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# GOLF WORLD

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## HOW TO FIND YOUR PERFECT RHYTHM

**FIND IT** ERNIE ELS ON HOW TO SWING EASY AND HIT HARD

**FIX IT** SIMPLE DRILLS TO GROOVE YOUR RHYTHM

**KEEP IT** USE THE PROS' 3:1 TEMPO FORMULA



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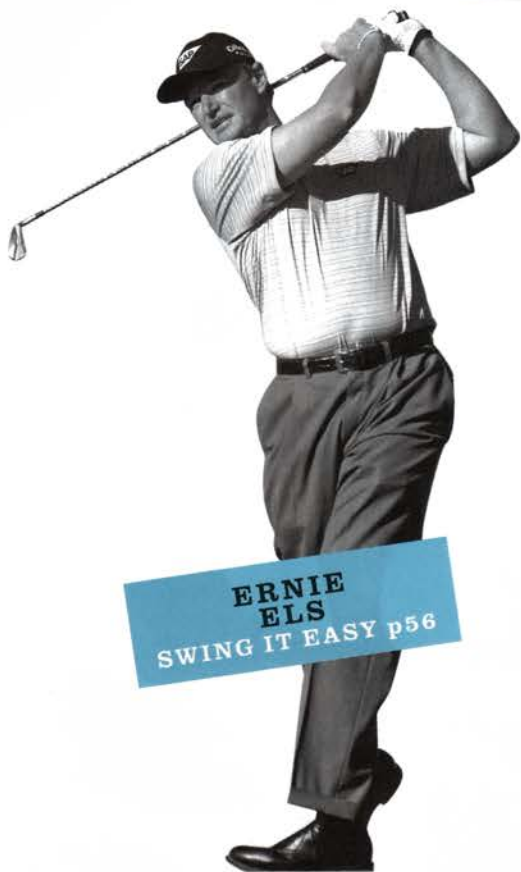
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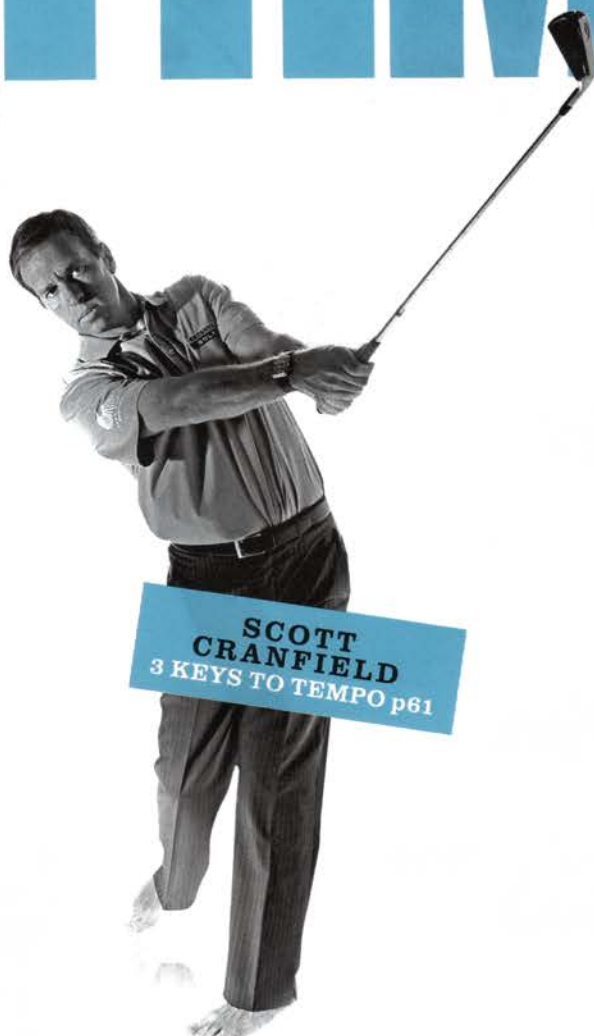


# HOW TO FIND YOUR PERFECT

# RHYTHM



**ERNIE  
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**PLUS:** Why pros of all shapes and sizes have the same 3:1 tempo ratio – and how you can engrain it in your game.



# GR

**'VIJAY SINGH'S TEMPO DISPLAYS THE  
TRADEMARK OF ALL TOP PLAYERS -  
THE BACKSWING TAKES THREE TIMES  
LONGER THAN THE DOWNSWING'**



# THE SECRET TO EAT TEMPO

The man who's spent his life studying the tempo of the world's best players explains what it is and why it's so important.

WORDS BY DUNCAN LENNARD

PHOTOGRAPHY BY GETTY



**D**oes a petite LPGA pro really swing the club at the same pace and with the same rhythm as Tiger Woods? The answer is yes, according to American John Novosel, author of the best-selling book, *Tour Tempo*.

#### How do you define tempo?

Tempo is the mathematical relationship of the elapsed time it takes to complete the backswing – the swing's start to the top – compared to the elapsed time that it takes to complete the downswing – the top to impact. For the best players in the world, that ratio is three to one.

#### How did you discover this 3:1 ratio?

Actually, by accident. I was marketing a training aid called the SpeedBall, and was filming a commercial with Jan Stephenson. She's quite a small lady, but was belting the ball 250 yards. While I was editing the film, I noticed Jan took 27 frames of video to complete her backswing and nine frames to complete the downswing. Each frame lasts 33 thousandths of a second. On a hunch, I dug out some footage of Tiger Woods at the 1997 Masters. He was hitting an 8-iron. Amazingly, I also counted 27 backswing and nine downswing frames.

So here we have a petite lady with a driver and a ripped 6ft 1in guy with an 8-iron – and their swings were the same pace and tempo. Crazy. I started checking others on TV, a painstaking process. And while I discovered the number of frames changed slightly, the ratio was always the same – 3:1. Later, and unknown to me, this ratio was corroborated by a study from Yale University (see page 54).

**Conventional wisdom is that a slower-natured person, like Sam Snead, would swing slowly while a brisk person, like Nick Price, would swing faster. How does *Tour Tempo* sit with that?**

Of all the pros we've studied, yes, there are variations in pace. Faster swingers are down towards the 18:6 ratio, while slower swingers edge up towards 30:10. But when you consider each frame is only one 33 thousandth of a second, they aren't massive differences.

What we've discovered is that "fast" swings and "slow" swings are largely an optical illusion created by smoothness. For example, if I asked you who had the faster swing – Greg Norman or Ernie Els – most would say Greg. In fact, Ernie's is a shade faster. Greg is around 25:8, while Ernie is 24:8. We see smooth, we think slow. I would also add



that the pace of your swing can change without any problem, as long as you keep that 3:1 ratio. When Tiger Woods won the Masters in '97, he was 27:9; when he won the US Open in 2002, his speed was 24:8; now he's flirting around with 21:7. To sum up, good tempo is not about fast and slow – it's only about having that ratio or not.

## Why is tempo so important to the golf swing?

I'll go back to Greg here. Remember the 1996 Masters, when he faltered on Sunday? He didn't suddenly forget the technique of how to swing the club – he lost his tempo.

On 16, Greg pulled it in the water. His normal tempo 25:8; on that swing he was 31:8. That's six more frames on the backswing, 25% slower than normal. That suggests to me that his thinking was along the lines of "I've got this lead; I'll be careful and keep it". He wasn't doing his normal swish/swish. I know he'd lost the lead by then, but his tempo had been set.

The importance of good tempo is that it makes your swing more reactionary. There is no doubt that golfers overthink the swing, a motion that happens in little more than one second. What can you think about meaningfully in that time?

A more reactionary action also helps us biomechanically. Our muscles have a natural stretch-and-shorten cycle – if you stretch them out, they want to recoil. They can't do that if you are trying to swing the club with a laboured and over-technical approach.

In the past, teachers always tried to explain tempo by coming in from the "positions" point of view; but it only takes away that desired reactivity. Some American humourist once said "if we taught sex like we taught golf, the human race would have died out long ago".

To see the damaging effects of this position-lead approach look at Ian Baker-Finch, Johnny Miller, David Duval... even Seve. They all suddenly lost it. Why? Did they all suddenly forget how to swing? I'd submit it wasn't their mechanics, it was their tempo. They lost their tempo from starting to think, taking advice from different teachers. Suddenly, instinctive



**GREG NORMAN 25:8**

**ERNIE ELS 24:8**

hitting tempo is lost, and you can't play the game you once mastered any more.

## What are the principal differences between an amateur's swing tempo and a pro's?

Amateurs take longer on the backswing.



**'WE HAVE A PETITE LADY WITH A DRIVER AND A RIPPED GUY WITH AN 8-IRON; THEIR SWINGS ARE THE SAME PACE AND TEMPO'**

They've all heard "low and slow", a piece of "advice" that has screwed up more golfers than I can believe.

I once had a student whose swing ratio measured 56:11 – he was so hung up on thinking what to do.

If you have too much time to wave the club around in the air, it tends to fall off plane and causes numerous other mechanical problems.

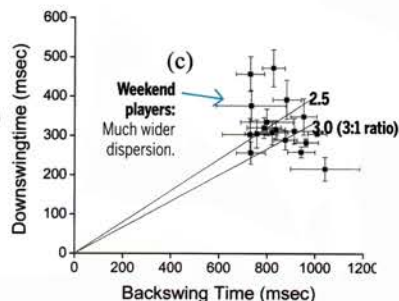
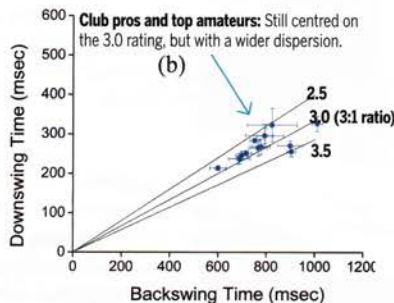
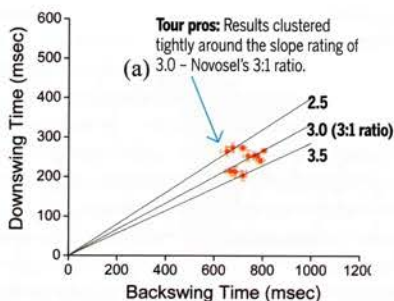
Obviously that over-thinking compromises the 3:1 ratio. In the Yale study,

the good players all clustered around it; the teaching pros and good amateurs were a little further away; the rest were anywhere.

The other difference is consistency – we're not robots, but the Tour pro can replicate his tempo much better than the club player.

## HOW TEMPO CHANGES WITH STANDARD

Yale University took a more scientific approach to a golfer's tempo. Using motion sensors in the shaft, they timed the swings of three standards of golfer from the start to the top, and the top to impact. They recorded up to 20 swings each with a 5-iron from 12 Tour pros, 13 club pros and elite amateurs, and 18 weekend amateurs...







**JAN STEPHENSON 27:9**



**TIGER WOODS 27:9**

#### What are the main tempo myths?

Takeaway – low and slow. We've already talked about how it affects your tempo and restricts reactivity, but low-and-slow also tends to be straight back, which throws you off plane. Pros go fast and circular.

The next candidate is pausing at the top. That pause can be deceptive; often it's the lag caused by the change of direction. You see it a lot with flexible youngsters, and that's probably where the myth comes from. There are exceptions, Kenny Perry for one, but the top of the backswing is a simple reactive change of direction and does not need to wait.

Then there's this notion that one's natural inclinations determine tempo. Okay, there may be something in that; but there are plenty of examples of golfers who don't conform. Bernhard Langer, a slow and methodical person, is one of the game's quicker swingers; his tempo is 21:7.

Finally, some folks seem to think older golfers can't swing the club with a Tour tempo. Well, there's a 97-year-old named Erie Ball who hit the first tee shot at last year's Tour Championship at East Lake. His tempo was 24:8.

#### Which players have the best tempo?

When I watch players, I'm looking for consistency and a reactionary nature. When Tiger won the 2002 Open he was 24:8 swing after swing after swing. I've never seen anything like it. Probably the next is Padraig Harrington, though Carlos

Franco could probably rival anyone. I watched him when I was on the range with the pros at the FBR Open in Phoenix. He made it look like a fish swimming.

#### Would simply hitting hundreds of balls see us gravitate towards the ideal golf tempo?

No; if that was the case millions of people would be tour pros. I don't think we are born with a tempo; tempo is learned. I do however feel there are forces in life that we, for some reason, instinctively connect with – whether it's the rhythms of classical music or the colours in art. I believe some similar instinctive force is at work in the golf swing. The most effective golfers in the world would not have developed this 3:1 tempo if there wasn't.

#### If there are several speeds of the 3:1 tempo swing – 18:6, 21:7, 24:8 or 27:9 – how can I know which one suits me best?

This is something for the individual to decide. But we have developed a headphone microplayer, which emits beeps at each speed, which you can take to the range. There's one pip for the start, one for the top and one for impact. It will play any 3:1 ratio speed, and you can try them all; just pay attention to which pace sounds right to your ear, and which delivers the best contact. The biggest mistake with the microplayer is to try to get the tempo to conform to your swing. You should do it the other way round. Whatever gives most solid shots is going to be your tempo. ■

## PLAYERS ON TEMPO



#### ADAM SCOTT

Think smooth. Tempo is such a hard thing to learn, it's all feel. I get my tempo by taking a couple of easy practice swings and then trying to repeat the motion when I step up to the ball. I also try to swing like Ernie Els. I love his tempo: It looks effortless, and yet he hits the ball a mile.



#### CHARLEY HOFFMAN

Take a few extra practice swings and a couple of deep breaths. The more relaxed you are, the better your tempo.



#### AARON BADDELEY

I put tees under my arms and keep everything synched up. The tees won't fall out if you swing right.



#### ERNIE ELS

Sometimes I get a bit quick-snatchy. I always try to look at my grip pressure and have a count, "one, two, three..." then into the ball.



#### DAVIS LOVE

I try to feel like there is almost a pause at the top of the backswing. You won't actually stop, but it should feel that way.



#### KJ CHOI

Normally I sing church hymns. You want a very slow, relaxed song, not one that is fast.



#### JEFF QUINNEY

I make swings with a club lying across my toes. Why? It helps me get a better feel for keeping my balance. It keeps my feet in check, too.

## HOW MUSIC CAN GIVE YOUR GOLF RHYTHM

Top teacher Scott Cranfield, who has some rhythm drills to try on page 61, also believes the music you listen to on the way to the course can influence your tempo.

He says: "I would always advocate listening to classical music on the way to the course; it's the only type of music that creates a balanced state of mind. The more complex sounds and rhythms engage you more, challenging your brain to make sense of what it's hearing. Classical music exercises and integrates the left and right side of your brain, creating a more balanced state of mind."

"People talk about getting pumped up to play with thumping rock or pop, but it has two pitfalls. First there is less variation; it doesn't challenge your brain, so you're not as integrated listening to it. Secondly, yes, it can work in terms of charging you up – in a sense, it can get you high – but the trouble with that is you are then prone to a fall. What happens if you go out super-positive and buzzing, but then don't start so well? You are vulnerable to going the other way."

"Ultimately, you really want to be in a more neutral and balanced frame of mind when you start a round of golf – and classical music will put you there."

