



Tired of a game where niggling back or hip pain dictates how you swing from round to round? PGA pro Reeves Weedon reckons he's found a solution for you...

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Back in 2014, PGA pro Reeves Weedon was watching an interview in which Jack Nicklaus was giving his thoughts about the modern golf swing. The Golden Bear, one of the game's longest hitters, was lamenting that rhythm had been sacrificed in the quest for power and, in doing so, swings such as the X-Factor (where a player tries to minimise hip turn and maximise shoulder turn) had created a generation of players - including Tiger Woods - who were prone to back injuries.

"A lot of the swings are far more violent at the ball," Nicklaus observed. "The game is far more an upper-body game today... we used to play more from the ground up. I only had one operation when I played, and that was for a knee injury I got playing tennis."

Weedon had been working on a simple but radical approach to the golf swing for more than a decade and the words of Nicklaus endorsed his entire philosophy.

But, as Weedon soon found out, Nicklaus was not alone in his concerns about injuries attributed to swings such as the X-Factor, which uses a lateral weight shift that creates massive torque on the spine and has been blamed for injuries to well-known players like Woods, Rory McIlroy, Justin Thomas and Jason Day.

Phil Mickelson, speaking at the 2016 Masters, also pointed to the dangers: "A lot of young guys get hurt as they create this violent, connected movement, and I don't believe that's the proper way to swing a golf club."

The problem has filtered through to the amateur ranks, too, as golfers, trying to emulate their heroes, bend and twist against the laws of biometrics to find "lag" and clubhead speed. Experts from Barrow Neurological Institute, in Arizona, have warned that swinging hard and fast is triggering an epidemic of back pain, especially among young golfers. They claim spinal problems rank as the most common injury among amateurs and professionals, comprising 35 per cent and 55 per cent respectively.

But Weedon believes he has a solution. He calls it the Lower Body Swing, and he now has scientific research to support his theories. In July last year, the results of a three-year research project conducted by the College of Human Medicine at Michigan State University were presented to the International

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EXPLAINED THE PROS' MODERN SWING



These are the key positions of the modern swing. The shoulders turn 90 degrees, while the hips turn 45 degrees to the target line, creating torque (pictures 3 & 4, below). The weight is on the right side with both knees flexed, while the glutes (the biggest muscles in the body) have moved very little. The club is more upright than the Lower Body Swing (see over the page). The lateral shift (side-to-side motion) during the swing inflicts massive torque on the lower back. As you can see (picture 5) there is a slight rolling of the left foot, with the knees leading the hips and the hips leading the shoulders. You can also see a C-like body shape from down the line (picture 6). Weedon suggests: "For a golfer's longevity, this finish should be erased for good."



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Society of Biomechanics in Sports conference in Ohio. Noting that there had been very few studies to compare various swing techniques, it concluded: "Abnormal biomechanics have been highlighted as a major cause of injury. One potential method that could ameliorate spinal loads while maintaining or even improving performance could be to increase lower body motions to produce the necessary rotational characteristics while minimising spinal forces. This 'lower body' style swing has the potential to produce similar spinal loading characteristics to that of the 'classic' style but performance benefits seen from the 'modern' style." Weedon's concept is "back to the future" in some senses, by reverting to a swing that focuses on the techniques of golfers like Nicklaus, Ben Hogan, Sam Snead and Arnold Palmer: "Look at those swings," he says, producing a file of largely black and white photographs. "Look at their bent knee position. They were using the ground. They had to hit the ball hard to make the ball go further,

but modern golf equipment does the work for you. It should now be about swinging with efficiency and that means using the biggest muscles available – the legs. "The fact is that as people grow older they lose their upper body strength, but they do not lose their ability to walk or run. The legs stay stronger by comparison, so it makes sense to focus the swing on those muscle groups. "Women are much weaker in their upper bodies, by comparison to men, than their legs so, again, doesn't it make sense for them to use their strongest assets – their legs – rather than make a swing based on their upper torso?" Dr Bryan Dixon, the long-time US Olympic wrestling and weightlifting doctor from the Michigan State University College for Human Medicine, described Weedon as a free-thinker who should be taken seriously. "Mr Weedon's ideas and willingness to subject his theories to critical scientific appraisal make him a singular figure in the industry. His commitment to the rigorous and



Reeves Weedon is based at Greenwich Driving Range and A1 Activity Centre in Barnet. He wants to hear from any golfers or teachers interested in the Lower Body Swing. He can be reached at reevesweedon@aol.com

Instead, he gave it up, jaded and with a bad back by the age of 22, probably caused by his tall and elegant swing. He ended up selling golf equipment for the next seven years until he realised he'd made the wrong decision and returned to the game he loved, but this time as a teaching professional. "I was actually offered a sponsorship at the age of 16," he says. "I said 'no'. I suppose things might have been different for me playing-wise if I'd known at the time what it meant and what opportunities it would have opened up for me. But you can't live with regret and I love teaching. To be honest, I was disappointed in what I discovered about the teaching profession. A lot of what is being taught about the golf swing is simply about who is the best showman and very little about helping people play better – and more safely." And that's where his ideas are focused.

There are two pictures to build into your mind. First, rather than swinging the club in an arc around the body with weight shifting back and forth between the left and right sides, the movement of the Lower Body Swing is more like a walking motion – from toe-to-heel on the way back and then heel-to-toe on the way through – while the weight stays almost entirely on the left side.

often tedious process of scientific research has placed him at the forefront of not just the biomechanics of the golf swing but also the 'pathomechanics' of golf-related injuries. His insights on the golf swing have become the basis of an ongoing international research project that has the potential to revolutionise golf performance and injury prevention."

as "RoboGolf", dominate his bay. Weedon can program the machine to enable students to swing like any player they choose, from Sergio and Seve to Dustin to Brooks, but Weedon leaves it covered most of the time, preferring to teach by eye rather than by robotics. He is now in his mid 50s, and one senses a wistfulness about a career he might have had if not for youth and injuries, which put paid to life as a touring pro. "I was supposed to be the next Peter Oosterhuis," he says of his successful amateur career in the mid 1970s and early 1980s, during which he captained England several times.

Weedon currently teaches five days a week at Greenwich Driving Range in London. The giant arms of a mechanical golfing machine, known





“The ground powers the golf swing,” says Weedon. “The more mass you push into the ground, the greater the momentum. A toe-to-heel then heel-to-toe weight shift, which feeds down to up, creates twice as much body rotation than the traditional modern golf swing and it means no tilting or bending of the back, so it creates little or no torque on the spine and helps prevent lower back injury.”

Jack Harris, an emeritus professor of biology at Sages Colleges outside New York, began working with Weedon seven years ago and believes little thought had previously been given to coaching ageing golfers, despite the fact an estimated 60 per

cent are aged over 50.

“An approach to working with senior golfers, and ideally all golfers, should meet four criteria,” he says. “It must be protective of the body, it must produce effective shots, it must serve both men and women, and it must be easy to learn. Reeves’ approach to the golf swing addresses these criteria and, unlike many other approaches to the golf swing, scientific investigations have documented the efficacy of his ideas.



“The Lower Body Swing is based on a fundamental fact of physics: all power ultimately comes from

ground force couples, that is, from pushing on the ground,” explains Weedon. “It is a whole body motion that doesn’t require special moves to get the club on plane, or preserve loft, or create lag. Consequently, the Lower Body Swing offers maximum clubhead speed for input effort through efficient, and timely, transmission of force to the clubhead. Unlike other swing approaches for senior golfers, the Lower Body Swing directs the golfer’s attention to the movements that physics says powers the ball.

“It is highly effective for women because women have most of their strength in their lower bodies. This is especially important for women

beginners, who often struggle to get the ball in the air using conventional technique. Using the Lower Body Swing, women beginners get the ball in the air in their first lesson.

“On the other end of the spectrum, experienced men and women may hit the ball in the air a long way, but often struggle to control where it is going. Because the Lower Body Swing creates power with an on-axis body, experienced players improve their accuracy when they use the Lower Body Swing. Furthermore, because the Lower Body Swing pays attention to the locus of power, that is, the interaction of the body with the ground, expert golfers who import the concept into their practice find they don’t suffer loss of distance as much as might be expected while ageing.

“Finally, it is easy to learn. Most people only require one lesson to understand the feel of the Lower Body Swing. It is not unusual for a golfer at his or her first lesson to stare wide mouthed at a ball that has just exploded down the fairway, with a gentle draw, after the seemingly simple movement of

a Lower Body Swing.”

Joe Miller, a two-time world long driving champion who regularly hits the ball over 400 yards, has also sought Weedon’s help with accuracy:

“Reeves suggested that my body mass would move quicker if I maintained a better connection with the ground,” Miller wrote of his experience. “He taught me a pronounced front-to-back/back-to-front weight shift which kept me centred and minimised power leakage. It gave me a feeling of pushing down on the backswing and up off the ground on the downswing.

“Reeves also encouraged me to keep my left arm under my right shoulder, a position that would allow me to rotate quicker. This promotes two feelings that I like: The first is that I’m literally hitting the ball with my body and the arms are just going along for the ride. And secondly, I feel that I can turn as hard and as swiftly as possible and the clubhead will strike the ball dead, solid perfect – which to me means long and straight.”

EXPLAINED THE LOWER BODY SWING



Flexion and extension of the legs creates a toe-to-heel/heel-to-toe weight shift.

The feeling is down and left with forces going to the ball. The glutes have the same motion as the back. In the Lower Body Swing (LBS), the knees lead the hips and the hips lead the shoulders (picture 3 & 4, above), which is completely

opposite to the modern swing where the shoulders lead the hips, hips lead the knees and there’s no left foot rolling. Take note of the position of the left arm, which – according to Weedon – is ideally below the level of the right shoulder (picture 4).

There has been no lateral hip shift, which creates minimal spinal load. Also, the ankles, knees and shoulders are more in line with each other, which is created by the legs pushing up on the downswing, replacing the common lateral hip slide.

Finally, there is no strain on the spine in the follow-through (picture 6). The LBS is biomechanically correct. The swing is about what the body wants to do, not what golf says the body should do.



TRY THIS

Here is a drill to get your legs starting the golf swing’s kinematic sequence. The simultaneous flexion and extension of the legs (A and C) is clearly seen here.

The ground is powering the swing. The feet move the knees, the knees move the hips, the hips move the shoulders, the shoulders move the arms, the arms move the club and the club moves the ball.

This drill encourages every joint in your body to work in line with each other.



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