

BULLETIN

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Nga mihi nui ki a koutou mo te tau hou rua mano ma tekau ma tahi -

Greetings for 2011.

Welcome to a new year and a new beginning for your organisation. As of January 1, NZSOPA have officially changed to the new name "Sports Physiotherapy New Zealand".

With this name comes a revamp of our existing rules that comes with registered incorporated society status. While the name may have changed, the focus of the group certainly hasn't. We as a collective group still uphold the same values, mission and direction as always. Our mission has always been to "empower our members in the provision of quality sports physiotherapy services to participants of all ages and abilities involved in sport, exercise and recreation through the promotion of excellence in education, research, clinical practice and specialisation".

As a group we have seen significant growth in membership over the last few years which allows us to offer additional benefits to all members. There is strength in numbers and Sports Physiotherapy New Zealand (SPNZ) is now the largest professional sports medicine association in the country as well as the largest SIG within Physiotherapy New Zealand. It remains our task to promote this strength to stakeholders and the general public in order to continue to meet our mission statements objectives.

This year we are planning a number of new initiatives, as well with continuing with ones that carry over from 2010. We are still planning on working closer with Sports Physiotherapy Australia and the International Federation of Sports Physical Therapy, and planning for our sports trauma course and our next symposium in 2012 is well underway. We have already confirmed a number of invited speakers including Jill Cook as our main keynote. Last year we started the initiative to have more members involved in SPNZ activities and it is already paying dividends, especially with the newsletter which is offering more dissemination of sports and orthopaedic physiotherapy information to members which will have flow on benefits to the community.

We hope that in 2011 you will continue to support your association with SPNZ and the year will be as successful to you personally as it will be for SPNZ as the association continues to evolve and add value to the profession.

Ka kite ano.

Dr Tony Schneiders
President SPNZ

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- Conference Report:** 15
 2010 Asics Conference of Science and Medicine and Sport, by Dr Tony Schneiders
- The SPNZ Asics Education Fund supported Dr Tony Schneiders application to attend this conference held in Port Douglas in Queensland in November 2010. World renowned keynote speakers presented on the effects of physical activity on health and performance, genetics in sport, enhancing sporting performance and evidence-based treatment in orthopaedic traumatology. See summaries of Tony's "Hot Topics in the Tropics" in his report on page 15.

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- **NEW**** Link to all SPNZ's clinical article reviews, research reviews and list of open-access (full text) journals. 20

LATEST NEWS

New Look for Sports Physiotherapy NZ

Upcoming changes to the website.

New Year, new look. As you will see the new year has brought in a new name and a new look for the SPNZ Bulletin. We are still finalizing our new logo and Bulletin format, and will continue striving to improve access to relevant content for our members.

The website will be updated over the next couple of months and this will result in a change of website address. We will notify you when our website changes, but until then continue using the www.nzsopa.org.nz web address. Links to the webpages will be updated in the SPNZ Bulletin after the website has been changed.

As usual, we welcome any feedback—good OR bad - that may help us improve.

Subscriptions for 2011

Renew your membership to continue receiving SPNZ benefits.

Renew your subscription with Physiotherapy NZ for 2011, and remember to include SPNZ in the SIG section. The \$45 membership fee entitles you to a range of benefits including:

- Free access to JOSPT
- Discounted registration at SPNZ conferences and courses
- Quarterly "Sports Physio" magazine
- Eligibility for the SPNZ Asics Education Fund
- Asics footwear and apparel at wholesale rates
- 25% discount on McGraw-Hill book titles

International Journal of Sports Physical Therapy

We need your feedback please! Let us know if you think this journal is worth purchasing—this may mean a small increase in SPNZ fees in 2012.

The IFSP Executive Board is pleased to announce a journal partnership with a long-standing IFSP member, the Sports Physical Therapy Section. They have agreed to adopt the North American Journal of Sports Physical Therapy (NAJSPT) as the official journal of the International Federation of Sports Physiotherapy (IFSP). This is currently published four times per year. To reflect the international focus of this Journal, the name of the publication will be changed to the International Journal of Sports Physical Therapy, beginning with Volume 6, Number 1 on March 1, 2011.

SPNZ have been offered a special subscription rate for

members which would most likely require a \$10 increase in membership fees, taking our membership fee to \$55 from 2012.

WE WANT TO KNOW WHAT YOU THINK.

Visit the NAJSPT website, browse the issues and let us know if you think it is worth an increase in membership fees. You will be able to access abstracts but not full text articles.

Email mborich@ihug.co.nz and let him know whether you think this would be worth an extra \$10 on your membership from 2012.

Special Projects Group

Want to contribute without the commitment of being on the SPNZ Executive?

SPNZ has a small team of volunteers who help the SPNZ Executive with various tasks, projects and article reviews for the SPNZ Research Reviews section that has been published in the last couple of editions of the Bulletin. This group do a fantastic job, and we are always looking for other willing volunteers. Do as much or as little as you like. If you're interested in contributing, or increasing your "professional activities" section of your CPD portfolio, contact Angela Cadogan at acadogan@vodafone.co.nz.

Interested in helping SPNZ?

The Special Projects team could use your help.

This group help the SPNZ Executive with various 'special projects' and assist with contributions to the Bulletin. Do a little, or do lots, it's up to you.

If you're interested in helping or want to know more? Contact

acadogan@vodafone.co.nz

FEATURE

ICC CRICKET WORLD CUP 2011

Interviews with the NZ BlackCaps Team Physiotherapist and Strength and Conditioning coach.

The 2011 ICC Cricket World Cup kicks off on 19th February, and will be jointly hosted by India, Sri Lanka and Bangladesh.

This is the 10th Cricket World Cup using cricket's One-Day International format, with 14 national cricket teams scheduled to compete. The NZ BlackCaps arrived in India on 8th February and as this Bulletin goes to press they will be preparing for their first match against Kenya on February 20th in Chennai. We caught up with team physiotherapist Dayle Shackel and team strength & conditioning coach Bryan Stronach to find out how the team are preparing and what their jobs entail.



Team New Zealand Matches

Feb 20, 2011	V	Kenya	Chennai, India
Feb 25, 2011	V	Australia	Nagpur, India
Mar 4, 2011	V	Zimbabwe	Ahmedabad, India
Mar 8, 2011	V	Pakistan	Kandy, Sri Lanka
Mar 13, 2011	V	Canada	Mumbai, India
Mar 18, 2011	V	Sri Lanka	Mumbai, India

BLACKCAPS PHYSIOTHERAPIST

Dayle Shackel

Dip Phys, Masters Physiotherapy (Sports).

Dayle is a sports physiotherapist, based in Christchurch. Dayle was the BlackCaps full-time touring physiotherapist from 2000 to 2008. In 2008, he took on the home-based role of Injury Management Coordinator as well as running the NZ Cricket Injury Surveillance programme for all domestic and NZ representative teams. Dayle was also the physiotherapist for the Delhi Giants in the Indian Cricket League (ICL) in 2009, and was the Medical Officer for the Indian Premier League (IPL) competition in 2010. Following recent management changes in the NZ BlackCaps Dayle has been brought back on board as team physiotherapist and will continue in the role through to the end of the World Cup competition in April 2011.

How did you come to work with the BlackCaps in 2000? The position became available and I went through an application process and interview with a panel including the team coach, a current player, the NZ Cricket sports science coordinator and an independent physiotherapist.

What are your key responsibilities as the BlackCaps team physiotherapist?

- Injury management (including assessment, diagnosis and treatment) of all touring players and management
- Liaise closely with coach and captain re the availability

of all players and discuss the possible options that maybe available i.e. unable to play, play in a limited capacity (bat but not bowl) etc.

- Point of contact for all medical matters of all the touring party including families.
- Liaise with NZ Cricket medical officer regarding injuries and illness and the appropriate medical management for each condition.
- Liaise with provincial Physiotherapists regarding players who are returning to or coming from the national team.

This will be the 3rd World Cup you have been involved with. What does a typical match day in the tournament situation involve for the team physiotherapist?

- Depending on the start time i.e. day game or day/night game means the day starts early or late but generally there is strapping before we leave for the ground at the hotel
- Make sure have all the kit ready for the game and load on bus
- Set up wherever is available at the ground for treatment for the day
- Individual treatments before team warm ups begin approximately 1 hour before the start of the game
- During game watching every ball and to be available for acute injuries which may require on field or dressing room management
- Post game assess players for new injuries and how

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ICC CRICKET WORLD CUP 2011

- existing problems have come through the match
- On return to hotel treatment for injuries or illness as required
- Sleep!!

What are the communication pathways within the team, and external to the team with regards to injured players during an event such as the World Cup? Immediate communication (verbal) to coach and/or captain on any acute injury either during a match or training. After the initial acute assessment and management there is usually a phone call to NZ cricket medical officer to discuss injury concerns and treatment or investigation possibilities. If player is returning home, a written report is needed (including ACC form) for the players home – based physiotherapist and doctor.

If the player is to exit the tournament a meeting is required with the player, coach, captain, media manager and team manager to discuss the options and strategy for media. If the player is staying reviewing the injury with the strength and conditioning coach is important to maintain general fitness and strength and to implement the return to sport programme.

What fitness testing processes are undertaken during a World Cup event to determine whether an injured player will be available for selection and how is this process managed? Who makes the final decision? It depends on how acute the injury is but ideally they would work their way up to a full net session through a graduated series of clinical tests, followed by functional and running programmes including jog to sprint, straight line to change of direction, bowling and batting as required and fielding session drills and skills etc.

If the time is restricted and training opportunities are not available to test player function then a pre game testing session of running and bowling would be done to a lesser degree than the training session usually 2-3 hours before the game. The testing is done by the trainer and the

physio and results reported to the coach/captain who take the information and then make the ultimate decision based on a wide range of information including the players physical status, the team make up/balance and importance of the game.

Prior to joining the BlackCaps again, you were the Injury Management Coordinator. Explain what this role involves. The role involves managing the diagnostic and injury management process for all NZ Cricket contracted players once they become unavailable for selection due to injury. This means making sure the relevant ACC paperwork is processed, appropriate medical reviews and investigations are made with minimal delay. Once the diagnosis and management plan has been established and agreed upon the player has a return to sport programme designed which is communicated to all relevant parties. If there are delays due to complications of healing etc then the plan is altered accordingly and communicated to the parties again.

The role also involves injury surveillance of all NZ domestic teams, NZ Cricket representative teams (NZA, White Ferns, U19s) and medical management of specialist groups such as the NZ Cricket fast bowling development squad.

What are the return to sport processes for players who have been injured for long periods of time and who 'heads' this process?

The players who are on extended rehab plans are bought under the Injury Management Coordinator for NZ Cricket and their role is make sure an accurate diagnosis is achieved as quickly as possible and then best practice management is implemented with appropriate time frames attached and milestones checked regularly for progress. Once these guidelines have been agreed on the overall plan is designed by the coordinator with input from the relevant medical personnel and player. When relevant checkpoints have been achieved relevant skill and match options can be added to achieve a full return



NZ BlackCap Daniel Flynn is hit in the grill while playing in a test match against England in 2008. The grill buckled resulting in him losing a tooth—seen here with physiotherapist Dayle Shackel.

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to sport. These plans are and checkpoints are disseminated to all relevant people.

You also manage the NZ Cricket Injury Surveillance programme for domestic and international cricket.

What are the most common cricket injuries, and which injuries result in the most lost time from sport? The most common injuries are hamstring injuries however recently groin/osteitis pubis injuries and patella tendon injuries requiring surgery or extended periods of relative rest have become more prevalent.

From your time working at the international level, what do you feel are the contributing factors to the most common/serious cricket injuries and what are the best prevention strategies (if any). At international level a big problem is the large gap in physical conditioning requirements between domestic and international cricket. This means our bowlers are increased risk of injury as they are not conditioned adequately for this step up. Other risk factors for bowlers are spikes in bowling loads which often occur for us in test matches with generally a 30% increase in in 1 week which has been shown to increase the risk of injury 2-3 weeks after the event. Best preventative measures are monitoring of bowling loads and having rigorous strength and conditioning which bridges the gap between the domestic and international game are something myself and the team trainer are constantly monitoring.

What advice would you give other physiotherapists working in clinics around NZ about diagnosis and/or management of cricket injuries? For adolescent cricketers who bowl and complain of back pain associated with bowling and have had a recent increase in bowling volume there should be a strong suspicion of stress fracture and referral to a sports physician made for investigation. Getting this diagnosis clear early on is important to allow appropriate rehab plans with the long term interests of the player in mind. If left without diagnosis the bowler will generally bowl slower as this is often the best way for them to be able to continue bowling. But it means that they will be unlikely to be able to bowl fast without symptoms affecting performance, selection and confidence in returning to 'fast bowling'.

Patella tendon injuries are also becoming more common and again without correct management it can lead to long term knee pain and a tendon which is unable to tolerate load and takes several months to treat conservatively or in worst cases, surgery. Early intervention and diagnosis with appropriate treatment can save a player missing matches or seasons later.

Career highlights

The chance to see some great cricket matches and players at close range and an insight in to how the best players prepare and perform.

Career lowlights

None really, although getting the hotel bombed in Pakistan in 2002 was somewhat of an inconvenience!



BLACKCAPS STRENGTH & CONDITIONING COACH

Bryan Stronach



Bryan Stronach has been the NZ BlackCaps Strength and Conditioning Coach since 2007. Bryan is contracted full-time to the team which sees him on tour up to 9-10 months of the year. Bryan has played many sports himself, and prior to his appointment to the NZ BlackCaps he had previous strength and conditioning experience in rugby, golf and first class cricket.

When home, Bryan is based in Christchurch, and we caught up with him before he left for the 2011 World Cup to find out more about his role.

What are your key responsibilities in this role in preparation for the World Cup? To get the players as fit and strong as possible so that they are able to handle the physical demands of the sport and the extreme conditions of playing this sport in a country like India. The fitter the guys are the better they are going to be able to handle those conditions. The Black Caps play all year round and do not get a typical "off season" to be able to concentrate on their conditioning without having to worry about games. As a result the players need to increase their physical condition whilst still playing a busy international schedule and this is a key part of my role leading into the World Cup.

During the World Cup? My responsibilities change a lot during the World Cup from trying to increase the physical condition of the players to simply trying to maintain their current levels of condition. There is a major focus on recovery between games and also after travel since the world cup is being held over three different countries (India, Bangladesh, Sri Lanka). Recovery includes strategies implemented during and straight after the game, the night after the game, active recovery the day after the game, nutrition, hydration etc.

What are the key areas of fitness (aerobic vs anaerobic) and strength/power for cricket? Cricket is physically a very demanding sport that involves all areas of fitness. In

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ICC CRICKET WORLD CUP 2011

terms of injury prevention, aerobic conditioning and maximal strength are the main areas of focus. Bowlers can cover distances of up to 16km during a game, and can spend up to 6 hours on their feet during a game. Ground reaction forces reach up to 9x body weight for bowlers and they need the strength to be able to handle these forces. Without the body adapting to these extremes injury is likely.



In terms of performance enhancement, speed, power and agility are all very important in the sport of cricket to improve fielding and running between wickets. Without a doubt when you break the game of cricket down into the physical demands of the sport it is one of the highest physically demanding sports you can play (especially for fast bowlers).

What are the challenges of maintaining strength/fitness in events such as the World Cup that extend over 6-8 weeks? The challenges of maintaining strength and fitness during the world cup is not as hard as you might think. This world cup has been well organized and at times we have 5-6 days in-between our games. Normally in an international series we would have 2-3 days in between test matches and as little as a day (in which we are travelling) between 1day matches. Having 5-6 days in between means that we can get in some good recovery sessions and also have some good conditioning sessions, so that we can maintain player strength and conditioning.

The main challenges are getting access to gyms with suitable equipment. Most of the gyms that we use on tours are hotel gyms and lack a lot of equipment or even weights that we need to maintain the player's strength. We also need to be very careful in terms of the players' nutrition so that they are maintaining the energy they need to keep training but also so that they do not get sick and therefore loose physical condition.

How do 'strength and conditioning' programmes both on and off tour contribute to injury prevention and rehabilitation? Strength and conditioning programmes prevent injuries by preparing an athlete's body to deal with the stresses that it comes under for not only the game but also for the stresses that occur in the preparation and training for a game or tour. In cricket this is specific to the role of the athlete in the game. For example (as mentioned) a bowler can cover 16km or more in a day (at different intensities) and bowl up to 30 overs at 4-9x their body weight of ground reaction forces. If your strength and conditioning programme has not been specific and therefore the body has not adapted to be able to handle these stresses then injury will likely be the result. It



Strength and conditioning programmes have a different role when it comes to rehabilitation. We are completely directed by the medical staff at the early stages of rehabilitation. We might be told to leave them alone for a period of time, asked to strengthen an area in a certain way, be given areas that we can work someone hard but leave others etc. As they progress through their rehabilitation programme the athletes are handed more and more back to the strength and conditioning programme to once again get their bodies ready for the specific physical demands of the sport.

How do the team physiotherapist and strength/conditioning personnel work together in the rehabilitation of an injured player? We work together quite closely but in the case of injured players the programme is very much directed by the physiotherapist, especially in the early stages. As the athlete progresses through the rehabilitation programme the physiotherapist may (depending on how they are progressing) pass some aspects of their programme that require strengthening etc, or to carry on with conditioning areas of the body that are not affected by the injury to the strength and conditioning coach. Then finally as the athlete passes from rehabilitation to a return to sport programme the strength and conditioning coach takes more responsibility.

The key to the physiotherapist and strength and conditioning coach working together is communication. There is not a set time for one or the other to take over. We work together but the direction around injuries needs to come from the physiotherapist.



What are the key elements of recovery for international cricket? Recovery is a massive area for cricket because of the physical demands of the sport but also because of the schedule. There is very limited time between games and therefore limited time to recover. We try and cover the basics really well. For example things as simple as being as fit as possible (the fitter you are the less you fatigue and the quicker you recover), good nutrition (including recovery supplements) and sleep (your body recovers most while you are in a deep sleep). Apart from this we concentrate on, on-field recovery (which is based on fatigue prevention rather than recovery), after game recovery (includes ice baths, skins, nutrition, message, stretching etc) and active recovery which is usually done the next morning. This recovery becomes quite specific depending on the athlete and the physical demands that have been placed on the body.



ARTICLE REVIEW

Clinical and magnetic resonance imaging features of cricket bowler's 'side' strain.

D. Humphries, M. Jamison.

ABSTRACT

The clinical features of 10 cases of lateral trunk muscle injury in first class cricket pace bowlers are described. Typically the injury occurs during a single delivery, is associated with considerable pain, and prevents the bowler from continuing. The clinical picture is typical of a muscular or musculotendinous injury. The most consistent clinical tests were focal tenderness on palpation and pain with resisted side flexion towards the painful side. The magnetic resonance image in 70% of cases was consistent with an injury to the internal oblique, the external oblique, or the transversalis muscles at or near their attachments to one or more of the lowest four ribs. The injury occurs on the non-bowling arm side. Recovery can be prolonged. The injury was a recurrence in six of the 10 cases. The biomechanics of the injury are not yet understood.

British Journal of Sports Medicine (2004); 38; e21

Full text available at <http://bjsm.bmj.com/content/38/5/e21.full>

INTRODUCTION

Cricket fast bowlers are well known for their high injury rates due to the high impact and repetitive nature of the activity. Recent injury surveillance data from Australia reports the most common bowling injury over a 5-year period was abdominal muscle strains, known more colloquially as 'side' strains (Orchard et al., 2002). "Side" strains to bowlers accounted for 21% of injuries to bowlers, followed by hamstring injuries (9%) and quadriceps muscle injuries (8%). As well as being the most common injury, "side strains" and lumbar stress fractures scored equally as the highest injury prevalence (the percentage of bowlers missing due to injury at any given time). "Side" strains resulted in 124 games being missed due to this injury which means 1.5% of bowlers were unavailable for selection at any given time at State and International level (J. W. Orchard et al., 2006). From previous experience, these injuries vary widely in their recovery time with return to sport times ranging from 2-3 weeks up to 4-6 months.

Despite abdominal muscle 'side' strains being the most common injury to cricket bowlers, and one of the most severe in terms of time lost from sport, there had been no previous clinical description of this injury in the literature, nor has the anatomical pathology been defined. The injury appears to be relatively unique to cricket bowlers although, anecdotally, similar injuries are said to occur in javelin throwers. The lack of published information about these injuries provided the impetus for this article by Humphries and Jamison.

METHODS

For this study, clinical and magnetic resonance imaging (MRI) data were collected by the medical and physiotherapy staff involved in first class cricket in Australia on a standardised form, to gain an insight into the clinical pattern and anatomical details of this injury. Ten cases in pace bowlers, for which both the clinical details and the MRI findings were available, were collected over two seasons. The data collected included:

- when in the action the injury occurred
- on which side of the body the injury occurred (bowling or non-bowling arm side)
- whether the bowler was able to continue bowling
- clinical signs (including a number of physical tests devised for the study)

- treatment
- duration of time before bowling competitively again
- whether this was the first incidence of this injury for this player.

RESULTS

The results are summarized in Table 1. The most notable features were:

- the consistency of the injury occurring on the non-bowling arm side
- the positive side flexion test
- the high rate of a previous similar injury.

The onset of injury was mostly acute, with 3/10 reporting gradual onset and 6 of the 10 bowlers reported a previous history of side strain injury. The majority (6/10) were unable to continue bowling after the onset of pain. The most common MRI findings were a tear of either external oblique or internal oblique around the 10th or 11th rib however 3/10 MRI scans were reported as normal. Return to sport at the pre-injury level ("full-recovery") ranged from 1 day to 70 days. Physiotherapy treatment (Physio) varied from electrotherapy to massage and a strength programme however no consistent pattern of treatment was followed. Corticosteroid injection (CSI) was used at different intervals after the injury, and again no consistent protocol was followed. Reduced load meant match bowling at some stage of rehabilitation but at a reduced pace.

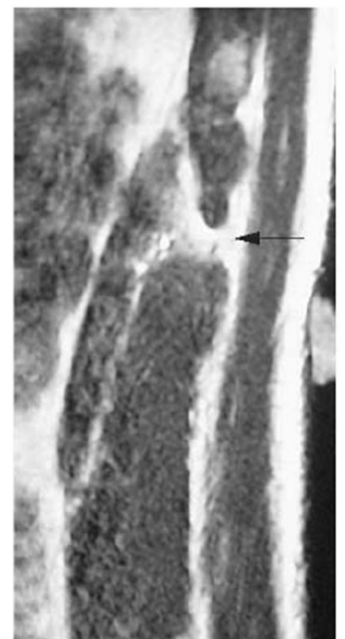


Figure 1. Magnetic resonance image of internal oblique full thickness tear (arrow). Note external marker at point of maximum tenderness.

DISCUSSION

Although only a small number of injuries were captured within this cohort, this article

CLINICAL SECTION

ARTICLE REVIEW CONTINUED...

provides a good synopsis of the bowler's side strain from diagnosis to return to sport.

Clinical examination:

History: In all the pace bowlers studied, the injury occurred on the non-bowling arm side when the bowler's non-bowling arm was being pulled down from a position of maximum elevation with some lateral trunk flexion during the final delivery action (seen below).



Physical examination: Of the specific tests devised, it was found that all bowlers had noteworthy pain when asked to perform a resisted action of side flexing to the painful side, from a starting position either side flexed away from the painful side or from neutral. In practice this is usually performed in the side-lying position with the players' legs being stabilized during attempted side-flexion from the plinth. The area of maximal tenderness during palpation also correlated with lesions viewed on MRI scans.

Provisional Diagnosis:

The most common pathology was a tear of the internal or external oblique muscle strain at the lower rib attachments. Some differential diagnoses to be aware of include referred thoracic spine pain and stress fracture of a rib. The clinical presentation for these injuries is usually clear, and MRI is not usually needed.

However the demands of elite level professional sport, where large amounts of lost earnings are at stake, or when squad selection for future matches or tours are a consideration, radiological investigations may be appropriate to rule out other pathology that may significantly alter return to sport time-frames, such

as rib stress fractures.

Treatment:

All injuries required some treatment, primarily physiotherapy aimed at pain relief, recovery of mobility, and recovery of strength. Recovery time-frames are highly variable and generally when repeated (and loaded) resisted side-flexion is pain free, with full pain-free stretch, a monitored and progressive return to bowling programme can commence. This needs to be monitored for symptoms, beginning with low intensity bowling off a shortened 'run-up', followed by appropriate recovery (non-bowling) days to allow tissue recovery and adaptation. Progressive increases in bowling volume can then be introduced, followed by careful reintroduction of higher bowling intensities. The oblique abdominal muscles are highly activated during any rotational activity, and in cricket, the type, volume and intensity of other cricket training (including batting and fielding/throwing) must also be carefully managed.

Return to sport:

Average return to sport at the previous level was 30 days (range 1 to 70 days). No definite correlation between the MRI appearance and the time to recovery could be drawn. Recurrence of these injuries is common and contributing factors such as bowling actions, and sudden increase in bowling intensity, such as bowling 'effort' balls must be considered.

CONCLUSION

The side strain is an injury of significance in cricket bowlers. It can be recurrent and may cause lengthy periods of absence from play. The clinical presentation and MRI findings are primarily those of a muscle injury. At present, the only identifiable risk factor is a history of a previous side strain. Further research will be aimed at determining the predisposing factors, optimal management, and effective prevention strategies for this injury.

REFERENCES

- Orchard J, James T, Alcott E, Carter S, Farhart P. Injuries in Australian cricket at first class level 1995/1996 to 2000/2001. *British Journal of Sports Medicine* 2002;36:270-5.
- Orchard JW, James T, Portus MR. Injuries to elite male cricketers in Australia over a 10-year period. *Journal of Science and Medicine in Sport* 2006;9(6):459-67.

Table 1 Clinical features, magnetic resonance imaging (MRI) findings, and treatment

Case number	Onset	Side	Continued to bowl	Side flex test	Full recovery	Previous side strain	MRI findings	Treatment
1	Acute	Non-bowling arm	No	Positive	35 days	No	Tear E/O at rib 10	Rest, NSAID, ice, physio
2	Acute	Non-bowling arm	No	Positive	70 days	Yes	Tear E/O at rib 10	Rest, NSAID, ice, physio
3	Acute on chronic	Non-bowling arm	No	Positive	1 day	Yes	No abnormality	Restricted training load
4	Acute	Non-bowling arm	No	Positive	34 days	No	No abnormality	Rest, physio CSI
5	Gradual	Non-bowling arm	Yes	Positive	4 days	Yes	No abnormality	Ice, reduced load, physio
6	Gradual	Non-bowling arm	Yes	Positive	35 days	No	Transversalis strain	Reduced load, physio
7	Acute	Non-bowling arm	No	Positive	28 days	No	Tear E/O ribs 9,10 and 11	Ice, physio
8	Acute	Non-bowling arm	Yes	Positive	15 days	Yes	Partial tear I/O at rib 11	Physio, CSI
9	Acute	Non-bowling arm	No	Positive	55 days	Yes	Tear I/O at rib 11	Physio
10	Gradual	Non-bowling arm	Only 12 balls more	Positive	20 days	Yes	Strain I/O at rib 12	Reduced load

MRI notes: E/O, external oblique; I/O, internal oblique; strain, muscle oedema without fibre disruption; tear, muscle fibre or musculotendinous disruption. Physio, Physiotherapy; CSI, corticosteroid injection.



SPNZ PHYSIOTHERAPY RESEARCH REVIEWS

INJURIES IN CRICKET

As we continue our focus on cricket in this issue, the SPNZ Special Projects Group have compiled a list of research reviews on cricket injuries with relevant clinical commentary. This list of article reviews, as well as previous SPNZ research reviews are on our website:

www.nzsopa.org.nz/resources.html

Fielders and batters are injured too: A prospective cohort study of injuries in junior club cricket.

Finch CF, White P, Dennis R, Twomey D, Hayen A. (2010). *Journal of Science and Medicine in Sport*;13:489-495
doi:10.1016/j.jsams.2009.10.489

Article Summary

This study reports injury rates from 411 junior cricketers, from ages under 12 (U12) to under 16 (U16) during an entire season. An injury was defined as "an event which required medical attention, and/or results in missed participation during the game or training". Injury rates were calculated for batting, bowling, or fielding during games and trainings. During the season, only one injury was recorded for U12 players, with 28 and 18 injuries for the U14 and U16 players respectively. The highest injury rates were recorded for U16 fielding, and U14 batting, both during game situations. Overall, more batting and fielding injuries occurred during games, while more training injuries occurred while bowling and batting. The lower limb was the most commonly injured site (31%), while the most common type of injury was a bruise (32%). Being struck by a ball was the most common mechanism of injury (53%). All overuse injuries occurred in U16 bowlers, who were the only age group to report back injuries. The majority of the injuries were minor and allowed a player to return to the match/training the same day.

Clinical Significance: As the majority of cricket studies have focused on elite/competitive adult participants, it is pleasing to see data regarding cricketers from the other end of the performance spectrum. The study suggests overall injury rates for junior cricketers are low, and serious injury is (thankfully) a very rare occurrence. Only 1 injury, which was not specified, required hospital treatment during the season. Injury rates during trainings were slightly higher compared to games, which could indicate an emphasis on different activities during trainings verses games, or possibly certain activities are performed at different intensities during trainings compared to games. Compared with elite performers, where bowling is responsible for more considerably more injuries, the injuries in this study were more evenly distributed across batting, bowling, and fielding. Accordingly, the authors recommend injury prevention strategies for all aspects of the junior game, not just bowling.

Dissociation between back pain and bone stress reaction as measured by CT scan in young cricket fast bowlers.

Millson HB, Gray J, Stretch RA, Lambert MI. (2004). *British Journal of Sports Medicine*; 38:586-591
doi:10.1136/bjism.2003.006585

Article Summary

A series of 10 case studies is reported in this study. Nine of the bowlers presented to a Physiotherapy practice with LBP, and were clinically diagnosed with a lumbar stress fracture, with one pain free bowler also included. All bowlers had a CT scan of the lumbar spine after presenting to the practice. Pain was assessed using the VAS scale, with recovery monitored until return to full participation. All bowlers returned to full participation, following intensive rehabilitation, after 3-15 months. At the time of return to bowling, 7 subjects had either partial or completely un-united lumbar stress fractures. There was no association between pain scores and bony stress injury in the lumbar spine. Pain scores ranged from 0-5/10, and lasted for on average 2-3 weeks after onset (1 subject had 1/10 pain lasting 6 months). The authors suggest a CT scan showing a bone stress fracture doesn't automatically determine the cause of pain, and this type of finding may in fact reflect a form of biological adaptation to the biomechanical stresses of fast bowling.

Clinical Significance: The findings from this study indicate results from a CT scan may not be useful in determining if a fast bowler is ready for a return to sport. As we know, the relationship between CT/x-ray findings and pain/dysfunction is sometimes tenuous, especially in the lumbar spine. The authors suggest a return to sport should be based on results from CT, MRI, and isotopic bone

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scans, with some form of objective, functional measure, but should we just be using pain as the guide? Half the case studies state the participant underwent 'intensive rehabilitation' for the injury, but no information was provided as to what this entailed. Although this was not the focus of the paper, details of the rehabilitation would have been interesting from a Physiotherapy perspective. Lastly, a noted NZ Sports Physician once said 'back pain in a fast bowler should be considered a stress fracture until proven otherwise', and this paper does lend support to such a statement.

Retraining motor control of abdominal muscles among elite cricketers with low back pain

Hides,JA, Stanton WR, Wilson SJ, Freke M, McMahon S, Sims K. (2010). *Scandinavian Journal of Medicine & Science in Sports*;20:834–842.

doi: 10.1111/j.1600-0838.2009.01019.x

Article Summary

All abdominal muscles contribute to stability of the spine and pelvis; however there is evidence that the transversus abdominis (TrA) muscle is controlled independently of the others in a range of tasks. Low back pain (LBP) patients have shown to have a delayed activation of the TrA muscle, alterations in the recruitment of the multifidus muscles and increased activity of the superficial muscles of the lumbo-pelvic region. This study looked at the effect of a stabilization program on the motor control of elite cricketers' abdominal muscles. Twenty six young male elite cricket players, with and without low back pain were included. Changes in the cross-sectional area of the trunk, the thickness of the internal oblique (IO) and TrA muscles and the shortening of the TrA muscle in response to an abdominal drawing-in task were measured at the start and completion of a 13-week cricket training camp. Measures were performed using ultrasound imaging and magnetic resonance imaging. Participants in the group with LBP underwent a stabilization training program that involved performing voluntary contractions of the multifidus, TrA and pelvic floor muscles, while receiving feedback from ultrasound imaging. Specific retraining of cricketers with LBP resulted in an increased ability to draw in the abdominal wall, with less (over) contraction of the IO and TrA muscles. There was a 50.1% decrease in the mean reported pain level among the cricketers with LBP, over the course of the training camp.

Clinical Significance: Athletes repetitively expose their spines to large forces during their sporting activities. Training the motor control of their abdominal muscles would help to protect the lumbo-pelvic region. Teaching fast bowlers to contract the TrA muscle independently of the other abdominal muscles may help to stabilize the spine against the large forces induced on the spine when bowling. This study concluded that increasing the amount of contraction of the TrA muscle when performing stabilization exercises may not be as important as improving the ability to contract the TrA muscle independently of the other abdominal muscles before progressing to higher load activities.

Injury to recreational and professional cricket players: Circumstances, type and potential for intervention

Walker HL, Carr DJ, Chalmers DJ, Wilson CA. (2010). *Accident Analysis and Prevention*;42:2094–2098.

doi:10.1016/j.aap.2010.06.022

Article Summary

This retrospective study looked at the incidence of injury resulting in hospital visits of cricket players in New Zealand between 2000 and 2005. The objective of this research was to identify the epidemiology of the injury and how it occurred. Cases were identified from New Zealand's National Minimum Data Set of public and private hospital discharges and day patients. Results showed almost 1% (n = 498) of the sport and recreational injury cases in New Zealand were attributable to cricket. Being struck by the bat or the ball was the main mechanism of injury for New Zealand cricketers; however mechanisms varied amongst age groups. For those <10 years of age the mechanism was most commonly being struck by the bat; from 10 to 50 years it was being struck by the ball or the bat; and for those over 50 years of age, over-exertion, strenuous or repetitive movements or falls were the contributing factor. The injury pattern also changed with age. Fifty percent of all injuries to those <10 years were to the head. Between the ages of 10–19 years the head, upper limb and lower limb were the most common sites. Those 20 and over sustained mainly upper and lower limb injuries. In this current study only those hospitalised for at least one night were included. The resulting injury rate was 39 per 100,000 per year. This figure is likely to be an under-estimation of actual rates.

Clinical Significance: From these results we can see that different age groups may benefit from different intervention strategies. Players can be advised to wear protective equipment i.e. helmets or shin pads, and coaching interventions can be looked at to reduce injury. For players over 50, prevention in the way of cardiovascular and sport specific resistance training may be appropriate.

RESEARCH SECTION

SPNZ PHYSIOTHERAPY RESEARCH REVIEWS CONTINUED.....

Is bowling workload a risk factor for injury to Australian junior cricket fast bowlers?

Dennis RJ, Finch CF, Farhart PJ. (2005). *British Journal of Sports Medicine*; 39:843-846
doi: 10.1136/bjism.2005.018515

Article Summary

This study examined whether bowling workload is a risk factor for overuse injury to Australian junior cricket fast bowlers and to evaluate the appropriateness of bowling workload guidelines that were currently in use in Australia at the time of the study. Forty four male fast bowlers with a mean age of 15 years were monitored prospectively over the 2002–2003 season. Bowlers completed a daily diary to record bowling workloads and self reported injuries, which were validated by a physiotherapist. Bowling workload prior to the first injury (for those bowlers who were injured) was compared to workload across the whole season for uninjured bowlers. Results showed that 11 of the 44 bowlers (25%) reported an injury during the study period, and 7 of these were lumbar spine injuries. The injured bowlers had been bowling significantly more frequently (median 3.2 between bowling sessions) than uninjured bowlers (3.9 days between bowling sessions) (Mann-Whitney U = 105.0, p = 0.038). Bowlers with 3.5 (or less) rest days were at a significantly increased risk of injury (risk ratio (RR) = 3.1, 95% confidence interval (CI) 1.1 to 8.9) compared with those who had more than 3.5 rest days (non-bowling days) between bowling sessions. There were also trends towards an increased risk of injury for those who bowled an average of >2.5 days per week (RR = 2.5, 95% CI 0.9 to 7.4) or >50 deliveries per day (RR = 2.0, 95% CI 0.7 to 5.4). This study identified high bowling workload as a risk factor for overuse injury to junior fast bowlers. Continued research is required to provide scientific evidence for bowling workload guidelines that are age-specific for junior fast bowlers.

Clinical Significance: Young cricketers often present to physiotherapists with overuse injuries. Stress fractures are common including lower limb and lumbar spine. As the BlackCaps strength and conditioning coach, Bryan Stronach pointed out in his interview in this Bulletin, the ground reaction forces during fast bowling are 4-9x body weight. For an 'average' 15 year-old bowler (65-70kg) this means that up to 600kg force may be absorbed by the body for each and every bowling delivery. Many of these young bowlers are playing cricket at many levels including school 1st XI, club cricket, they may be playing in a regional representative team (under 16's) and in addition, many love the sport and spend hours bowling in the backyard at home. The result is they may in fact be bowling every day of the week, often with no rest (non-bowling days). In addition, cricket may not be the only sport they play! The adolescent years are at time of peak skeletal growth when the bone is more susceptible to injury. In addition to diagnosing their problem, it is essential the physiotherapist provides education and advice regarding the volume of bowling or impact activity, working with the bowler, often their parents, and coaches to prioritise bowling sessions to enable sufficient rest-days between bowling sessions to avoid overuse injury. This study suggests less than 2-3 rest days between bowling sessions (training or matches) may increase the risk of injury.

Fast bowlers in cricket demonstrate up to 3 to 4 week delay between high workloads and increased risk of injury.

Orchard JW, James T, Portus M, Kountouris A, Dennis R. (2009). *American Journal of Sports Medicine*; 37 (6):1186-1191
doi: 10.1177/0363546509332430

Article Summary

This prospective cohort study compared future injury risk in cricket bowlers of high and low workload status. One hundred and twenty nine pace bowlers who bowled over a period of ten seasons were followed to compare overs bowled in each match and injury risk subsequent to the match. The authors analysed the number of overs in the initial match as well as the occurrence of bowling injuries and the number of overs bowled during various time frames subsequent to the initial match. Bowlers who bowled more than 50 overs in a match had significantly increased risk of injury in the next 21 days compared with bowlers who bowled less than 50 overs. Bowlers who bowled more than 30 overs in the second inning of a match significantly increased injury risk per over bowled in the next 28 days.

Clinical Significance: Previous studies have already demonstrated a correlation between increased bowling workload and injury risk in cricket bowlers but this study focused on the effect of a single high workload session rather than general high workload. This is a difficult analysis with many confounding factors which the authors pointed out in the discussion. Their findings of increased risk of injury at week 3 to 4 is interesting and has significance in terms of the physiotherapy role in injury prevention rather than just rehabilitation. The authors suggest that increased risk of injury after the acute overload may be due to a mechanism of damaging immature repair tissue. This implies that during the initial high workload match the bowler had sustained a micro injury to the body part that they end up injuring 3-4 weeks later. There was insufficient data to make this link however so further studies are definitely needed to fill this theory out.

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Volume 41, Issue 2

[EDITORIAL]

JOSPT Perspectives for Patients: A New Feature

Guy G Simoneau

[PERSPECTIVES]

Heel Pain: Hands-on Physical Therapy and Stretching Prove Effective for Treating Heel Pain

[RESEARCH REPORTS]

Effectiveness of Myofascial Trigger Point Manual Therapy Combined With a Self-Stretching Protocol for the Management of Plantar Heel Pain: A Randomized Controlled Trial



Rômulo Renan-Ordine, Francisco Albuquerque-Sendf-n, Daiana Priscila Rodrigues de Souza, Joshua A. Cleland, César Fernández-de-las-Penas

Six Weeks of Balance Training Improves Sensorimotor Function in Individuals With Chronic Ankle Instability

JoEllen M. Sefton, Ceren Yarar, Charlie A. Hicks-Little, Jack W. Berry, Mitchell L. Cordova



Static Foot Posture Associated With Dynamic Plantar Pressure Parameters

Deydre S. Teyhen, Brian E. Stoltenberg, Timothy G. Eckard, Peter M. Doyle, David M. Boland, Jess J. Feldtmann, Thomas G. McPoil, Douglas S. Christie III, Joseph M. Molloy, Stephen L. Goffar

Associations Between Disordered Eating, Menstrual Dysfunction, and Musculoskeletal Injury Among High School Athletes

Jill M. Thein-Nissenbaum, Mitchell J. Rauh, Kathleen E. Carr, Keith J. Loud, Timothy A. McGuine

Quantifying Strain on Posterior Shoulder Tissues During 5 Simulated Clinical Tests: A Cadaver Study

John D. Borstad, Amitabh Dashottar

Preoperative Strength Training for Patients Undergoing High Tibial Osteotomy: A Prospective Cohort Study With Historical Controls

Crystal O. Kean, Trevor B. Birmingham, S. Jayne Garland, Dianne M. Bryant, J. Robert Giffin

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Acromioclavicular Joint Synovial Chondromatosis

Joseph M. Molloy, Jeffrey C. Paschall, Liem T. Bui-Mansfield

Eosinophilic Granuloma in a Patient With Hip Pain

Leslie C. Hair, Gail D. Deyle

[LITERATURE REVIEW]

Effects of Pilates-Based Exercises on Pain and Disability in Individuals With Persistent Nonspecific Low Back Pain: A Systematic Review With Meta-analysis

Edwin Choon Wyn Lim, Ruby Li Choo Poh, Ai Ying Low, Wai Pong Wong

[RESIDENT'S CASE PROBLEM]

Practical Use of the HOAC II for Clinical Decision Making and Subsequent Therapeutic Interventions in an Elite Athlete With Low Back Pain

Erik J. Thoomes, Maarten S. Schmitt

[ABSTRACTS]

February 2011 Abstracts

A selection of important abstracts of articles published in other journals.

J Orthop Sports Phys Ther 2011;41(2):120-126

RESEARCH SECTION

RESEARCH REVIEWS

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- The analgesic and antihyperalgesic effects of TES in pain models
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- Surgical management of neuroma pain
- Impact of spondylolisthesis in elderly men
- Long term follow-up of surgical vs non-surgical treatment of chronic low back pain

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- Meniscal repair vs. partial meniscectomy for traumatic meniscal tears
- Different modalities of analgesia following unilateral TKA
- ACL reconstruction: patellar tendon vs. hamstring grafts
- THA for proximal femur fractures in older patients
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<http://www.researchreview.co.nz>

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- Microbiological contamination of cubicle curtains
- Measuring dynamic first metatarsal elevation
- Does a longer limb predict plantar fasciitis?
- Tools for treating in-toed gait in children
- Removing residual protein on podiatry instruments
- Foot posture in medial compartment knee OA
- Ankle taping protects knee joints
- Foot orthoses and gait Importance of ankle ultrasound in JIA
- Reliable measures of footwear comfort
- Morton's neuroma – outcome of surgical excision

Rehabilitation Research Review

Studies in the latest issue include:

- Self-efficacy and fear of movement in acute pain
- Home-based cardiac rehab in the elderly
- Lean thinking in healthcare
- Nintendo Wii game benefits post-stroke rehab
- Intensive rehabilitation benefits Huntington's disease
- Moxibustion for stroke rehabilitation
- The process of community reintegration after stroke
- Perceived change in health-related QoL
- Professional development in TBI for educators
- Recovery from mental illness

AWARDS SECTION

ASICS EDUCATION FUND REPORT

” HOT TOPICS IN THE TROPICS ”

2010 Asics Conference of Science & Medicine in Sport

— Report by Dr Tony Schneiders

The SPNZ Asics Education Fund supported Dr Tony Schneiders' attendance at the 2010 Asics Sports Medicine and Science Conference, held at the Sheraton Mirage, Port Douglas in Queensland, Australia from 3rd to 6th November 2010. Although the photograph suggests this was a tough assignment(!), Tony found the time to attend some of the presentations and has provided us with an overview of the conference and summarized some of his 'picks' for best presentations.

Conference abstracts were published on-line as a supplement to the December 2010 edition of the Journal of Science and Medicine in Sport (JSAMS). More details about JSAMS, including subscription information can be found at: <http://www.jsams.org/>.



ABOUT THE CONFERENCE

I was fortunate to receive the Sports Physiotherapy New Zealand (SPNZ) Asics Education Award funding to be used towards attendance at the Asics Conference of Science and Medicine in Sport conference held in Port Douglas, Queensland from the 3-6th November 2010.

The Asics Conference of Science and Medicine in Sport (ACSMS) is a multidisciplinary meeting held every year for professionals with an interest or involvement in sports medicine, sports science, physical activity promotion and sports injury prevention. This Asics sponsored conference format is run every second year, usually in an exotic location with previous conferences on Hamilton Island (2008) and in Fiji (2006). The conference dovetails in with the SMA “Be Active” conference which is run in Australian main cities, usually each alternative year.

The Conference was attended by a total of 478 delegates. For the first time ever registrations were closed due to reaching full capacity. A benefit to SMA members and attendees is that conference abstracts are published on-line as a supplement to the December 2010 edition of the Journal of Science and Medicine in Sport (JSAMS). More details about JSAMS, including subscription information can be found at: <http://www.jsams.org/>

If you are a SMA member the conference costs A\$650 at the early bird rate. If you are not a member then you either pay an extra A\$220 dollars on top of that or you can join SMA for A\$195 at the time which is the best deal as you get SMA membership benefits for the next year as well as a cheaper conference. So all up it will cost you A\$845 which is around NZ\$1100 if you are not already a member. Quite steep for a 3 day conference when you compare it with the NZ Sports Medicine conference or the SPNZ symposium at \$200! So what do you get for just over \$1100? The SMA member benefits include a yearly

subscription to JSAMS (I also received back issues for 2010)

Your registration includes:

- Admission to all Sessions and Workshops
- One complimentary ticket to the Welcome Reception.
One complimentary ticket to the Scientific Poster Session with drinks
- One complimentary ticket to the Conference Dinner
- Book of Abstracts (Including a detailed Conference Program)
- Delegate Satchel
- Entrance to the Trade Exhibition
- Morning and Afternoon Teas & Lunches

The food is good and plentiful and they are very generous with the wine (unlimited) at the dinner but you would have to drink a lot of it to get value for money over and above a NZ conference fee. While the conference dinner venue was exceptional being poolside at the Sheraton Mirage, unfortunately it finished at 10pm so that hotel guests were not disturbed, which was all a bit too early for most.

LOCATION AND ACCOMODATION

Port Douglas is a sleepy town and there were not many options for those who wanted to continue to party on into the night so most people ended up socialising in small groups at hotel bars or back at their lodgings. Accommodation at the exotic ACSMS locations doesn't usually come cheap either. A room at the Sheraton Mirage Port Douglas, where the conference took place, will set you back around A\$220 a night (conference special rate!) for the cheapest room so unless you are sharing it makes sense to stay somewhere a little cheaper. I got a unit with breakfast and Internet for \$A\$135 a night which

AWARDS SECTION

ASICS EDUCATION FUND REPORT CONTINUED.....

2010 Asics Conference of Science & Medicine in Sport —Dr Tony Schneiders

was about middle range. The problem was that the Sheraton is a large resort and few kilometres out of town therefore distances were large between hotels, so taxis or shuttles were required at an additional cost.

So all up including airfares and accommodation this conference could almost set you back \$3000 which is a large investment for most NZ physios at the moment unless you can write it off in tax or combine a holiday with it; and it is not a bad place for a holiday! Unfortunately at the time of the conference was held (start of the wet season-though it didn't rain) you could not swim in the sea because of stingers nor in the rivers because of crocodiles, so the hotel pools had to suffice-tough life! The lure of the Great Barrier Reef and the Daintree rain forest at your feet is enough to make this a great conference destination if you can get some more time off work to explore.

SPEAKERS AND TOPICS

So what were the speakers like and were the presentations good value? Like every conference the answer is yes and no, there were good and bad; but mostly good. The scientific organising committee who put the keynote and invited speakers together did a good job. Due to the huge interest in attendance and presentation demand, the organising committee cut all platform presentations



ACSMS 2010 Scientific Committee (Left to Right): Jill Cook, Anita Green and Wendy Brown.

down to 8 minutes, plus 2 minutes questions. This was good for some presentations that were a bit less relevant but not quite enough for some that were more clinically interesting. The vast majority of all presentations were from Australia with a smattering of research, particularly in sports

science, from other parts of the globe.



The main keynote was Professor Lars Engebretsen. Lars Engebretsen is Professor, Orthopaedic Center, Ullevål University Hospital and Faculty of Medicine, University of Oslo. Lars' current professional affiliations include Professor of the Norwegian College of Sports and Physical Education and the Division of Orthopaedic Surgery, University of Norway,

Co-chair of Oslo Sports Trauma Research Center. He is Consultant and Chief of Sports Medicine at the Norwegian Olympic Sports Federation Olympic Committee and Para-Olympic Committee, Head Physician for the Norwegian Olympic Center and Head of Medical Sciences, International Olympic Committee (IOC). He was the Chief Physician for the Norwegian Olympic Team for Athens 2004, Torino 2006 and for the Norwegian Olympic Training Center. Lars has published over 400 articles, book chapters and abstracts.

Lars' presentation topic was "**Are our treatment methods**

in orthopedics sports traumatology evidence based?

This talk highlighted the current situation for evidence based medicine in orthopaedic sports traumatology. The talk finished with an example of perfect study design, implementation and publication in hip surgery and with the rules of randomized controlled studies.

Lars' example was not necessary new or different to current practice and while he is an entertaining speaker I felt I did not necessarily learn anything new from the address. Lars' appeared on a number of medical panels at the conference discussing clinical cases and here is where Lars' knowledge and experience was best put to use.



The second most prominent medical keynote was Professor Peter Fricker. Peter Fricker is well known for his significant role as team doctor and medical director of Australian teams at five Olympic Games and six Commonwealth Games. After many years as medical director at the Australian Institute of Sport, he was appointed overall Director in 2005. He is Chairman of the Medical Commission of the Australian Commonwealth Games Association and a Member of the Medical Commission of the Australian Olympic Committee, and was Medical Director for the Teams to Manchester and for the Australian Team to the Athens Olympics. He has focused on research that supports and enhances the performance and success of Australian athletes and teams.

Peter's talk was interesting and titled: "**Genetics and the athlete – metaphysics, science and ethics** "

Peter spoke about the role of genetics in sport and while there is the commercial availability of gene testing for sporting potential, (you can be tested in Australia for around \$300) there are many issues for physicians, scientists and administrators which are unresolved. Genetic markers have been identified for sporting (physical) performance, to indicate risk of injury or illness, and to indicate gene doping. However, his take home message was there is a lot more to sporting performance and injury than just genetics and that research and discussion is needed to further validate the role of genetics in sport, and then to provide an ethical basis for decision making should genetic information prove useful. This was a good presentation but pitched on the anti-side of genetic testing so was a bit unbalanced and biased. It would have been good to see a pro-genetics presenter discuss the same issues.



The third keynote was Professor Bengt Saltin. Bengt Saltin has devoted his life to researching the effects of physical exercise on health and performance. He coined the term "humans were meant to move" and his famous "bed rest" study transformed medical practice on how people recover from heart attacks, general surgery, or injury. Over the years he has conducted extensive research

into skeletal muscle function and training, cardiac function in athletes and patients, high level elite performance, gene-environment interactions and performance enhancing drugs.

AWARDS SECTION

ASICS EDUCATION FUND REPORT CONTINUED.....

2010 Asics Conference of Science & Medicine in Sport —Dr Tony Schneiders

His current work focuses on exercise and diabetes. He is one of the world's most respected exercise physiologists and in 2002, he was awarded the IOC Prize, an Olympic Gold Medal, for having made the greatest contribution to our understanding of exercise for health and performance. Big credentials to live up to and Bengt presented a paper at the conference; **“Exercise science; its role today and through a century”** While there is no doubt the Bengt is a brilliant scientist, his presentation was disappointing, a little too basic and too descriptive. Really not anything to take back to your practice and use Monday.

TONY'S TOP CONFERENCE PRESENTATION PICKS

As with any multisession conference it was impossible to see everything on the program. I have managed to secure the link for the program and abstracts and it is currently (at the time of writing) still active so download it now and check them all out for yourself and decide:

http://sma.org.au/wp-content/uploads/2010/10/634-SMA_ConferenceAbstracts_FINAL.pdf

Highlights across sports and orthopaedics for me were the papers from Leo Pinczewski, a Sydney Orthopaedic surgeon. His first paper **“A fifteen year prospective comparison of patellar and hamstring tendon grafts for ACL reconstruction”** was fascinating as this sort of long term follow up is never usually seen, and with 180 patients followed up the results were worth noting. At 15 years there were significant differences identified between the groups which were not seen at earlier reviews. The patellar tendon group had significantly worse outcomes on subjective scores, range of motion and functional tests despite no significant difference in laxity identified. There was a high incidence of ACL re-injury after reconstruction, to both the reconstructed and the contralateral knee for the patellar tendon group. Think I will ask for a hamstring tendon graft if I need an ACL reconstruction based on these findings.

His second paper **“Long term survival of high tibial osteotomy (HTO) for medial osteoarthritis of the knee – 8 to 19 year follow-up in a series of 455 patients”** showed that high tibial osteotomy can be very effective for periods longer than 15 years when compared with replacement; however, results do deteriorate over time. In appropriately selected patients and circumstances, HTO gives high patient satisfaction and affords patients unrestricted activity for many years without the need to go to Total Knee arthroplasty (TKA). The procedure is cheaper and less invasive than TKA and his analysis suggests that it should be highly considered in patients aged <50 years and with normal BMI. So tell your parents/grandparents/yourself! to consider osteotomy before replacement based on these findings.

The paper by Elias (#33) titled **“Cold water immersion is most effective for recovery of repeat sprint ability and reducing fatigue post an Australian football game”** was interesting to me as it showed that contrast baths were less effective than cold water immersion (CWI). So when working with your sports teams, don't worry about the intermittent shower and get your players in cold water (12-14degrees Celsius) for 10-15 minutes after training/matches if you want them to recover quicker. This is especially important for repeat bout activities/

sports.

Natalie Collins demonstrated in her paper titled **“Anterior knee pain (AKP) severity fluctuates over the female menstrual cycle”** irrespective of Oral Contraceptive use, females with AKP experience more knee pain during the menstrual phase of their cycle. She suggested that Sports medicine practitioners should consider potential fluctuations in AKP over the menstrual cycle and may need to advise affected women to exercise caution with aggravating activities during menstruation. These findings also highlight the need for sports medicine practitioners to consider non-mechanical contributors to AKP in female patients at times of heightened pain sensitivity.

I was fortunate to catch up with Trish Wisbey-Roth, from Bounce Back Active Rehabilitation Systems, at the conference as Sports Physiotherapy New Zealand are in negotiations to have her present at the next SPNZ symposium in 2012. Trish held a seminar in Auckland for us this year which a number of members attended. Trish ran a workshop at the conference; **“Retraining graded and functional control of the hip region to optimise dynamic activity”** Despite the 8.00am start it was well worth attending, as it was practical, hands on, and presented well. Trish covered the basic premise underlying optimal dynamic function of the region and presented a grading system that may be of use in identifying and rehabilitating deficits. If she comes to NZ we will get her to present this information to members.

I was lucky enough to get a podium presentation at the conference and presented some of my work on side-line concussion assessment. My title was **“Footwear and sports-surface influence dynamic neurological screening for sport-related concussion”**. The conference organisers obviously saw the title and thought it was specifically footwear related and I ended up presenting to over 100 podiatrists! Luckily the emphasis of the conference was on multidisciplinary interaction and cross-skilling, so I did not get rotten tomatoes thrown at me. Hopefully they learnt something as well that they can pass on to others on the side-line.

Each ACSMS conference ends in the “Best of the Best” session where the best presenters' in each area are invited back to compete for the top prize (Asics Medal)

The 2010 Asics Medal was awarded to **Louise Naylor**, from the University of Western Australia, for her presentation (#20) – **“Impact of shear stress on vascular function in humans: Explaining the direct impact of exercise on vascular health.”**

The other Best of the Best presenters were:

- **Chris Handley**, *La Trobe University* “Overuse tendinopathy is characterised by changes in the metabolism of proteoglycans present in the extracellular matrix of tendons”
- **David Lubans**, *The University of Newcastle* “Randomised controlled trial of the Physical Activity Leaders (PALs) program for low-active adolescent boys from disadvantaged secondary schools”

AWARDS SECTION

ASICS EDUCATION FUND REPORT CONTINUED.....

2010 Asics Conference of Science & Medicine in Sport —Dr Tony Schneiders

- **Leo Pinczewski**, *North Sydney Orthopaedic and Sports Medicine Centre* “Long term survival of high Tibial Osteotomy for medial Osteoarthritis of the knee – 8 to 19 year follow-up in a series of 455 patients”

Dara Twomey, *University of Ballarat* “Accuracy of the field-based injury and exposure data collection methods in a large scale injury prevention randomised controlled trial”

2011 AND 2012 CONFERENCES

Next year there is a sequence change and the ACSMS conference will be in Fremantle, Western Australia (19-22 October 2011), and then the “Be active” conference, incorporating the International Conference of Physical Activity and Public Health, the Australian Conference of Science and Medicine in Sport, the National Physical Activity Conference and the National Sports Injury Prevention Conference will return in 2012 in Sydney (Sydney 31 October - 3 November 2012). Well worth the effort to get to any of these if you can.

I would like to thank Sports Physiotherapy New Zealand for the partial funding of my attendance at ACSMS in 2010. As the funding is provided to SPNZ by Asics NZ, it was appropriate that I could attend another Asics sponsored event. Asics are certainly the most proactive supporters of Sports Medicine in this part of the world:-long shall it last.

Thanks very much Asics NZ.

Dr Tony Schneiders,
Portobello, Dunedin.

Thinking of attending the 2011 or 2012 Sports Medicine and Science Conference?

Financial assistance is available.

Apply to the SPNZ Asics Education Fund. Application dates for 2011 and 2012 are 31st March and 31st August each year.

Application forms, terms, conditions and reporting requirements available at

www.nzsopa.org.nz/education.html

Australian Conference of Science & Medicine in Sport

Freemantle, 19-22 October 2011

<http://sma.org.au/conference/>



The Australian Conference of Science and Medicine in Sport (ACSMS) is a multidisciplinary meeting held every year for professionals with an interest or involvement in sports medicine, sports science, physical activity promotion and sports injury prevention.

At the Esplanade Hotel – Fremantle, ACSMS 2011 will showcase the latest in sports science and medicine.



CONTINUING EDUCATION

Upcoming courses and conferences in New Zealand and overseas in 2011 and 2012.

www.nzsopa.org.nz/calendar.html

LOCAL COURSES & CONFERENCES

When?	What?	Where?	More information
2011			
26 February 27 February	Spidertech Clinical Certification Course—Kinesio Taping Christchurch—Medical Assurance Society Auckland—venue TBC	Christchurch Auckland	joe@spidertechtape.com.au darron@spidertechtape.com.au www.spidertechtape.com.au
05 March	Clinical Trigger Point Therapy—Body Behavioural Therapy Group.	Te Aroha	jennylucy@xtra.co.nz
05 March 12 March	Polestar Pilates - PF	Auckland Wellington	polestarpilates.co.nz/forms.php
14 March	Core Pilates - Pilates Mat Training	Christchurch	corepilatesnyc.com
19-20 March	Contemporary Neurodynamics: Essential neurodynamic assessment and treatment—Richard Ellis.	Hamilton	neurodynamix.ndx@gmail.com
17-21 March	Planning for Pain Management: The 36th Annual Meeting of the New Zealand Pain Society Inc.	Christchurch	nzps.org.nz
24 -26 June	Discover the Sports Thorax –LJ Lee	Sydney	physiohealing.com.au
6 & 7 August	NZ Manipulative Physiotherapists Association Knee and Exercise Prescription	Wellington	nzmpa.org.nz

2012

March	Sports Physiotherapy NZ "Prevention, Practice & Performance"	Sebel Trinity Wharf, Tauranga	TBC
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INTERNATIONAL COURSES & CONFERENCES

When?	What?	Where?	More information
2011			
6 March	ACSP Clinical Sports Medicine 2011: The Knee	Sydney	More information
12-13 March	'Health for the Football Player' - 20th International Conference on Sports Rehabilitation and Traumatology	Bologna, Italy	isokinetic.com/
7-9 April	IOC World Conference on Prevention of Injury & Illness	Monaco	IOC World Conference
24 -26 June	Discover the Sports Thorax—LJ Lee	Sydney	physiohealing.com.au
19-22 October	Australian Conference of Science and Medicine in Sport	Freemantle, Perth	ACSMS Conference
10-12 Nov	Discover the Sports Pelvis—LJ Lee	Sydney	physiohealing.com.au

SPNZ WEBSITE

SPNZ MEMBER SECTION

www.nzsopa.org.nz/members.html

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Your email address is that which you supplied to Physiotherapy NZ.

Your password will be sent to you by SPNZ and can be reset to a password of your choice by clicking on "Reset Password".



NEW TO THE MEMBERS SECTION:

Resources

Copies of all clinical article reviews and SPNZ Research Reviews that appear in the SPNZ Bulletin editions will be placed in the new "Resources" section, as well as an updated list of Open Access Journals. These will be available for all members to access at any time.

[SPNZ's Research Reviews](#)

- Osteoarthritis
- Injuries in Cricket

[List of Open Access Journals](#)

(full text available to all members)

- Sports physiotherapy
- Sports medicine
- Sports science
- Rehabilitation

[Clinical Article Reviews](#)

- Barefoot running and the minimalist shoe debate
- Bench pressers' shoulder—overuse tendinosis of pectoralis minor
- Blood clots and plane flights
- Breathing pattern disorders in athletes
- Case report—lateral ankle fracture and missed proximal tibiofibular instability
- Efficacy of injury prevention related coach education in soccer and netball
- Heat acclimatization guidelines for high school athletes
- Management of hamstring injuries—issues in diagnosis
- Sideline evaluation of bone and joint injury
- Ocular injuries in basketball and baseball

AND MORE...

Quick Links to Members Section

Click on the links below to go straight to the required page:

[Resources](#)

Copies of SPNZ's Research Reviews, a list of open-access journals (full-text available), clinical article summaries and other sports physiotherapy related articles.

[Vacancies](#)

Sports Team Positions and Clinic Positions available

[Clinical Forum](#)

Got a clinical question and want advice from members? Post your question on the clinical forum.

[Asics Education Grant Information](#)

Application form, guidelines and instructions



[Book Reviews](#)

Book reviews on sports physiotherapy topics

[Snippets](#)

Quick sports physiotherapy tips

[Calendar](#)

Calendar of upcoming courses and conferences

[Reports](#)

Minutes of SPNZ meetings and submissions on professional matters.