



The process of postural and musculoskeletal 'screening'

How conducting a screening is like servicing a car.

One of the areas where Australia has played a leading role in world golf is the development of postural and musculoskeletal screening specifically for golfers. Often referred to as 'screening', the Australian industry has embraced this aspect of golf-specific fitness at all levels and ages.

Screening is a process that identifies a person's physical limitations, including strengths and weaknesses, flexibility and mobility, control and stability as well as potential risk areas. With this information, a physiotherapist can develop a comprehensive picture of how someone's body works. An individualised and golf-specific training program is then developed, targeting the most appropriate areas for improvement.

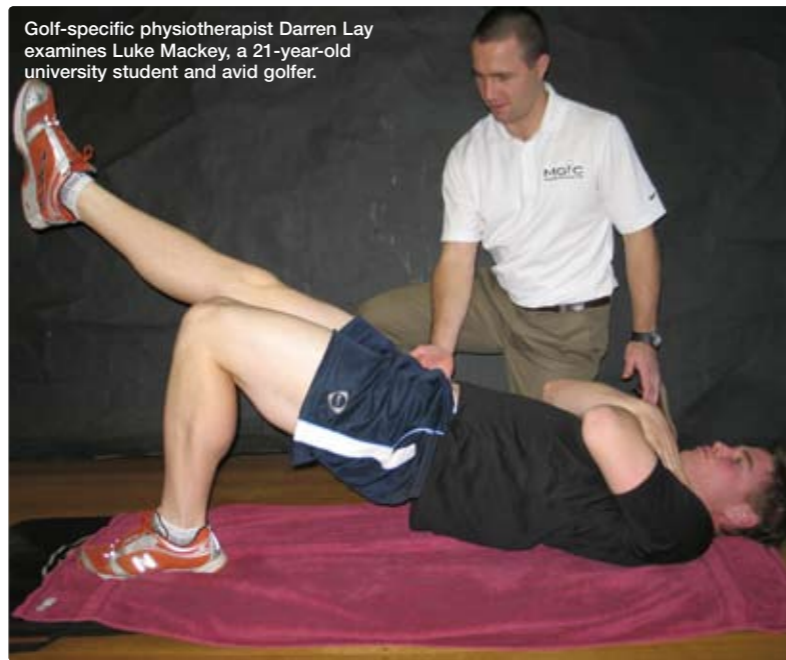
Our screening tests and exercises have been specially designed with the help of some of Australia's best professional golfers, PGA coaches and therapists. An early proponent was the late Ross Herbert, who established fitness as an integral part of training for elite amateurs when he was head coach of the Australian Institute of Sport's golf program. The rest of the world now uses a lot of screening knowledge initially developed at the AIS and VIS in the past two decades.

At the Melbourne Golf Injury Clinic, we normally use three procedures for a golf screening: 1) functional testing, 2) muscle-imbalance assessment, 3) postural and motor-pattern analysis. You could use just one component, but it's best to undergo all three to get a better understanding of your body shape, limitations and tendencies. Depending upon the golfer, we may also perform two dynamic tests – a two and three-dimensional swing analysis assessed by PGA coaches and golf biomechanists – to show what's happening in the person's golf swing.

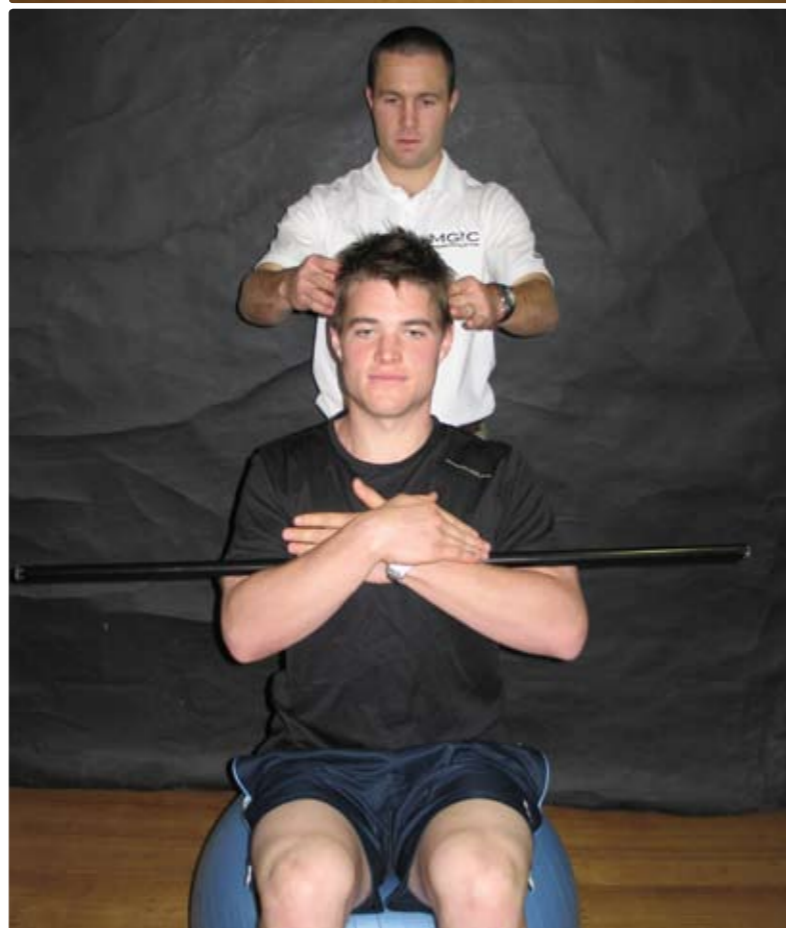
I like to think of a postural and musculoskeletal screening in terms of a basic motor vehicle check-up, followed by road testing and preparation for elite car racing. The **functional testing** procedure gathers information about a person's basic functional structure. Can you drive the car? Does it go through the gears? How does it steer and handle corners?

Subsequently, there is a core relationship between functional testing and the **muscle-imbalance assessment**, which is similar to inspecting a car. Are the tyres flat? Are the wheels in or out of alignment? I like to imagine the wheels are the joints of your body, while the tyres are the muscles.

You need to adapt a car for whatever you want it to do, whether it's touring, rally driving, NASCAR or Formula One. Hence, it's essential to put the car under load and pressure



Golf-specific physiotherapist Darren Lay examines Luke Mackey, a 21-year-old university student and avid golfer.



to see how it may perform in a rally or grand prix. However, different people have different body shapes, so it stands to reason they are capable (or incapable) of withstanding various levels of loading. So that's the purpose of a **postural and motor-pattern analysis**, which uses a video camera to record a person's movement patterns. The front and rear axles (your upper and lower body) and the chassis (middle body) are going to be affected by whatever loads you put on it.

Testing and exercises

This month we focus upon the functional testing procedure. (Note: The order in which the three assessment types are performed is not a major concern.) In the pictures that accompany this article, Darren Lay, a golf-specific physio at the Melbourne Golf Injury Clinic, is examining how a golfer's body functions through the kinetic chain.

ROHAN CLARKE (5)



Why do golfers need good pelvic movement?

One of the early things we check in a functional golf screening is pelvic movement. If you can move your pelvis correctly, it means all of your core muscles around the trunk can sequence together and work at the right time. People who can't move their pelvis very well (i.e. they can't separate the pelvis from their spine) generally have trouble recruiting their core muscles. And that's what the golf swing is all about. Getting all those areas sequencing together, one after the other so they work efficiently. If we can train you to move your pelvis and it becomes a natural movement, then it's more likely you'll recruit those core muscles in a functional movement like the golf swing.

– Darren Lay, golf-specific physiotherapist, Melbourne Golf Injury Clinic

Lay starts by charting some golf-specific information. He will measure holding and endurance levels of certain muscle groups. That is, how you sequence, how you move your upper body with the lower body, how you move your trunk and how you hold certain isometric positions. The idea of this first series of measurements is to get an idea of the person's functional mobility.

Lay says: "It's a series of objective measures to gauge how far you're moving, how you're rotating, where your strength is and where your strength isn't. It also gives us some measurements to check in future, say three months later, to see whether you are making improvements."

Continuing the screening process, Lay checks the patient's flexibility range, how the spine is moving, whether the shoulders are tight and if there are any strength concerns. All of this data helps to give a road map of a person's physiology. He is trying to establish: Why is certain movement happening? Why does it look like that? Why isn't your pelvis moving? What's tight and restricting that movement? Is it muscular tightness or is it weakness? Or is it just the wrong concept of what you need to do?

"It's no use saying that we need you to stand up straight. We need to say what's caused it and how we go about fixing it," Lay says.

At the completion of the functional testing procedure, Lay will recommend certain exercises to improve a golfer's movement. This will be used as part of an overall golf-specific fitness program once the two other screening processes have been performed.

To obtain a golf-specific screening, purchase a golfer's 'Fitness Survival Kit' or sign up for a 'Golf Fitness Camp', contact Ramsay McMaster and the Melbourne Golf Injury Clinic on (03) 9569 9448. For further information, visit ramsaymcmaster.com

