Golfers as athletes

BY **ROHAN CLARKE**. PHOTOGRAPHY BY **KIMBAL BAKER**

In the 21st century, the image of golfers is increasingly steering away from the pot-bellied stereotype. Today, professional golfers are athletes. Golf-specific physiotherapist Ramsay McMaster reveals how Australia is leading the way in the physiological transformation of the sport. What's more, club golfers can now reap the benefits from what the pros are being taught.

BREAKING THE STEREOTYPE: Former Australian Amateur champion Andrew Martin takes his place on the Melbourne Cricket Ground, an arena that has hosted some of the world's best athletes.

Golf-specific physiotherapy begins with a unique self-analysis system to gauge your overall body fitness. In addition, a 'traffic-light planner' is used by the golfer to map out his/her goals and competition calendar.

It's the type of situation every golfer dreads. And it was a terrifying experience for one of the country's leading prospects two years ago. Having played 12 holes of his second round in the South Australian Invitational at Royal Adelaide, Andrew Martin suddenly lost all of his grip strength and could no longer hold the club properly. His first thought was that the pain must have been a bad case of tendonitis in his wrist. So he soldiered on over the final six holes, barely able to get the ball airborne and struggling to hit it 150 metres.

To Martin's dismay, the pain returned over the coming weeks whenever he tried to play golf. X-rays revealed Kienbock's disease, a condition affecting the wrist, which disrupts the blood supply to the lunate bone. To repair the fracture in the lunate, Martin underwent a radial shortening procedure and had a compression plate inserted.

Remarkably, just 10 months after being struck down with pain on the fairways at Royal Adelaide, Martin completed a miraculous recovery by winning the 2004 Australian Amateur championship. His rapid recovery can be attributed to the golf-specific training program devised by physiotherapist Ramsay McMaster and teaching instructor Gareth Jones.

Martin was a 2-marker from Neangar Park Golf Club in Bendigo, Victoria, when he was introduced to the pair in 2003 – at the start of a two-year scholarship at the Australian Institute of Sport's golf program for elite amateurs. Martin had no previous coach, nor had he been exposed to basic physiotherapy practices.

McMaster and Jones undertook the task of deconstructing the swing of a talented amateur and transforming him into a finely tuned golfer-athlete. Like all other elite amateurs in the country, Martin underwent a postural and skeletal screening, using video analysis to identify muscle imbalance. As part of the golf conditioning process, Jones reviewed Martin's swing and a three-dimensional swing analysis was carried out. McMaster came up with a sequence of golf-specific exercises that would complement the intended swing changes.

Martin found the experience to be an awakening: "With Gareth, it's been good. He's kept it pretty simple for me," he says. "With Ramsay, [it's about] working on your posture and awareness of where your body should be. You feel like you're walking taller and shoulders back. It makes it so much easier for different positions you have to get into with your golf swing."

He is now a member of the national squad and plays off a plus-1 mark at Yarra Yarra on Melbourne's sandbelt. Martin's "whole new swing" is more compact, describing footage of his old swing as a bit "scrappy". He estimates the improvement to be worth four to five strokes per round. Perhaps the real improvement has been his physical transformation.

"In all honesty, his body has completely changed," McMaster says about Martin's 64-kilogram frame. "He's got an athletic body now, whereas before he was sort of a jelly baby. He was a little bit plump and he had his puppy fat. But he had talent. He really didn't work the big muscles in golf; he worked the smaller muscles and made compensations."

The evolution of fitness for golf

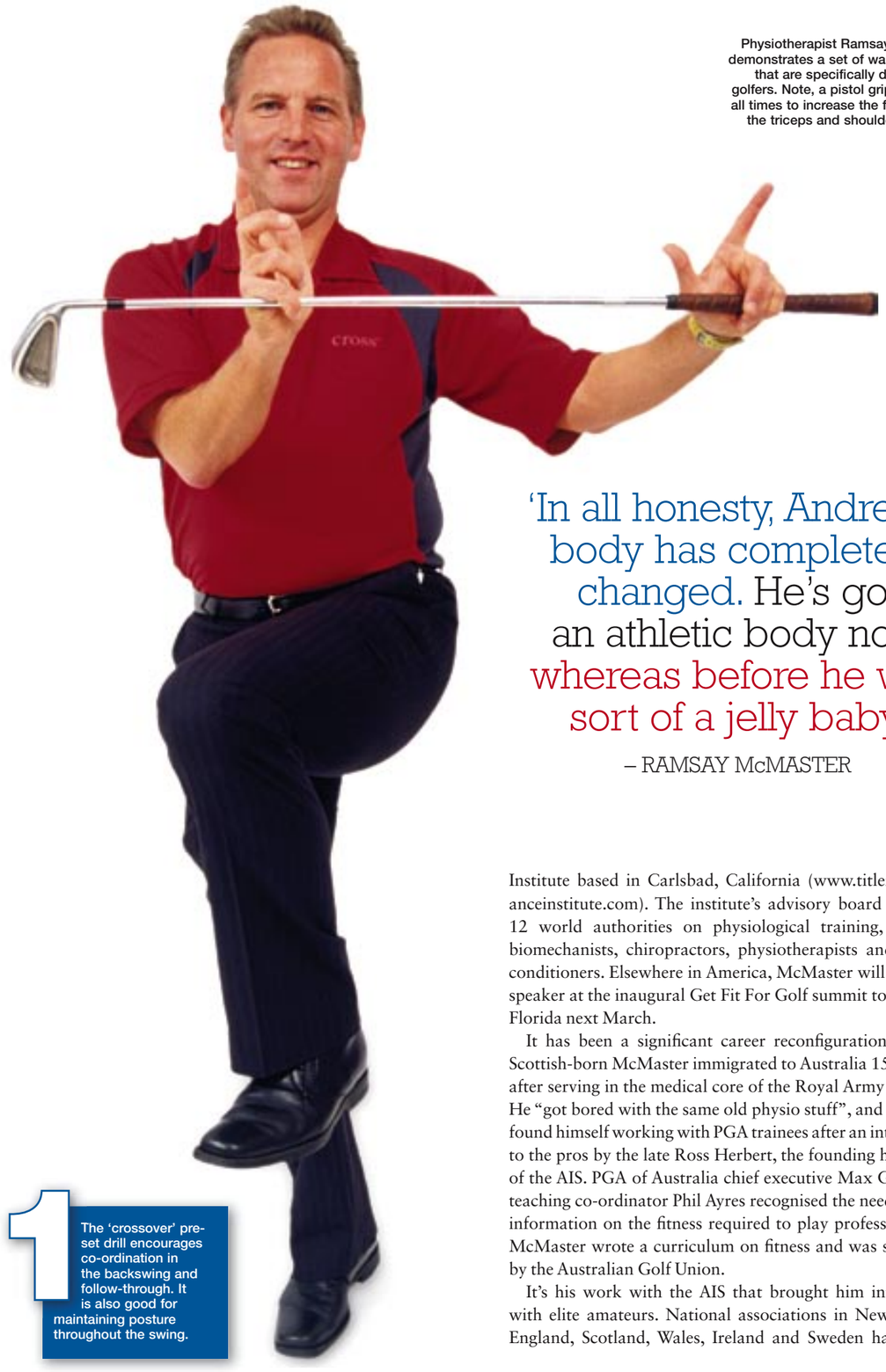
Through his work with tour players, McMaster is known as a leading authority on golf-specific physiotherapy. He is heavily involved as a consultant with the national and state institute of sport programs that have produced tour players such as Robert Allenby, Stuart Appleby, Aaron Baddeley, Mathew Goggin, Richard Green, Brendan Jones, James McLean and Geoff Ogilvy.

McMaster established the first physiotherapy practice in Australia to dedicate itself solely to golfers. Since 1992, he estimates The Melbourne Golf Injury Clinic has treated more than 4,500 elite amateur and club golfers of all ages from around the world. The clinic's staff of physiotherapists, myotherapists, a biomechanist and a Pilates teacher have performed more than 50,000 golf-related treatments.

He has written two books, *Get Fit For Golf*, parts 1 and 2, and produced five software programs. For the past two years, McMaster has been an advisor to the Titleist Performance Institute based in Carlsbad, California (www.titleistperformanceinstitute.com). The institute's advisory board comprises 12 world authorities on physiological training, including biomechanists, chiropractors, physiotherapists and strength conditioners. Elsewhere in America, McMaster will be a guest speaker at the inaugural Get Fit For Golf summit to be held in Florida next March.

It has been a significant career reconfiguration since the Scottish-born McMaster immigrated to Australia 15 years ago after serving in the medical core of the Royal Army in Britain. He "got bored with the same old physio stuff", and eventually found himself working with PGA trainees after an introduction to the pros by the late Ross Herbert, the founding head coach of the AIS. PGA of Australia chief executive Max Garske and teaching co-ordinator Phil Ayres recognised the need for more information on the fitness required to play professional golf. McMaster wrote a curriculum on fitness and was sought out by the Australian Golf Union.

It's his work with the AIS that brought him into contact with elite amateurs. National associations in New Zealand, England, Scotland, Wales, Ireland and Sweden have copied



Physiotherapist Ramsay McMaster demonstrates a set of warm-up drills that are specifically designed for golfers. Note, a pistol grip is used at all times to increase the feel through the triceps and shoulder muscles.

'In all honesty, Andrew's body has completely changed. He's got an athletic body now, whereas before he was sort of a jelly baby.'

– RAMSAY McMASTER

1 The 'crossover' pre-set drill encourages co-ordination in the backswing and follow-through. It is also good for maintaining posture throughout the swing.

'If Andrew had been in America, he would no longer be playing golf.'

– RAMSAY McMASTER

2 The 'rotation and sequencing' drill allows the body to move in the correct sequence during the swing. Muscles 'fire' to promote good co-ordination and timing in the backswing and follow-through.

3 The 'combined hip, trunk and shoulder' stretch works the whole body for golf. It warms up the large golf muscles and reduces tightness that can cause sway and compensatory movements. Ideal for after you've been sitting in a car or at a desk for long periods.

the golf-specific training programs that were developed by McMaster and other Australian-based physiotherapists. It is compulsory for all elite amateurs in those countries to undergo postural screening.

Over the past decade, the impact of multi-layered golf balls has changed the way the game is played at the professional level, however, you could argue that an equally meritable innovation has been the widespread acceptance of "screening" for golfers. Postural and skeletal assessments have been a keystone of maximising a golfer's potential as well as reducing long-term injury. For example, rookie professional James Nitties was a player prone to injury and in constant need of screenings as a preventative measure against further injury. Furthermore, McMaster has even identified kids with melanoma through his screenings.

Another advance that has been embraced by golf-specific physiotherapists has been the use of three-dimensional biomechanical analysis. Biomechanist Ryan Lumsden is frequently called upon by McMaster and Jones to quantify what they're doing with each golfer.

All around the world, physiotherapists work closely with many of the world's best coaches, such as Steve Bann, Pete Cowan, Gary Edwin, David Leadbetter, Dale Lynch, Denis McDade, Jim McLean and Ian Triggs. Their understanding of how the body works makes them an essential part of any team behind an elite golfer. It's pointless, for instance, giving a golfer a set of drills, if the person can't get into the position required to perform them effectively. As McMaster says, it's all about using your golf muscles rather than your kick-ass muscles.

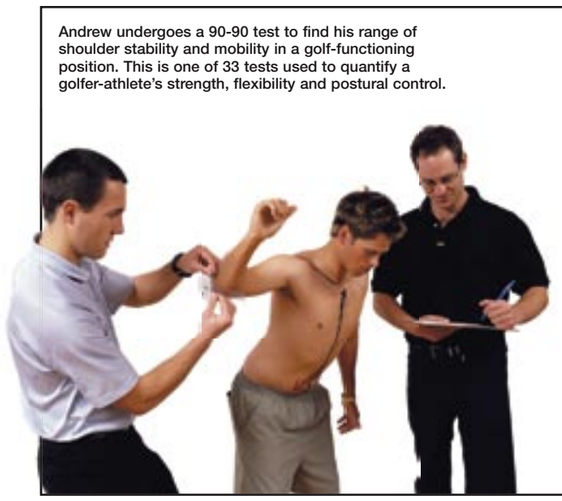
World top-30 Stuart Appleby best epitomises the modern-day professional golfer-athlete who has benefited from the type of golf-specific training, having learned the appropriate drills and exercises during his days at the Victorian Institute of Sport with coach Bann and trainer Vern McMillan. "He is probably the best example of someone who is doing everything right to maximise his potential," McMaster says.

For teaching pro Jones, it makes common sense that physiology and coaching is becoming intertwined. Everything in golf is about habit, he says. You're looking for something that is powerful that repeats. And when fatigued, you start to compensate in other areas of your swing. In the case of his student, Martin, specific exercises and drills have enabled him to change his golf swing for the better. Martin has less turn and more coil for a more powerful position at the top of his swing. The result is a more efficient motion, Jones says. "So now as he has got stronger and been able to work his core – his abdominals, he can now resist a little bit more with his body and keep things on plane a lot better. So it's a lot more manageable for him."

The tour player as a Ferrari

But it's not all preventative. Rehabilitation that is specific to golf is essential if there is to be a full recovery from major hand surgery for touring pro James McLean, who is back playing the US PGA and Nationwide tours after being out of the game for about two years. For rising Swedish star Henrik Stenson, golf-specific rehab has rectified postural imbalances and played a major part in his elevation into the world's top 60 golfers from a ranking beyond 200.

McMaster observes that more professionals are being pro-active in seeking out "rehabilitation" programs from golf-specific physiotherapists. Armed with a knowledge of how the golf swing works, they have realised the benefit that a healthy body can have on the longevity of their career: "They come in and they set out a regime where they periodise what they're doing. They've got a plan of what type of therapy they

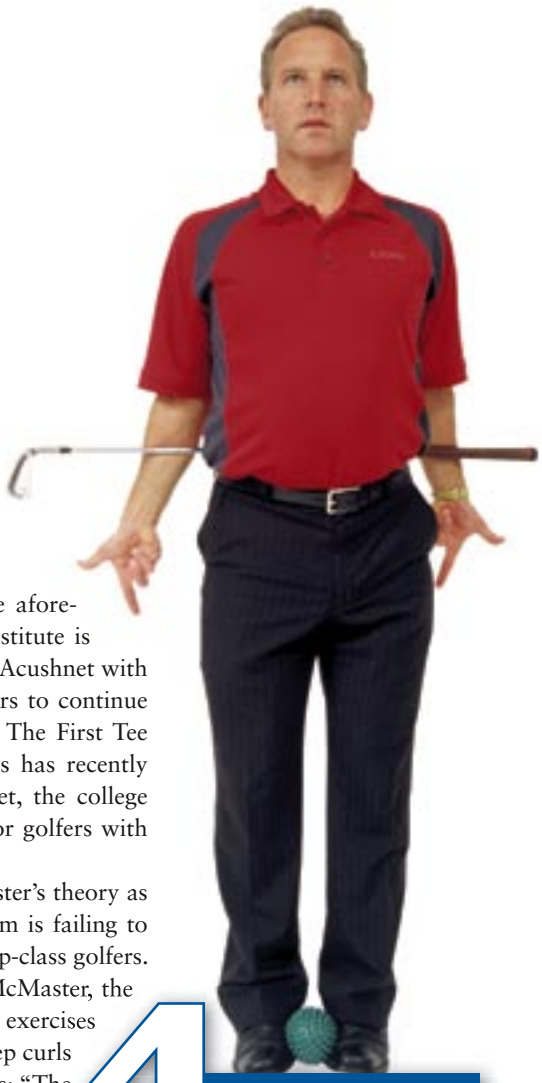


Andrew undergoes a 90-90 test to find his range of shoulder stability and mobility in a golf-functioning position. This is one of 33 tests used to quantify a golfer-athlete's strength, flexibility and postural control.

Andrew is doing a dynamic postural and speed gym-type exercise with physio Darren Lay. PGA Tour players use this to increase lower-leg strength as it works the fast-twitch muscles that encourage speed and power.

'I always look at the comparison of a tour player as a Ferrari car.'

– RAMSAY McMASTER



get at certain times. They get re-screened. It's about golf rehabilitation, really, the whole work we cover. Screening is just part of the process. Rehab – where you're stopping someone and reviewing what they're doing.

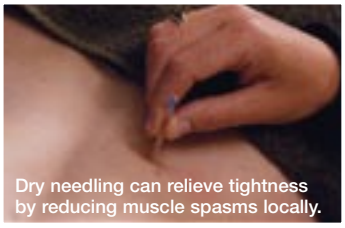
"It's almost like we were really making golf-specific rehab rather than sending them for general rehab. That seems to be the evolution of what we're doing here. We're not looking at Band-Aiding them. We're constantly building on a better model all the time.

"I always look at the comparison of a tour player as a Ferrari car. They go around, around the world and they can have a pit stop in the locker-room with the physios. The Ferrari, at the end of the year, they dismantle the car, they put all the new information in and they build a better car, a faster car."

An interesting aspect to the role of golf-specific physiotherapy is that the Americans are yet to fully embrace the concept. The afore-mentioned Titleist Performance Institute is one such exception, established by Acushnet with the hope of allowing baby-boomers to continue to play golf in their senior years. The First Tee program for disadvantaged youths has recently introduced postural screenings. Yet, the college system in America doesn't cater for golfers with such assessments.

This goes to the heart of McMaster's theory as to why the American college system is failing to produce its appropriate share of top-class golfers. A major reason is, according to McMaster, the Americans are still giving football exercises to college golfers. For instance, bicep curls have a detrimental affect for golfers: "The better you get, the more specific your golf training has to be. Your golf exercises have to be tuned into your coaching

4 The 'angel wings' toe-lift exercise improves your static posture and balance. It will reduce stooping and rounded posture when addressing the ball.



Dry needling can relieve tightness by reducing muscle spasms locally.

Australian representative Emma Bennett demonstrates an exercise that promotes good recruitment of the lower abdominals and shoulder girdle muscles.

Using a posture bar, Emma does a modified exercise that can be done almost anywhere. Right-handed golfers are likely to need at least 20 per cent more work on their right side and vice-versa for left-handers.

A medicine and Swiss ball are used for dynamic postural exercises to strengthen Emma's larger golf muscles.

The golf-swing is a 'one-sided' movement that undergoes constant repetition. Here, Andrew performs a golf-specific Pilates exercise that promotes extension of his entire right side, which takes pressure off the spine during impact.

'If a golfer who spends $2,000 annually on membership and equipment is forced out of the game because of a bad back, then everybody is losing income.'

drills." In reference to Martin's situation, he adds: "If he'd been in America, he would no longer be playing golf."

Statistics support McMaster's theory. Tiger Woods, who turns 30 in December, is the only 20-something to represent the US at this year's Presidents Cup. Charles Howell, at age 26, Ben Crane, Zach Johnson, Ryan Palmer and Vaughn Taylor – all aged 29 – are the only Americans ranked in the world's top 125 to graduate from college. (Sean O'Hair, 23, did not attend college.)

By contrast, the nations that have embraced golf-specific training are starting to churn out a heap of quality players in the same age bracket: Australia (Adam Scott, Geoff Ogilvy, Paul Sheehan), England (Luke Donald, Ian Poulter, Paul Casey, Justin Rose, Nick Dougherty, Kenneth Ferrie) and Sweden (Henrik Stenson, Peter Hanson).

The trickle down for club golfers

While he gains great satisfaction from working with elite players, it is the average golfer who McMaster sees as being at the forefront of golf-specific physiotherapy. Golf, he says, is going to keep more people mobile – that is, "walking and in balance."

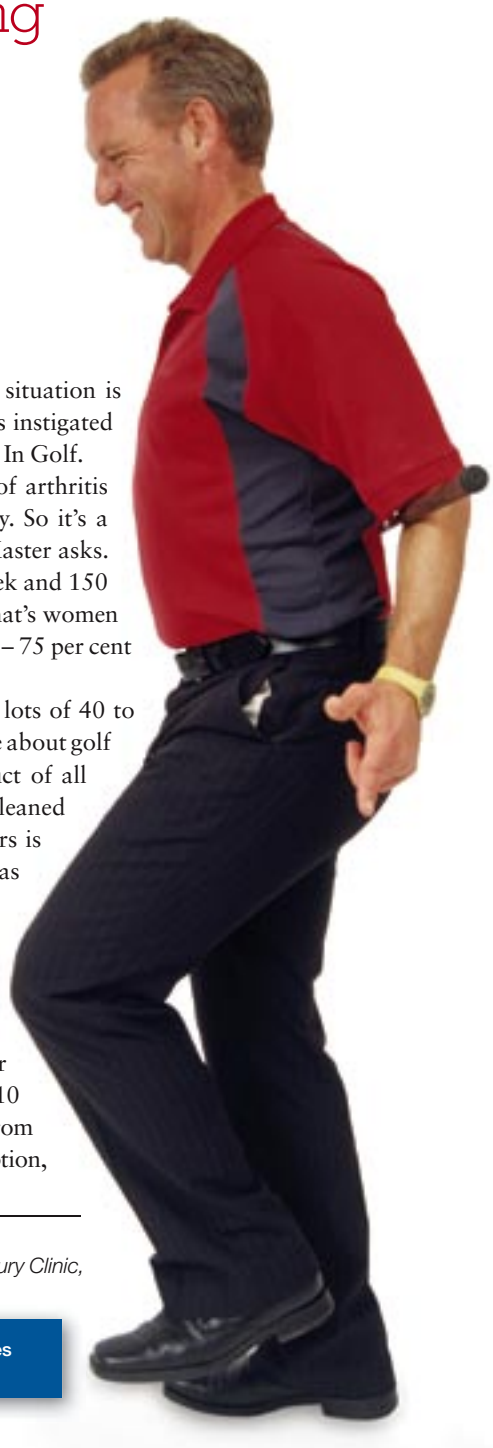
Of course, you may be able to improve someone's ball striking by changing their clubs, but it probably won't help them play for a longer period of time. McMaster explains that if a golfer who spends $2,000 annually on membership and equipment is forced out of the game because of a bad back, then everybody is losing income. The situation is of such concern that the AGU has instigated a program about Keeping Golfers In Golf.

"If you lose 20 guys because of arthritis in a golf club, it's a lot of money. So it's a big loss for a club, isn't it?" McMaster asks. "We do 200 golf treatments a week and 150 of them would be club golfers. That's women and men, from 25-year-olds to 65 – 75 per cent of my income is from them."

From his experience, there are lots of 40 to 50-year-olds who are golf illiterate about golf training. Fortunately, a by-product of all the research and development gleaned from years of tracking elite golfers is that golf-specific conditioning is as readily available to the 27-marker as it is to the scratch player.

McMaster has released a special program, "How To Train Like A Tour Player", aimed at helping club golfers reach their potential. "I'd say nine out of 10 have improved their handicap from screening and golf-exercise prescription, and playing with a coach." □

For further information about Ramsay McMaster and The Melbourne Golf Injury Clinic, visit the website www.golfmed.net.



5

The dynamic 'fast march' exercise helps improve a golfer's posture in the address position. It activates the fast-twitch muscles in the lower legs, which are needed for speed and power.