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BIO GOLF

THE NEW WAY TO LEARN

Are you fed up going for lessons and not improving? TG has uncovered an exciting new form of 3-D teaching that makes learning easier than ever before.

WORDS BY CARLY CUMMINS PHOTOGRAPHY BY ANGUS MURRAY

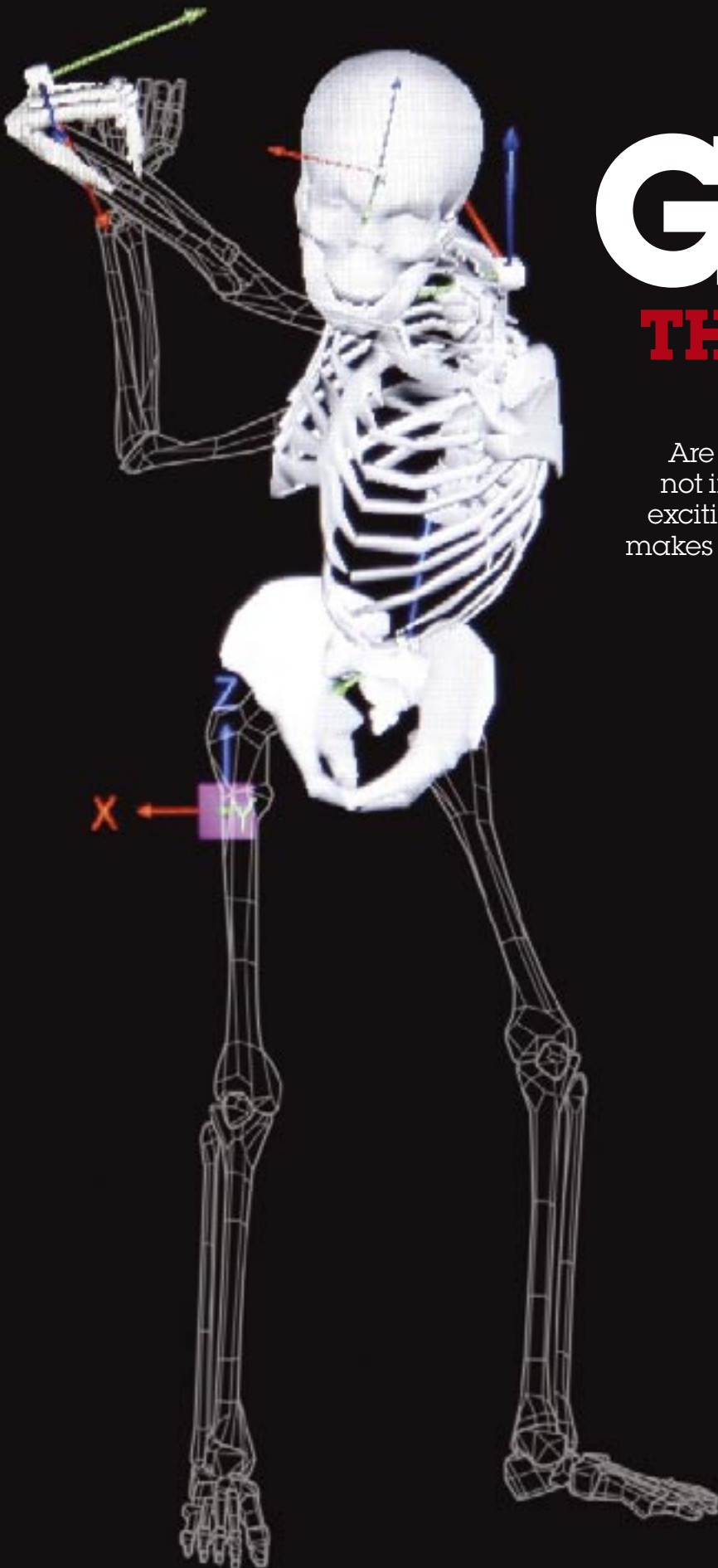
The face of golf coaching is changing. Less than 30 years ago, a typical lesson consisted of little more than a session hitting balls in front of a teaching professional on the driving range; they would analyse your swing by eye, diagnose your problems and then demonstrate the new moves you needed to make.

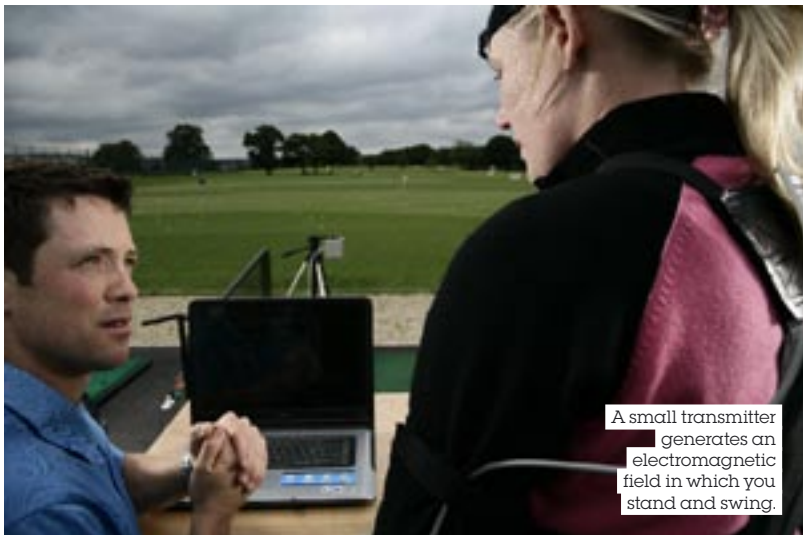
Then along came the video camera. Suddenly we could see our swing faults in slow motion. And with no end of swing analysis software at their fingertips, the pros' guesswork was taken away. But even these high-tech systems were flawed – just because we could now see our mistakes, that didn't make it any easier to make the changes.

The obvious progression in this teaching evolution is a lesson that combines a high level of technical insight with a tangible method of making swing changes. Until now that has never existed, but TG has uncovered a new form of coaching that holds the missing link between swing thoughts and swing feelings. It's called 3D Golf BioDynamics, and basically involves the golfer strapping a series of sensors to their body and hitting shots within an electromagnetic field. By wearing a tail wire linked to a computer, your swing moves are instantly captured and transformed into data that's used to create an incredibly realistic 3D model of your swing.

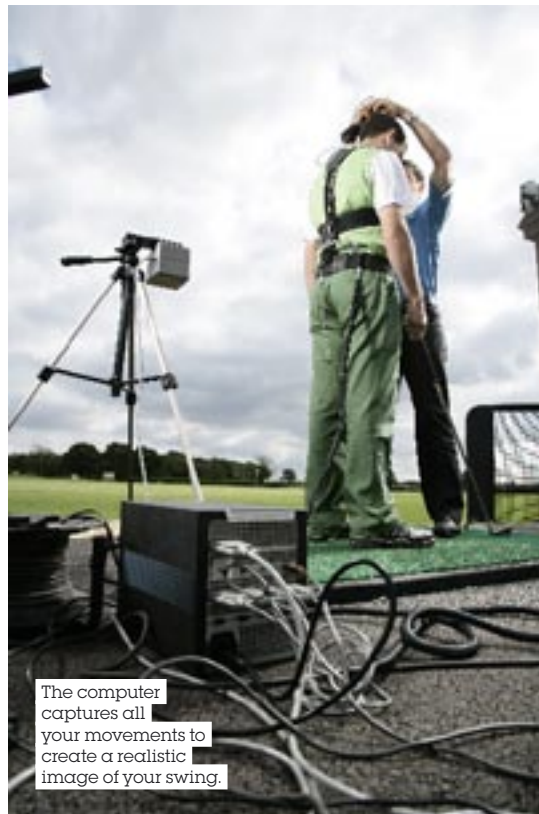
The readings are so accurate (to 0.15 of a degree and one millimetre) that a coach can tell almost anything from your weight transfer to the timing of your hip action – the biomechanical nuts and bolts of your swing. According to top Tour coach David Leadbetter, these critical factors can't be detected by the naked eye. "The kinematic sequence [muscle movements] of the golf swing cannot be seen on video and can only be measured in three-dimensions," Leadbetter insists.

But 3D Golf BioDynamics goes beyond the simple analysis stage of your problems; it can also help you to learn new swing moves, using a simple audio feedback device that can be programmed with a set of swing parameters to correct your faults – make the right moves and it continually beeps. »

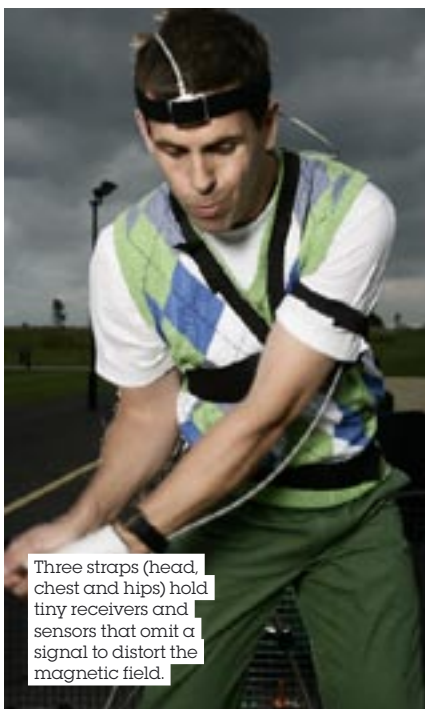




A small transmitter generates an electromagnetic field in which you stand and swing.



The computer captures all your movements to create a realistic image of your swing.



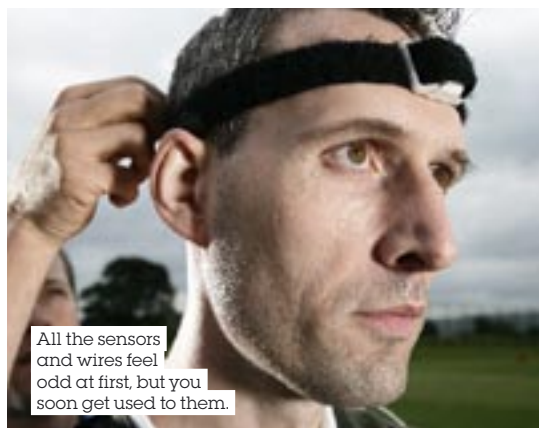
Three straps (head, chest and hips) hold tiny receivers and sensors that omit a signal to distort the magnetic field.



Swing signals are fed into a computer via a thick 'tail' of wires.



A sensor under the strap of your glove records hand action.



All the sensors and wires feel odd at first, but you soon get used to them.

The system is so effective that it has been licensed to several top golf schools around the world, including the Jim McLean academies in the USA. It has recently been introduced to the UK via Total Golf Analysis, based in south Croydon, whose teaching professionals Mark Bull and Stewart Corstorphine are pioneering the technology.

"3D Golf BioDynamics is the most accurate system on the planet," insists Mark. "With this technology I am able to get an instant and precise picture of a golfer's swing faults, and offer a more detailed diagnosis than I would otherwise. The computer data literally breaks the swing down into every single movement, highlighting any inconsistencies in the sequencing of the torso, pelvis and hands – the crucial factors in providing maximum energy transfer to the ball.

"It also helps me to identify any physical limitations the golfer may have, and that allows me to recommend a training programme to improve their performance. Not only can golfers see their faults in 3D, they can actually hear when they are making the changes correctly, and that's

a huge advantage when it comes to helping them to make those new swing moves."

The swings of about 7,000 golfers, including more than 100 Tour professionals and elite amateur players, have been captured using the 3D system. This data has enabled Golf BioDynamics to develop a series of model swings for specific golfer types based on age and gender. Testing has proved that if you can swing within the set of corridors – the name given to the acceptable range of movements for each specific body part for your ideal model swing – you will generate more power, greater accuracy and swing consistency.

With such incredibly accurate information on hand it's no surprise that fascination with 3D Golf BioDynamics has already spread to the Tour, where top players including England's David Howell, US Open champion Angel Cabrera and up-coming Colombian star Camilo Villegas have used it with great success. The question is: can it also transform a bunch of seasoned hackers into better players? TG's Instruction Editor, Carly Cummins, joined two readers for a test-run...

THE X-FACTOR READING

You've probably heard of the X-Factor TV show, but have you heard of the X-Factor in your golf swing? This is one of the key factors in generating power in the swing and can be measured accurately by the 3-D Golf BioDynamics software. The X-Factor is the term used to describe the rotation of the pelvis and torso throughout the swing. The greater your X-Factor stretch (or in other words, the greater the difference in coil between your upper and lower body) the more power you'll generate as your muscles respond to a faster, more powerful contraction. Just think of your golfing muscles like the elastic in a rubber band – the more you stretch the band and the faster it then stretches back, the more power you will generate.



#1: Carly Cummins
Occupation: TG Instruction Editor
Age: 27 **Handicap:** 3



Background: I've been playing golf since I was 12, but I've always struggled to make swing changes. Although I have a pretty sound, repeatable technique, I find it very hard to feel the movements I am making; most of the time the swing just comes instinctively.

I struggle to relate what the pro shows me into a feeling; even when they put me into the right positions, I find them hard to repeat without assistance. The result is that I have played with the same swing fault – a slight over-the-top movement that causes a weak fade or nasty slice – for years. I'm really excited about the prospect of being able to hear when I make the right swing moves.

Mark Bull's bio data analysis: At set-up Carly's hip alignment is closed (aiming to the right). During the backswing her hips sway to the right and over rotate, causing the upper body to lift, the head to rise and the hands to re-route the club over the top.

THE VERDICT



Finally, a lesson where I can actually see and feel my progress in an instant. I love the fact that you hear when you make the correct swing move. I instantly reduced my excessive hip turn – something I've struggled to do for years – and that had an immediate effect on my shots, which flew much straighter. The best part is that it only takes a couple of minutes for the computer to capture your swing and evaluate your faults; it's not a lengthy process. You really can make radical swing changes in an instant. The only disappointment is that I have to go away and practise, without the reassurance of the audio feedback device being there to help me continue to make the correct moves.

#2: Alex Molliex

Occupation: Telecommunications design and build manager

Age: 33 **Handicap:** 17



Background: I started playing golf six years ago and I was totally hooked after just one lesson. I have a young family, so I don't get to play much, but I try

to practise two or three times a week. I'm a perfectionist, so I am always looking for ways to improve and, being a technically minded player, I couldn't wait to try the 3-D Golf BioDynamics system.

Mark Bull's bio data analysis: Alex sits too far back at set-up and he aims well right of the target. He has a big hip sway and a lack of upper body rotation in his backswing. As a result, he pulls a lot of shots to the left.

THE VERDICT



In the last three months I have had two sessions of BioDynamics, which have really helped me to improve my posture at address, stop swaying in the backswing and eradicate a nasty

head drop. I was completely unaware of the faults in my swing; I just couldn't feel the bad moves happening. With the beep system I adjusted my head movement in seconds. It was both a great tool in helping me to understand why I needed to make the changes and then remedy the swing faults. I have noticed a massive improvement in my ball striking and my ball flight has changed considerably from a pull to a slight draw. Although a BioDynamics lesson is expensive, I would definitely recommend it to others.

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#3: David Nesbitt

Occupation: Director, recruitment company **Age:** 34 **Handicap:** 25



Background: I came back to the game last July when someone dropped out of a work golf day and I made up a fourball. They laughed when I dusted off

my persimmon-headed driver, but I was amazed by how much of my junior coaching came back to me. My old problems came back too – a low ball flight and the occasional shank. I decided to book a course of lessons and my club pro at Styal Golf Club suggested I took my first lesson on the 3-D BioDynamics system.

Mark Bull's bio data analysis: David's right hip sits very high at set-up and his upper body alignment is open. He has very little body rotation in the backswing and his head moves towards the target, causing most of his weight to load into his left side – a typical reverse pivot action.

THE VERDICT



3-D Golf Biodynamics is an extremely accurate and reliable method of analysis that can be used in conjunction with the knowledge of a good golf professional. It provides them with

scientific data through sophisticated software, which breaks down the way you set-up, move your body and swing the club. Basically, it backs up with science what the golf pro has analysed by eye or on slow-motion video. It's unique because it provides real-time feedback, with buzzers, of what you are doing and what you should be doing. During the lesson you can position, move your body and swing the club in the correct way, creating muscle memory that can then be translated into your own practice. This system has done wonders for my game. I would strongly recommend everyone to try 3-D Golf Biodynamics.

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Overall verdict

Good golf instruction has always focused on identifying the movements that allow you to produce an effective and efficient golf swing, and a golfer's level of strength, flexibility, power, control and co-ordination are all part of that. These factors, as well as vital information on the physical capabilities of a player to help prevent injury, can be detected using the BioDynamics system.

It is fascinating to see your swing in 3D and the audio feedback is invaluable. By hearing when you make a correct swing move, you learn to trust your new movements and any doubt is taken away. That makes swing changes quick and easy to learn.

Getting strapped up with sensors might look odd and feel strange, but this doesn't restrict your movement and you quickly forget you're wearing them. It's a very technical lesson, but the speed of the process is impressive. It takes as little as 30 minutes to capture and analyse a swing.

There are several other 3D swing analysis systems, including the TaylorMade MATT system, which is as accurate as Golf BioDynamics but does not offer 3D analysis in realtime. The other big advantage over other 3D systems is that it is portable and can be set up on a range anywhere. This allows Total Golf Analysis pros Mark Bull and Stewart Corstorphine to take the technology on the road and host demo days.

The only downside of the system is that there isn't a portable version that golfers can buy and take with them to the range, to help them continue to make swing changes under the guidance of the audio feedback. Without this, some golfers could slip into bad habits again. But this is the only negative in what is an amazing new form of teaching.

Contacts:

TG tested the new 3D Golf BioDynamics system at Total Golf Analysis. The company has bases at Selsdon Park Hotel and Golf club, South Croydon; Physioactive Mottingham, London; and Adlington Golf Centre near Manchester. They also offer a portable service for clients across the country. Prices for a 3D lesson are £100 for an hour or £50 for 30 minutes. For more information visit www.totalgolfanalysis.co.uk