers for too long have been under the illusion that they **must** actively drive, move or power their bodies to the left.

But you must feel like you are staying still or moving the top part of the leg in the opposite direction to start the downswing. Here are some learning drills to aide your progress.

Drill #1: Keep your rear foot flat on the ground: When starting the downswing feel like your rear foot remains on the ground well into the downswing.

Drill #2: Keep your back facing the target: After you've made the backswing you want to feel that your back remains facing the target for a fraction of a second. This will minimize the unwanted spinning and allow the club to drop into the correct position.

Drill #3: Brace the front foot: Use a step or ledge and get the feeling that the front foot is bracing into the downswing. A variation of this is to raise the front foot on a step.

Drill #4: Throw the club: For some reason when we throw a club we tend to follow these principals closely. Throwing a club takes your focus away from your body and into your arms. This is a good thing. A stable body and fast hands are essentially the perfect downswing motion you want.

See <http://www.golfgooroo.com/resources/> for more information and training drills.

In the last chapter I encouraged you to let the heel of your left foot rise in the backswing.

Why would I suggest such a thing?

Because it greatly assists in the downswing stabilization.

When you allow your heel to raise on the backswing your big toe is forced to support the weight at the start of the downswing. You are somewhat pre-setting this key downswing move and this in turn reduces the complexity of this crucial phase.

The absolute last thing you want to do early in the downswing is to allow the weight to roll onto the outside of your left foot. This is a big no-no and will result in a weak over the top move. Did someone say slice?

INTERESTING SNIPPET

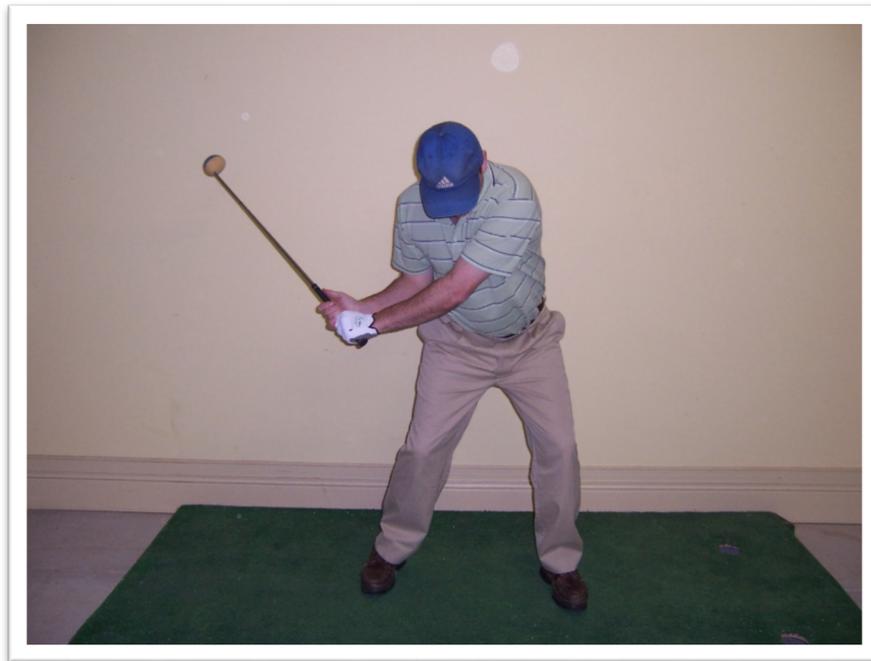
When the big toe theory was first proposed, the scientists and I looked at the bottom of a number of golf shoes.

Interestingly enough, it was found that some of the elite golfers had large wear marks under the big toe joint. The physical evidence supported the data.

This observation was supported by an obscure research study undertaken in Japan. The big toe pressure of a number of professional and amateur golfers were tested throughout their swings. It was found that the professionals had a greater amount of torque on their left big toe during the downswing phase of the swing when compared to the amateur players.

After some practice you should start to feel that you're in this "stacked position". This is the ideal position and the one that all good ball strikers find themselves in. Some points of consideration.

- Notice the club behind the hands (this is the classic late hit position)
- A closed body position especially the shoulders (this is a sign that you haven't rotated too much and you've got the ideal amount of lateral slide).
- Weight down into the front foot (You've stabilized the swing nicely with your big toe)
- More of a lateral shift rather than spinning
- A simple motion – there's nothing too complicated
- Head in a neutral position
- Perfect balance (perfect position to deliver the club with awesome power)





The ideal “stacked” position

Interesting snippet: Take a few moments and view some of the world’s best players (golf magazines have some great images). They all get into this stacked position. It’s a key part of the swing but can only be obtained when you understand HOW to get there. You can not try and copy this position and achieve it – you need to learn how to control your body into the downswing to get there.

POWER PHASE

Nearly every golfer wants to hit the ball further. The promise of an extra few yards is enough for most golfers to rush out and buy a new driver, try a new ball or muck about with some new training drill. The bottom line is a golfer will try almost anything to hit the ball further.

But most of these things are gimmicks. They're nothing more than marketing hype to get you to part with your hard earned money. But there are some things you can do to help you hit the ball further.

I hinted earlier that the swing is really just a throwing motion. All scientific evidence supported this fact. And a tremendous drill is to learn to throw a golf club at your target.

The harder and faster you can throw your club, the further you'll hit the ball. It's pretty simple really.

By learning to perform the downswing instructions in the last chapter you'll be in the perfect position to throw the club through the ball. You'll have a stable base of support and be ideally balance.

To be more precise it is a throwing motion of your upper arm (the humerus).Your torso provides very little power during this phase. The torso starts the motion early in the downswing with the lateral shift. The body is not moving very quickly at this stage – so there is very little power.

After that the body provides support for your hands and arms. It acts as a reactive support mechanism allowing the throwing motion of your arms to generate maximum club head speed.

I want to make this next point very clear...

It is a throwing motion of your upper arms. Not your forearms. Your forearms and hands are going along for the ride. They should feel very passive. Aggressive forearm rotation destroys rhythm, timing, power and makes squaring the club face at impact difficult.



No! Please don't over-rotate your forearms

If your hands get too active early, you run the risk of *casting* or *releasing* the club too soon. This will definitely cause you some horrible problems. For maximum power you need the angle between the forearm and shaft to be retained as long as possible.

You have seen pictures of great golfers in that classic "late hit" position. This is exactly what I have in mind for you.



The classic “late-hit” position

The only way for this to happen is to focus on making this phase of your swing a throwing motion. Try throwing a ball and become aware of what is actually happening.

You should notice that your body moves early then holds, your shoulder and upper arm start working really hard and finally your hand zips through to release the ball. Try it! The golf swing is a very similar action.

It may feel like you are rotating your forearms when you make a good swing. Reality is that most of the work (effort) is coming from the internal rotation of the humerus (upper arm).

David Leadbetter, as one of the world’s leading golf coaches, understands the importance of “passive hands”. Through years of experience he has seen the destruction caused by hands and forearms that are too aggressive through impact. This is why one of his main teaching concepts is to teach “passive hands” through impact.

Some golfers have trouble with the 'passive hands' teaching because they feel they can't generate any power or speed in the swing. These golfers usually spin and over rotate in an effort to find power. This is not what you want to do.

BioSwing takes golf instruction to the next level.

By focusing on your upper arms you can still feel like they are generating some real zip with the club, while also keeping the club face square. You get the best of both worlds, power and accuracy.

Have you ever hit a shot that felt really easy but the ball traveled further than expected?

Like a smooth swing from the middle of the fairway?

Or a restricted swing from the trees that sailed through the fairway and into more trouble?

These swings are close to perfect swings. They feel too easy and they almost always surprise you with how far they go.

- You're using a shorter backswing (ideal)
- You are not stretching or straining for a long backswing (ideal)
- You are relaxed (because you are not going for power)
- You do not spin out (because you are relaxed and in balance)
- You are almost certainly applying power by using a slinging motion of your arms (because this is the perfect way to produce power, there is no better way)
- The swing feels effortless (there is no strain or stress which makes golf simpler and easier on the body)

So learn to move your arms and you'll hit the ball further. It really is a simple golf swing that any golfer can learn.

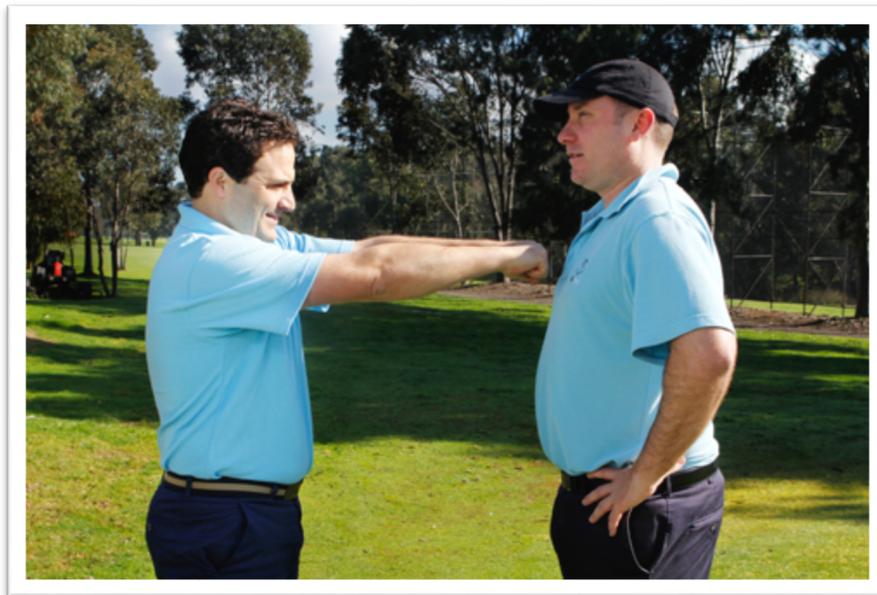
Don't believe me?

I get a bit of criticism from some people that can't get away from big muscle thinking. So let's be clear here.

Yes, you need your body and your body **must** move. But it should only move in response to your hands and arms. Your body is an active support mechanism. The keyword here is "active". So it must move but it should never dominate.

Want some more proof?

Get someone to stand a few inches in front of you. Now with a straight right arm try and punch them. You're not allowed to bend your arm.



A straight-arm punch is hopeless

Are you able to apply any power? It's nearly impossible isn't it?

Now allow yourself to bend your arm a little. From this position you can produce some serious power. So I don't recommend you go through with the punch.



Now I'm in trouble. From a bent-arm position anything is possible

Here's the main point.

To produce power you need speed. The only thing moving fast enough to hit the ball vast distances are your arms. So at the risk of repeating myself, learn to swing your arms from a stable body position and you'll do just fine.

WHAT ABOUT ACCURACY?

Glad you asked. Power without accuracy typically doesn't make for a good golfer.

Long drive champions can hit the ball a very long way and may be the envy of many golfers, but most aren't very good players. If learning to hit the ball long and straight is important to you then listen up.

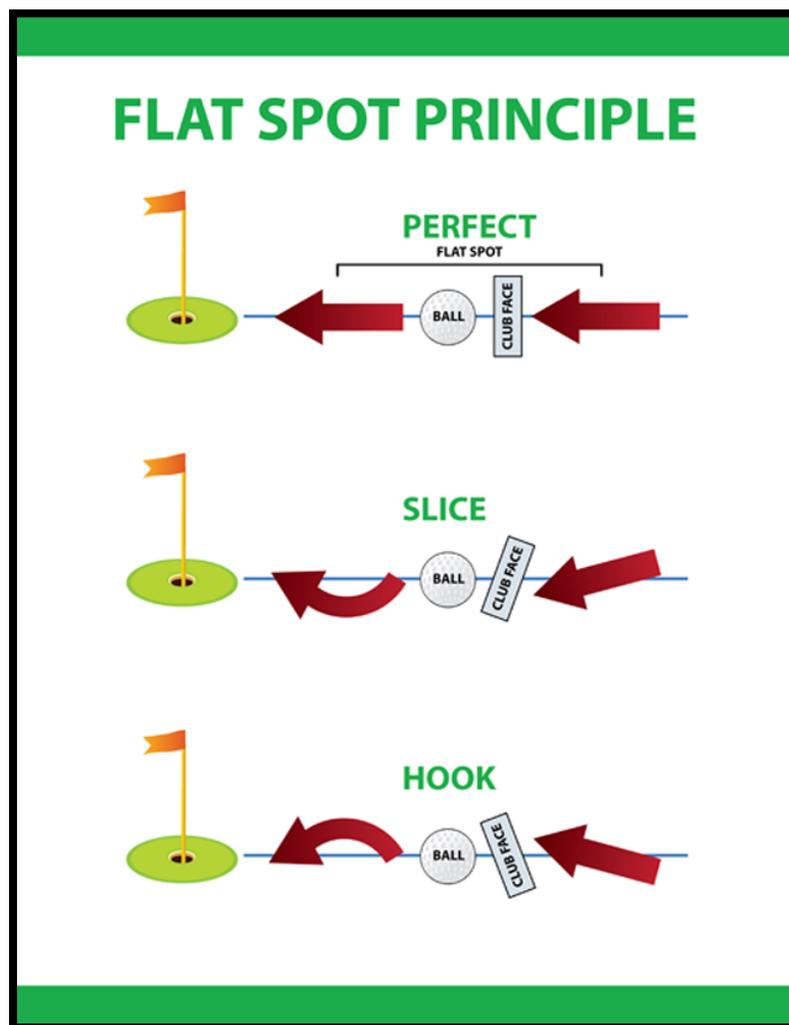
The Flat Spot Principle (FSP) is the scientific secret that allows the ball to be hit long and far. It's the scientific principle that makes the game look easy.

WHAT IS THE FLAT SPOT PRINCIPLE?

The Flat Spot Principle is what allows great golfers to hit the ball long and straight a vast majority of the time. When the club head is traveling at such high speeds (120+ mph) it is impossible to have conscious control over what is happening. Things are moving too quickly.

So why are the best players able to consistently hit the ball long and straight?

They have the clubhead and clubface travelling along the target line for a longer period of time. This is the FSP.



When they strike the ball the clubface is pointing at the target. With the clubhead matching the target line, the ball can only go in one place.

If a great player wants to hit the ball further they can swing harder at the ball. When a poor player tries to do this the ball ends up further into the trees.

But there is a catch.

The FSP happens too quickly for conscious control. It's way too quick. Trying to control this part of the swing will cause self-doubt to enter your swing. You'll lose rhythm, timing and your swing will appear contrived. It will look ugly. It will be jerky and it won't be effective.

SO HOW CAN YOU ACHIEVE THE FSP?

The only way to achieve the FSP is to learn all aspects of BioSwing.

Everything you have read above contributes to achieving a flat spot at impact. And this is the only way to develop a powerful and accurate golf swing.

The lateral shift ensures that the club approaches the ball on the correct path, the stabilization with the big toe causes the arms to provide the power and passive forearms ensures that the clubface remains square for as long as possible. All this equals a great golf swing!

The Flat Spot Principle also gives golfers great timing. You'll feel you have extra "time" to hit the ball. With the clubhead and clubface working together, in line and towards the target, you will experience a new confidence in your ball striking.

Your swing will become simpler, with more shots finding the target. The more you continue with this approach the better your confidence. A confident golfer is then able to achieve real progress, stepping out of normal golf and entering the world of peak performance and mastery.

Golf then becomes more fun and you enhance your learning capabilities.



When the clubhead and clubface work together during the impact phase your ball striking and confidence will go to a new level

Training drill: The best way to learn to get the FSP is with the my Swing Trainer. It's the only golf learning tool on the market that has been engineered to help golfers develop a flat spot in their swing. If you make a poor swing you'll hit a sponge. When you can swing your club through the gates without hitting any sponges you'll achieve the FSP.



A simple, easy and effective golf swing thanks to the FSP

Interesting snippet: The FSP is the reason elite players make the game look so easy. We marvel at how easy they make the game and how much time they seem to have. This is the magic of the FSP. It really does give you more time and a serious advantage.

Where most amateurs have swing that is mostly miss, the best players have found a way that almost guarantees themselves of hitting a great shot. This is the magic of the FSP.



IMPACT

This is where it all happens – impact is the moment of truth!

First a word of warning on what you don't want.

Some modern golf instruction talks about having your hips (body) square at impact with both feet flat on the ground. Scientific research does not support this.

These concepts are based on false perceptions, (less moving parts equals a simpler swing) and the problem with this is that it gives the golfer the incorrect image of what he needs to do. If the golfer actually keeps his hips square and his feet flat on the ground at impact he can not achieve an effective swing.

It is not possible to have a high club head speed with feet grounded and hips square with the target. This theory was devised to reduce injury and simplify the swing. Unfortunately it has the opposite effect.

The golfer still wants to produce distance but tries to limit the amount of body action. What happens is that they swing flat out, usually with aggressive muscle activity and then tries to finish the swing abruptly. It's not possible to do and results in a poor swing.

It also puts so much strain on the body that every swing is a major effort and after a short time lower-back and elbow pain is common. So an overly restrictive impact position is not recommended.

If you do experience back pain then I suggest you start slowly. Always warm up before you play and practice (I'm sure you do this already). Attempt at all stages to swing easily. The golf swing will always place some stress and strain on your body but if you do follow the advice above you can minimise it.

You should also consider using the lightest clubs money can buy. This will enable you to achieve the most distance with less effort. That is a good deal in anyone's language.

You have to allow the body to move in response to the fast moving arms. Retarding the motion unnecessarily by restricting the body motion is downright dangerous and stupid.

If you swing at low speed (pitch shots and chipping) it will be possible to have both feet flat on the ground at impact. This is because your body does not need to move so far to support the slower moving function of the arms.

The feeling at impact will be that you are hitting against your left side. This feeling is only possible if you perform the before mentioned motions correctly. This "hitting against your left side" advice has been common advice for many years.



Achieving the FSP

BioSwing will enable you to achieve it because you have been told HOW to do it. Just being told "hit against your left side" will not work. That type of golf instruction tells you *what* to do. The golfer needs the *how* also. This is a big and important difference.

THE FOLLOW THROUGH

This is the shortest chapter in the book. I don't believe anything positive can come from talking about the follow through position.

The function of the follow through is to dissipate the energy of your swing. That's it.

Focusing on achieving a certain position usually only results in negative outcomes. You have to trust what has gone before and allow the follow through to take its natural course.

I'm sure that of all the sports, only golfers concern themselves with the follow through. I can't imagine footballers or baseball players worrying about the follow through in their respective tasks.

To finish off:

You never ever want to try and finish your swing abruptly. (Unless you have a tree branch located on the through swing!) Attempting to finish the follow through prematurely is a major cause of injury. It puts massive strain on your arms, hands and shoulders. It also causes the swing to lose its flow and rhythm.

Always attempt to finish your swing in a comfortable and relaxed position and you shouldn't have any problems. A more flexible golfer may have a full follow through while a tighter one will be shorter. Trust that your follow through will be perfect – let it go where it needs to.

A SUMMARY

So that's BioSwing. My goal was to make the golf swing as simple as possible. I had access to some of the smartest people on the planet and so much research data that this could have been a very detailed book.

But I resisted the urge to get too technical. Why?

Because despite common perception, too much information doesn't help the process. An adult may think they need every detail to be successful but they don't.

And the last thing the golf world needed was another technical and confusing golf instruction manual. So BioSwing has been presented in the simplest way I could come up with.

I have provided you with the essentials to learning a better golf swing. By focusing on the seven key areas below,

1. Club across palm and hands close together
2. Weight down into heels-**lock the hips.**
3. Start the swing with the hands. **Hands lead-Body follows.**
4. Relaxed top of backswing position. No X-Factor!
5. Downswing Move...**Outward force of back leg...Big toe theory.**
6. Power Phase...**Throw the upper arms...passive hands.**

7. Finish in a comfortable position.

I have given you the essential information to perform a better golf swing. I have not told you how to perform every inch of the swing. I have left you room to add you own personality and flair.

This is important...

I am not trying to turn you into a robot. That would not be any fun for you or me. It would be impossible to do anyway. This is what mainstream golf instruction has tried to do. As a result the average score for all players has not come down in 50 years! So I know that it cannot be right!

In the same way that everyone has their own unique fingerprint or distinct walking style I have left the possibility for you to develop *your own individual swing*. You now have the key ingredients, it's up to you on how you mix them and develop your own **Golf Swing of the Future**.

Enjoy and good golfing,

Cameron Strachan

2015

THE SECRETS OF BIOSWING : HOW TO MASTER YOUR GOLF SWING

This is a bonus chapter that has never been released before. The goal here is to simplify BioSwing further and give you the tools to get outside and enjoy the benefits of this golf swing.

A PROBLEM

I don't think it's possible to learn golf from a book. Sure, you can get some interesting information but you won't make progress until you get outside and start hitting golf balls. So make sure you get outside and play the game. Hit balls, have fun and don't forget about playing the game.

Over the years I've received a lot of feedback about BioSwing. Some golfers have had trouble incorporating BioSwing into their game. After investigation those having trouble took the advice too literally and broke their swing down into component parts.

This is not what I want you to do. BioSwing is all about giving you enough information to be dangerous. I want you to remember that the golf swing should be a free flowing action. It's definitely not a position based swing where you need to achieve certain positions throughout the swing.

Let me say this more clearly.

I want you to play golf. I don't want you going to the golf course and thinking about your grip, stance or your swing. This makes golf hard. It's boring too.

When you can stop thinking so much you activate your learning system. You'll perform better and learn at the same time. Don't stress and worry about the technique of BioSwing when you're out playing. It hasn't been designed that way.

So what the story then?

I really wanted you to have enough of the technical data to build a better swing. But I didn't go overboard. I know a lot of technical people were ultimately frustrated with BioSwing. They wanted more of the science and all the technical stuff. But this isn't a manual for them. They can access the findings presented at the International Society of Biomechanics in Sport (ISBS) and study away. This is a manual for golfers who want to play better. Who want to shoot lower scores.

SECRET LEARNING TIPS FOR BIOSWING

Is there a way to learn BioSwing that's even simpler? So simple that you can see improvement right away?

I think there is. I've come up with three learning ideas that can help you get the most from BioSwing and your game. Best of all, these ideas shouldn't get in your way and bog you down. Remember, you should be focused on playing the game, not too worried about your golf swing.

BONUS EXERCISE #1: THE GEAR EFFECT

This exercise will push you a little. You may even find it harder than it first appears. Here's the deal.

Find a quiet spot where you can hit balls without being distracted. This is important, too many of us are easily distracted by phones and others. Get serious and find 20 minutes by yourself.

Now make a swing and be aware of how fast you're swinging. Can you feel your swing? Most golfers can't, they're asleep and have no idea. But stick with it, because learning to feel your swing is a key to making lasting improvement.

Now make a slower swing, say 75% slower than your original. Are you able to do this? It's harder than you'd think.

Now go slower again. This time 50%. It's getting harder.

Can you go slower still? Say 25% or even 10%. You're still making a full swing, but at a much slower rate.

Keep going, you should be able to hit the ball cleanly and well with these slower swings.

Now increase the speed. Bit by bit come back to your 100% swing. Can you go faster? Can you go into overdrive? Can you swing at 110%?

Spend 20 minutes playing around with your swing. Learning to adjust gears is a great way to make progress. You're pushing your boundaries and learning all sorts of things. I call this deep practice. It's hard and most golfers won't bother with it. But give it a go, you won't be disappointed.

When you can make a full swing with 10% power and hit a pure shot your golf swing will be going places and there will be no stopping you.

BONUS EXERCISE #2: AWARENESS.

I touched on this in the last exercise. Awareness is important for learning and making progress. The sad fact is most golfers are not aware of what is going on. They think too much and don't really know what they're doing.

So this is a wake up call to start feeling what it happening with your swing.

Start with the clubhead. Can you make a swing and feel the clubhead from start to finish? This is a brilliant exercise that will do more for your golf than most lessons you see on the Golf Channel.

Next, move to a body part. You might make a swing with awareness of your hips. This is not the time to try and control what your hips are doing, just learn to feel what is happening.

You can work your way around your body, feeling each part of it. Hands, feet, head and torso. Make swing after swing feeling a specific body part.

Why does this work?

Because awareness opens up your learning system. And almost like magic, when you are aware of what is happening any faults will correct themselves.

Five to ten minutes of awareness swinging each week will ensure your swing improves and BioSwing locks in.

Interesting snippet: I have been doing the awareness stuff for a long time now. When you really start to make progress the swing starts to feel slow and heavy. You get incredible sensations of each part of the swing and good shots are a given.

When I lose my swing it's almost always because I have lost focus and have stopped feeling what is happening. In these times the swing feels fast and light. I have very little control. But with a slow and heavy sensation you have amazing control over each part of your swing.

And another point: I have also found that increased awareness of the key parts of BioSwing are key for learning them. The downswing move for instance is hard to learn because everything is happening quickly.

But learn to feel your legs or hips or big toe will open a whole new world of possibilities. And best of all, changes can happen at the subconscious level, just how they should.

BONUS EXERCISE #3: HOLD FIRE RELEASE (HFR)

HFR is the ultimate swing cue. Each word represents a key aspect of BioSwing and they can be used individually or collectively when you're out playing.

Hold: This is the start of your downswing. You need to feel that you are **Holding** still at the very start of the swing. Variations include,

- Keep your rear foot flat on the ground
- Feel like your back is pointing to the target early into the downswing
- Feel your shoulders remain closed into the downswing

Fire: This is your arms. You need to Fire your arms at and through the ball. A brilliant drill is to throw a club (an old one preferably) towards the target. Some tips,

- Be safe. I have seen clubs go in all sorts of directions, including backwards.
- Start small, throwing only a few yards.
- Aim to throw the club ever so slightly to the right of your target line. A club finishing to the left means you've spun out.
- Gradually pick up pace but don't overdo the throw. Once you've got a feel for the motion go back to hitting balls.
- Be safe. It's worth repeating.

Release: This is your body. You need to release your body into a comfortable finish position. Some learning cues,

- Release your body once you've hit the ball.
- Let your arms pull your body through to a full finish
- Finish with your weight on your front foot.

These three words which make BioSwing even simpler. You can make a great swing with HFR. Practice them individually and then go play.

Interesting Snippet: I have been saying for a while that the ideal learning environment to work on your golf game is away from the course. And the best place I have found is in the backyard/garage with a mat and net.

Please consider Almost Golf Balls, a mat and net and practice in your backyard. This might be the best practice you can ever do and will definitely result in improved performance.

Final thing: I have put together a resource page that gives you access to videos, case studies and extra training drills. I am always updating and perfecting the coaching model and the best way of sharing this information is on the resource page.

I have also found that my training videos help take your understanding and progress to a higher level.

If you've enjoyed what you've read so far then please check out the resource page for more.

See <http://www.golfgooroo.com/resources/> for more information, videos and training drills.