



# PHYSIOTHERAPY WORKS THE EVIDENCE

## SPORTS PERFORMANCE

Playing sport has always been an important part of life in New Zealand.

The Ministry of Health physical activity guidelines<sup>1</sup> recommend adults should do at least 30 minutes of moderate-intensity physical activity at least five days a week, increasing for children and young people to 60 minutes.

Participating in sport is a great way to meet those recommendations but there are some risks.

Between July 2012 and June 2013 ACC paid out \$249,232,175<sup>2</sup> for claims related to sports injuries.

The good news is that many of these injuries can be prevented. Physiotherapists are ideally placed to provide injury prevention strategies and rehabilitation programmes to facilitate an early return to sport.

### Pre-exercise assessment

A physiotherapy assessment can identify any musculoskeletal problems a patient might have that would make it difficult for them to participate in the sport of their choice – and then provide a training programme. The correct

training programme has been shown to make a substantial difference to the number of sports injuries that occur. A physiotherapist can also identify if poor breathing patterns are limiting performance and coach patients on how to improve their breathing control and sports performance.

### Return to sport

Sports players are always keen to get going again, but returning to sport too early can result in more problems in the future. A physiotherapy assessment and rehabilitation plan will facilitate an optimum return to sport.

## Training programme – FIFA11+

One of the better known programmes is the FIFA 11+ programme which is designed to reduce injuries among male and female football players aged 14 years and older<sup>3</sup>. Research has shown that when teams used the FIFA 11+ at least twice a week as part of their training sessions they had 30-50% fewer injured players. One of the most dramatic outcomes of the FIFA 11+ is the prevention of injuries to the anterior cruciate ligament. This injury frequently results in surgery, a long period of rehabilitation and the development of osteoarthritis of the knee later in life. Physiotherapists working with the team coach are the key providers of the programme.

## Stretching

Advice on stretching is another area physiotherapists can help with. The traditional view of stretching was to encourage static muscle stretches to the main muscle groups regardless of the sport to be played, the person's joint laxity or normal muscle length. However it has been found this can result in a decrease in muscle torque and has little effect on injury prevention. There is a move to a more dynamic stretching regime focusing on gross movement patterns as part of a warm up regime<sup>4</sup>. There is still a place for static stretches but these need to be targeted at specific muscles and take into account the planned activity.

## Immediately after an injury

RICE (Rest, Ice, Compression and Elevation) is still used as the initial treatment following an injury and in some circles has been expanded to include protection (PRICE) and optimal loading (POLICE). Current research is questioning the value

of icing for more than a few hours post injury (as cold can block the inflammatory response required for healing), although it still useful in providing an initial decrease in pain. There is an emphasis on an early return to active movement (within the pain range) of the affected joints, and the physiotherapist is the ideal person to provide this advice.

## Rehabilitation

Rehabilitation after a sports injury is essential to enable a return to play and help prevent further injury. Early intervention often results in better, more cost effective long term outcomes. A physiotherapist can do a full assessment of the injury and provide a rehabilitation plan of exercises taking into account the specific challenges of different sports.



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## Concussion

The long term effects and risks from sport concussion are increasingly being acknowledged. In 2013 ACC figures show more than 5500 claims for sport related concussion at an estimated cost of more than \$3 million. Accurate screening on the sports field is problematic but there are tools available, the most widely used being the Sport Council Assessment Tool (SCAT 3)<sup>5</sup>. It includes subjective and objective measures and aims to measure the cognitive and physical abilities of the player.

Physiotherapists working with sports teams can administer the SCAT3 at the sports field and give advice on return to play and/or a rehabilitation plan to facilitate a safe return to sport. Any player with a suspected concussion (or who has been seen to have received a blow to the head) should be immediately removed from play.

## Strapping

Correctly applied strapping can provide some protection to an injured joint when a person returns to sport following an injury and physiotherapists (often working with a sports team) are well qualified to effectively apply strapping. There is no evidence that colourful kinesiotaping is more effective than traditional materials<sup>6</sup>.

## How to find a physio

Many physiotherapists work with sports injuries and a directory of New Zealand physiotherapists is available on our website.

[physiotherapy.org.nz/findaphysio](http://physiotherapy.org.nz/findaphysio)

## References

<sup>1</sup>Ministry of Health

<sup>2</sup>ACC Injury Statistics Tool accessed 30 June 2014

<sup>3</sup><http://f-marc.com/11plus/home/>

<sup>4</sup>[www.acc.co.nz/preventing-injuries/playing-sport/sportsmart-10-point-plan/warm-up-cool-down-and-stretch/pi00114](http://www.acc.co.nz/preventing-injuries/playing-sport/sportsmart-10-point-plan/warm-up-cool-down-and-stretch/pi00114)

<sup>5</sup><http://bjsm.bmj.com/content/47/5/259.full.pdf>

<sup>6</sup>Williams S, Whatman C, Hume PA & Sheerin K (2012) Kinesio Taping in Treatment and Prevention of Sports Injuries. *Sports Med* 42, 2 153-164