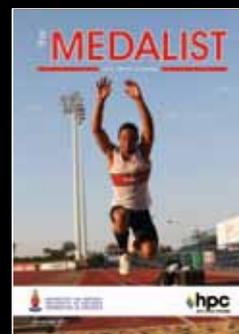
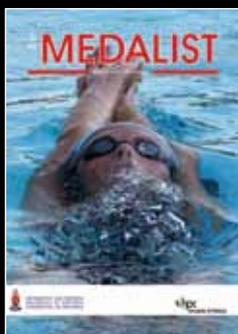
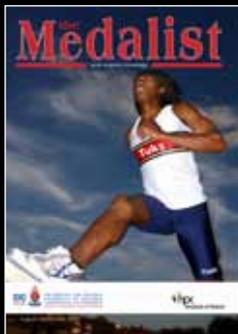
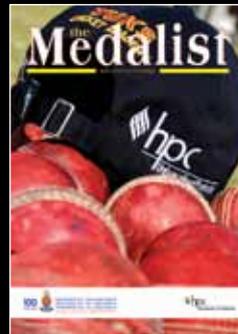
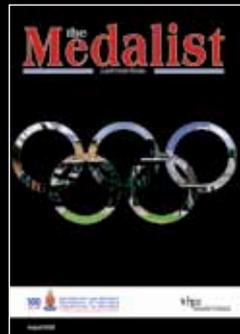
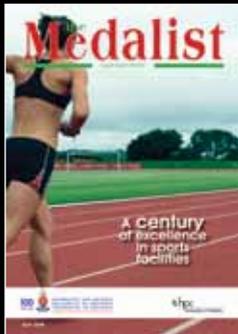
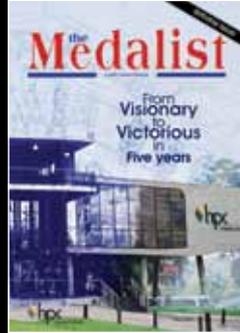
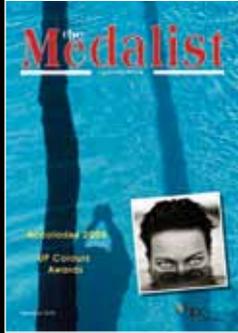


# the MEDALIST

sport, science, knowledge

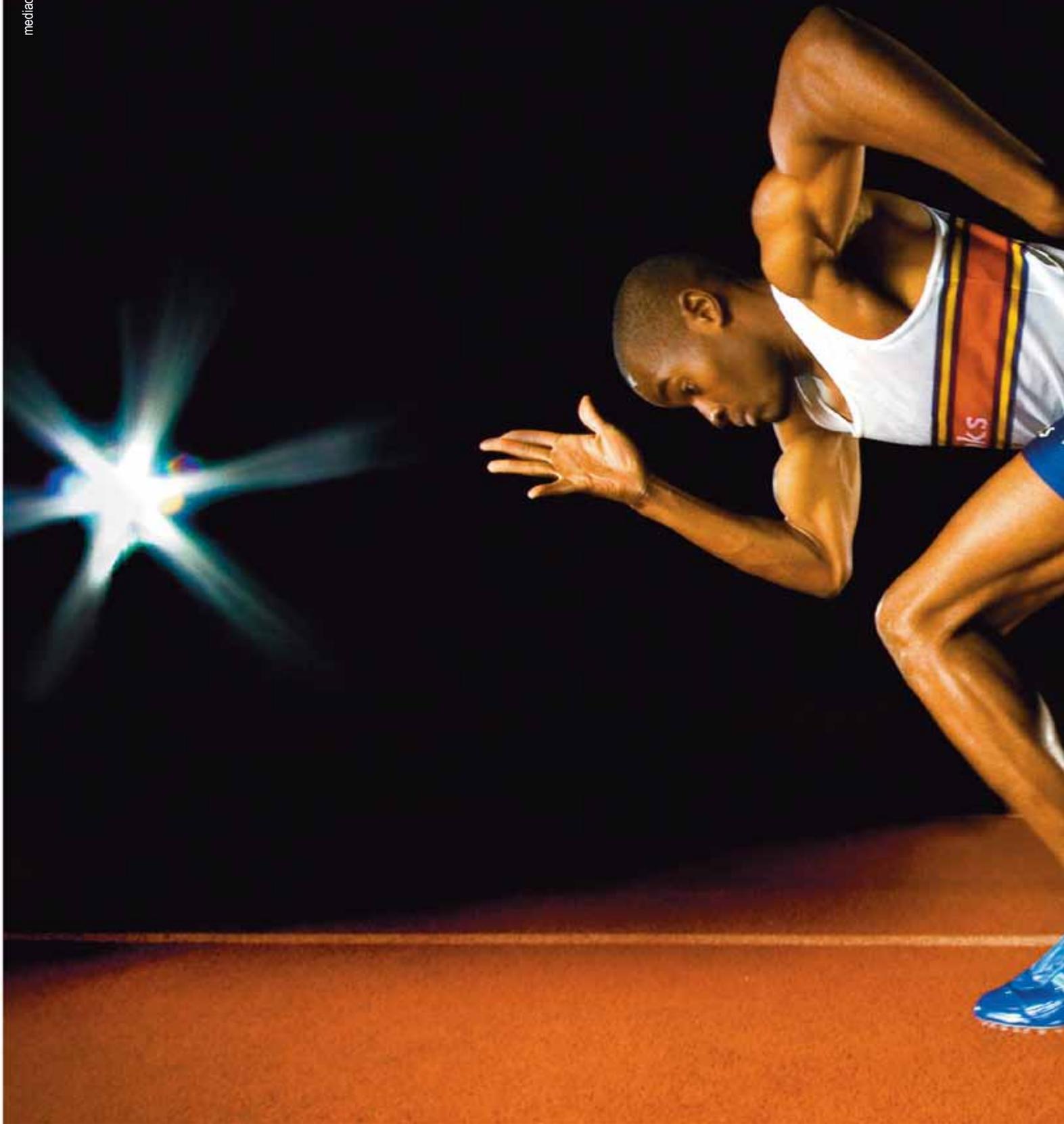
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# from the CEO'S OFFICE



The eyes of the world will be on London in just a few months time when on the 27<sup>th</sup> July 2012 the Opening Ceremony of the XXXth Olympiad, hosted by the City of London, will be held at the newly built Olympic Stadium. With only a few months to go to the London Olympics the hype is building the closer we get to the opening ceremony.

A number of International athletics and swimming teams have already visited the hpc for their training camps building up to the Games. This bears testimony to the fact that the hpc and the University of Pretoria has world class facilities and is seen as the venue of choice for the final preparations for a number of potential medallists at the Olympic Games.

The hpc has been requested by SASCOC (South African Sports Confederation and Olympic Committee) to host the pre-departure camp for Team South Africa in July and we are very proud of this fact and will pull out all the stops to give the athletes and officials a send off to remember. The preparation of the athletes based at the hpc is going well and we are hopeful that they will do us proud

in London, a just reward for all their blood, sweat and tears.

In this issue we take a look back at the history of the Olympic Games as well as the origin of the Olympic symbol and colours as well as at South Africa's participation at the Olympics and the participation of South African "exiles" who took part for other countries over the years due to our sporting isolation and other reasons. These articles are written by Johann Russouw who won an award for these articles which were originally transmitted in radio programmes. I am sure you will find them extremely interesting and will learn a lot more about this prestigious event that you may not have known.

As mentioned in my last Editor's article, this year, 2012, is an historic year in the life of the hpc as we are celebrating our 10<sup>th</sup> Anniversary. We will be hosting an International seminar/conference from 15 – 17 June with a number of International speakers lined up to deliver papers on "Beyond 2012 Coaching a new generation" and this will be complimented with a prestigious sports banquet on the 15<sup>th</sup> of June and the celebrations will finally culminate with an international

sports event between our TuksSport High School and schools of similar ilk from around the world during the first week of December.

We are very proud of our achievements over the past ten years and look forward to another decade of sport, science and knowledge and developing the next future sporting icons of this country.

*Toby Sutcliffe*

# High Performance on a Budget

can you create a high performance environment without spending any money?

*Text: Wayne Goldsmith*



When clients ask me to work with them, it is usually to help them become the best they can be in one or both of these two areas:

1. Help them to create a sustainable winning culture
2. Help them to create a world class high performance environment. Although most of the time I get to work with professional sports and elite level Olympic teams, I am

regularly asked to work with schools, amateur sporting clubs and part time coaches on a range of performance related issues, athlete attitudes, motivation techniques leadership development, coach development and sports performance enhancement programmes.

Recently a client from an amateur but highly successful sporting Club asked me, "Wayne, we hear what you say about the best high performance environments in the world and about tools like GPS systems, ice baths, recovery centres, the latest video analysis systems and having a sports medicine team available 24 / 7. But we are all part timers. We gladly donate our time to coach the team and we have to fit our coaching around our jobs and our family. Our budget is minimal. Can we still create an effective high performance environment without spending any money?"

Yes, you can.

The first step...Prioritise.

The first step in doing anything where money (or the lack of it) is an issue is to establish priorities - if you

can't afford to do everything you would like to do (optionals), spend time, effort and money on the things you have to do (essentials).

In sport, there are millions of things you could do – look at the long list of sports products and services available to choose from: equipment, nutrition supplements, clothing, sports science equipment, technology, software..... in fact it is harder to decide what not to do then what to do!

With so many choices to make and so many potential purchases possible, it is critical to think rationally and intelligently about what you spend your high performance dollar on and to establish a clear rationale for spending money in the high performance area.

Start with a simple High Performance Prioritisation exercise:

Priority One: Essential: must do;  
Priority Two: Important: should do;  
Priority Three: Desirable: could do;  
Priority Four: Optional: would like to do.

Priorities will be based on what the team is trying to achieve at the time – on what the team’s core philosophies are all about. For example, a team who decides to enhance their performance by increasing the size, strength and power of all players in the off season might score gym work as Priority One.

Another team that has decided to enhance their performance by learning faster and improving their skill levels might score video technologies and feedback tools as Priority One and gym work as Priority Two.

Clearly, not everything in a high performance environment can be Priority One at all times.

One exercise I have found that works well is to bring the key drivers of the high performance programme together – senior athletes, coaches, sports science, sports medicine and strength and conditioning staff together and have them work collaboratively on establishing priorities for the team. Ideally this exercise is completed for four specific periods:

Off season; Immediately pre season; In season; Immediately post season.

Priority One: Things that are essential.

This is the toughest part: deciding what you absolutely can not do without. Everyone will argue that their particular area or skill or philosophy is the most important. Strength and conditioning coaches will argue that spending time in the gym is essential. Physiotherapists will argue just as passionately that injury management is essential. Coaches will argue that the most essential element of all programmes is coaching time spent working with athletes on the technical, tactical and strategic skills of the game. Clearly not everyone is right or wrong – the process is dynamic.

The simplest way to resolve these arguments is to ask this question: “Can we be competitive without “xyz” (where xyz is one aspect of the

performance environment)?”

In a sport like football for example: Can we be competitive without regularly training together to our full potential?

Answer: No.

Can we be competitive without taking sports supplements?

Answer: Yes.

Can we be competitive without consistent hard physical training?

Answer: No.

Can we be competitive without using heart rate monitors, lactate analysers and GPS tracking systems?

Answer: Yes.

It is funny! Having gone through this prioritisation exercise with many sporting teams over the past ten years, inevitably the things that consistently score.

Priority One are “people” factors – i.e. coaching time, player attitudes, cohesion and communication across the organisation, player behaviour issues, on field off field leadership etc. The lesson here is that ultimately - even in professional sporting teams, people, their attitudes and their passion to perform are the real difference between winning and losing, and most importantly.....

Attitude is free;

Desire costs nothing;

Passion has no price tag;

You pay zero for Commitment.

Amateur sports can think like, act like, perform like successful, winning teams if they build their culture around people factors.

Conversely, a professional team with the money to buy and build the world’s best performance environment will fail unless the right people with the right attitudes are driving the programme.

Priority Two: Things that are important.

Priority two issues are those which are important but not essential. Having a world class gym with the latest equipment is important for a sport like rugby, AFL, American

Football and basketball but when money is an issue, a good gym with reasonable standard training equipment will suffice.

Priority Three: Things that are desirable – “perfect world” things.

For example, in a “perfect world” all players would have access to a one hour massage three times a week. But, when it comes down it, most players are OK with one massage and taking responsibility for implementing their own recovery programme.

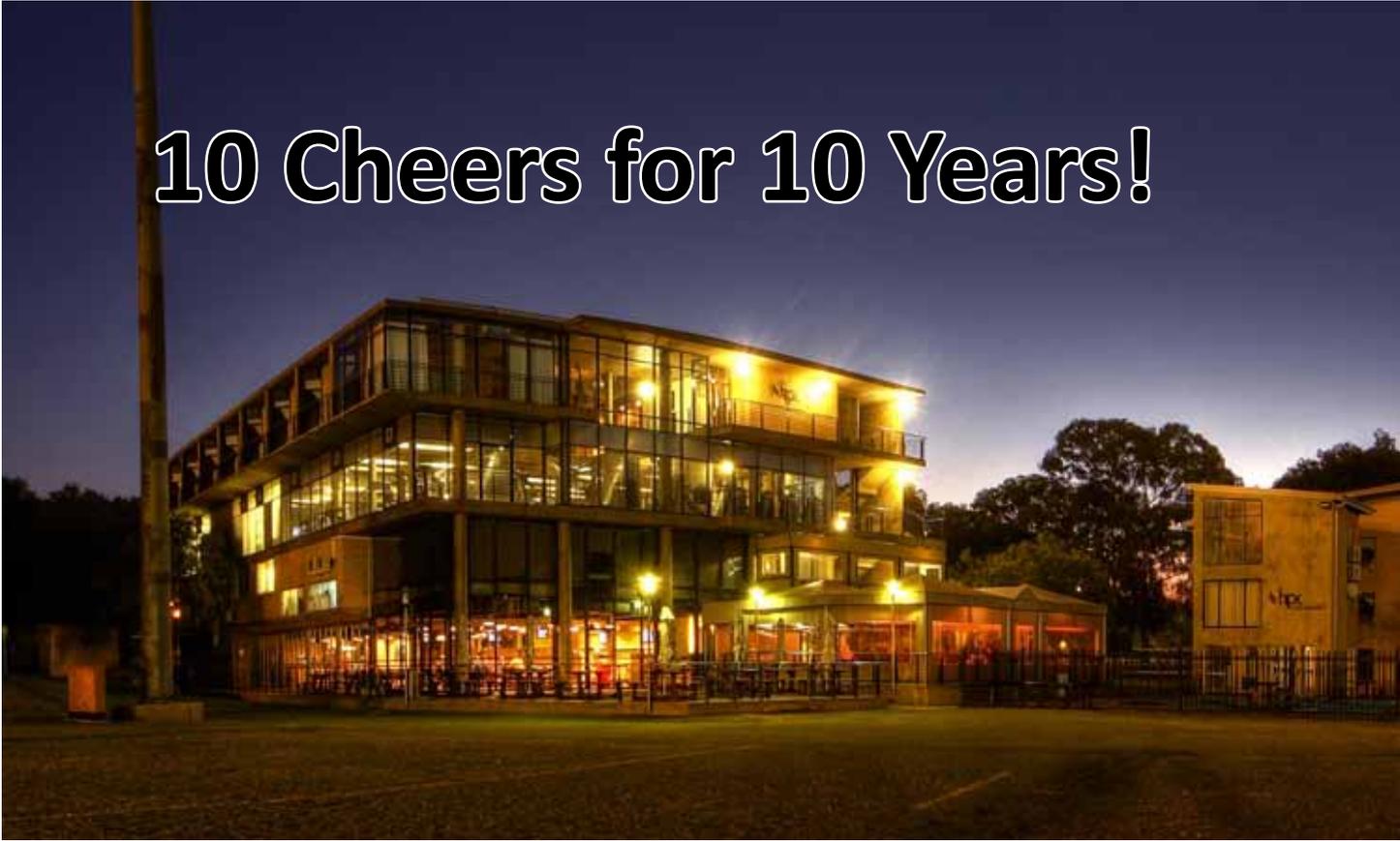
Priority Four: Things that are optional.

In the optional category are quite often time saving devices and technological advantages: things that can potentially save time and reduce inconvenience but in a tight budget situation, they can be overcome by a little hard work, improved communication and learning some new skills.

Summary:

1. Unless you have an unlimited budget – (and there is no one in the world who can honestly say that their budget is unlimited) – building and sustaining an effective high performance environment comes down to choices: to prioritising how, when and where you will allocate resources;
2. Priorities will change from season to season (and even within seasons) depending on the situation and the challenges the team is facing at any time;
3. Create a high performance priorities system that works for you – one that compliments the overall direction and philosophy of the high performance programme;
4. Invariably, people drive performance! If you only had one single dollar to spend, spend it on enhancing the performance of your people – it is the one high performance programme investment that returns ten times what you spend.

# 10 Cheers for 10 Years!



*Text: Rick de Villiers Image: Reg Caldecott*

## ***With the hpc's 10<sup>th</sup> anniversary coming up, The Medalist takes a walk down memory lane.***

Cast your mind back ten years. Your initial decade-old memory might be of a younger, thinner you. But you probably wouldn't remember that petrol sold at an unthinkable R2.23 per litre, or that the Queen Mother passed away that year. It's unlikely that you'd recall who won the first American Idol competition (Kelly Clarkson) or what you got for Christmas. You almost certainly wouldn't pin 2002 as the year that the High Performance Centre opened its doors.

It's not as if the occasion was inauspicious. Among those attending the official ribbon-cutting on that crisp May evening were sports luminaries like Gary Bailey, Daan du Plessis, and Danie Visser. Also caught in sparkle of flashing cameras were then-Minister of Sport, Ngconde Balfour, and the former president of Athletics SA, Leonard Chuene. Prof. Callie Pistorius, rector of the University of Pretoria at the time, beamed like a proud parent and made so bold as to declare the hpc the new address of sport in Africa.

All the bricks had been laid, all the nooks had been dusted. The centre boasted conference facilities, an auditorium, high-end accommodation lockers, a restaurant, a sports-science gym, medical offices and a sports-technology unit. The members of staff were geared and expertise was on tap. All that remained was

for the hpc to live up to the hype surrounding it.

Within that year the centre played host to the Belgian Olympic team, and also received a number of eminent guests, among whom one of the most famous names in soccer, Sir Alex Ferguson.

On the development front, three academies were initially established (gymnastics, swimming, tennis), and it took little time for serious athletes to make South Africa's newest sports hub their home. But what distinguished (and still distinguishes) the hpc from other sports centres was the founding of a school that catered specifically for the needs of promising youngsters.

In 2002, only 27 learners were enrolled at the TuksSport Study Centre (now TuksSport High School), but this number has since mushroomed to over 200. The



academies, too, have multiplied. The hpc quickly left behind its humble beginnings and incorporated a number of other sports into their portfolio. Soccer (men's and women's), taekwondo, rowing, golf, cricket, athletics, table tennis, judo and triathlon are all now part of the stable.

But what makes the hpc special is that it's a home away from home. Countless international teams and sportspeople have signed the hotel register, and some have left even more permanent reminders of their visit. The most notable archaeological traces belong to the Argentinean soccer team, who made the hpc their base camp during the 2010 FIFA World Cup. At the request of the (in)famous Diego Maradona, new luxury toilets ('E-Bidets' to the value of R14 000) were installed. The squad's legacy also lives on in a new suite (Maradona had a wall between two rooms broken down

to ensure he had enough personal space) and in the unforgettable memories of those boys who were elected to carry the players' bags.

Toby Sutcliff, CEO of the hpc, thinks this a good example of the hpc's ability to accommodate the needs of its clients. 'You can't be all things to all men, but it's our policy to make sure our visitors are happy. In this business, it's adapt or die – and hosting the Argentinean team certainly showed that we can adapt.

'The project was an unbelievable experience, and so too seeing the manner in which all the staff entered into the project. Nothing was ever too big or too menial to do, and everyone pitched in to ensure that we offered them the best experience possible.'

There probably isn't another FIFA World Cup on the horizon for South Africa, but hpc has proven itself

capable to deal with any kind of challenge. Though there will be no further branching out among the academies, the centre hopes to carry on its tradition of excellence and remain the beacon for specialist sports centres in South Africa. So for the ten years past and those yet to come, let us raise our glasses!

# HISTORY OF THE Olympics

*Text and images: Johann Russouw*

## The Olympic Cycle

The Modern Olympic Games (Summer and Winter) take place every 4 years and this period is known as the Olympic cycle. But why is the Olympic cycle fixed on 4 years?

The official history of Olympia began with the 1<sup>st</sup> Olympiad in 776BC and the games festival at Olympia has been celebrated since 776BC at intervals of 49 or 50 months. This period of 4 years has been known by the Greeks as the **penteteris**. The **Holy Month** during which the games took place coincided during the uneven Olympiads (49 months) with the Elean month of **Apollonios** and during the even Olympiads (50 months) with the month of **Parthenios**. According to the Elean calendar, **Apollonios** was the 8<sup>th</sup> month and **Parthenios** the 9<sup>th</sup> month after the winter solstice. The festival was always held during full moon and the earliest full moon during **Apollonios** was on August 6<sup>th</sup> with the last full moon on September 5<sup>th</sup>. The earliest full moon during **Parthenios** occurred on August 20<sup>th</sup> and the full moon was on September 19<sup>th</sup>. Consequently the Olympic

Games always took place between August 6<sup>th</sup> and September 5<sup>th</sup> or between August 20<sup>th</sup> and September 19<sup>th</sup>, thus during early autumn.

Many of the other **Pan Hellenic festivals**, such as the one at **Pythia**, were celebrated with intervals of 4 years. However, some festivals were celebrated with intervals of 3 years (i.e. **Isthmia**) or even 2 years (i.e. **Nemea**). There were also the festivals at **Delphi** and **Thebes** that were held at the extreme intervals of 8 years! The Olympic **penteteris** dates back to ±800BC and the proper regulating of the calendar was a subject of great religious importance to the people of that time. It was of great importance for them to chose the correct moment in order to appease the unseen powers or gods responsible for their well-being. The goodwill of the unseen powers was especially necessary for their agricultural activities and these were determined by the seasons of the **sun calendar**. The most significant elements of the sun year were the solstices as well as the day and night

equinoxes and it was either one of these that were usually regarded as the start of the year. This, as well as the rising and setting of certain stars formed the basis of the farmers' calendars during the period of **Hesiod** which were characterised by various religious rites.

The ancient Greeks, however, calculated their time according to the moon months and the moon years, resulting in the **moon** determining which day was favourable and which was not. The duration of the **sun year** is 365¼ days





compared to a **moon year** of only 354

days, because a moon month consists of only  $\pm 29\frac{1}{2}$  days. This means that a moon year is  $11\frac{1}{4}$  days shorter than a sun year. In order to make up the difference between the moon year and the sun year, it was periodically necessary to add leap days as well as leap months to the moon year, but unfortunately the arbitrary intercalation of such periods by the priests resulted in endless confusion. The first step to eliminate all the confusion that existed was the discovery that 8 sun years were more or less equal to 99 moon months. (The exact difference is only  $1\frac{1}{4}$  days) This discovery was of great importance because every 8<sup>th</sup> year meant the start of a new calendar. The cycle of 99 months was known as the **Great Year** because it reconciled the moon year with the sun year as well as the spring day and night equinoxes which signalled the start of the farmer's calendar. This important occurrence was widely celebrated with special cleansing rites and special offerings to the most important god in a particular community.

It is quite possible that the earliest religious festivals at Olympia were held before 776BC at intervals of 8 years. Because the intervals of 8 years were extremely long and inconvenient, the festivities at Olympia were in the course of time changed to the beginning and the middle of the 8 year cycle. By simply dividing the 99 month **Great Year**

into cycles of 49 and 50 months, the Greeks invented the **Olympic penteteris** and it is quite likely that this change started at Olympia as early as 776BC and was eventually followed by almost all the Greek city states. Because **Zeus**, the god the universe, was regarded the most important god at Olympia, the **Olympic Festival** or **Games** were characterised by prominent cleansing festivals, religious sacrifices and sports activities at the beginning and the middle of the **Great Year** (i.e. every 4<sup>th</sup> year) at the altar of **Zeus** at **Olympia**. The adoption of a 4 year cycle for the modern Olympic Games by the IOC was a logical one.

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## THE OLYMPIC SYMBOLS

The **Olympic Symbol** is the five interconnected rings. It is widely accepted that the 5 rings are supposed to represent the continents from where the competitors come to take part in the Olympic Games (Africa, the Americas, Asia, Australia and Europe). However, the true origin of this symbol is its discovery on a marble altar among the ruins at Delphi. This altar dates back to  $\pm 600$ BC and was possibly used during the Pythian Games that

were held every 4<sup>th</sup> year in honour of the god Apollo. The IOC decided at its congress in 1913 to accept this 5-ring symbol as the official symbol



of the Olympic Movement and also to put it on the white Olympic flag as the centre piece and main feature on the flag. The Olympic flag with the Olympic symbol on it was first shown in public at the IOC's congress in 1914 just before the outbreak of World War I and its official first appearance at an Olympic Games was at the Games of 1920 in the Belgian capital, Antwerpen. Three rings form the top and two are interconnected at the bottom. The colours of the top three rings are (l to r) blue, black & red and the colours of the bottom rings are (l to r) yellow and green. According to the founder of the Olympic Games, Baron



Pierre de Coubertin, at least one of the colours on the Olympic flag, the white background included, appear on the flag of each participating country. The white background of the flag symbolises peace and purity and the interconnection of the rings represent the atmosphere of friendship during competition at the Games.

The **Olympic Oath** was written by Baron Pierre de Coubertin and instituted for the first time at the Olympic Games of 1920. The Belgian fencer, Victor Boin, was the first competitor to take the oath on behalf of all the competitors. When the Olympic Oath is taken, a representative of the host country holds onto the Olympic flag during the opening ceremony and solemnly

declares: *"In the name of all the competitors, I promise that we shall take part in these Olympic Games, respecting and abiding by the rules which govern them, in the true spirit of sportsmanship, for the glory of sport and the honour of our teams"*. The original wording ended with 'countries' but it was changed in the 1960's because of the IOC's desire to eliminate nationalism at the Olympics.

The **Olympic Motto** is *Citius, Altius,*



*Fortius*. It is a Latin phrase which means Faster, Higher, Stronger and was used for the first time at the Antwerpen Games in 1920. Historians differ on the origin of this motto, but the latest research has revealed that a Dominican monk, father Henri Didon (1840-1900) was responsible for it. Father Didon, who was a personal friend of Baron de Coubertin, used this phrase to motivate his students at the Arcueil College in Normandy.

The **Olympic Hymn**, characterised by its solemn beauty and classical inspiration was composed by the Greek, Spiridon Samaras for the inaugural Modern Olympic Games in 1896 and the text was written by one Greece's greatest poets, Kostis Palamas:

*'Immortal Spirit of antiquity, father of the true, the good, and the beautiful, descend, appear, shed over*

*us thy light, upon this ground and under this sky, first witnesses to thy glory.*

*Give light and vitality to these noble games: throw imperishable floral crowns to the victors in the running, wrestling, and discus, and with thy light animate hearts of steel! In thy light, plains, mountains, and seas shine in a roseate hue and form a vast temple to which the nations throng to adore thee, O immortal Spirit of antiquity'.*

The **Olympic Creed** originated during a church service in St Paul's Cathedral on June 19<sup>th</sup>, 1908 to which all the participating competitors were invited.

During his sermon shortly before the start of the Olympic Games of 1908 in London, the bishop of Central Pennsylvania (USA), Ethelbert Talbot, who attended the international conference of Anglican bishops in London, used the following phrase: *'The only safety, after all, lies in the lesson of the real Olympia – that the Games themselves are better than the race and the prize....and though only one may wear the laurel wreath, all may share the equal joy of the contest.'* Baron Pierre de Coubertin was so impressed by these words that during a speech at a banquet in the Holborn Restaurant in London, he referred to the sermon and used the following words: *'The most important thing in the Olympic Games is not to win, but to take part, just as the most important thing in life is not the triumph, but the struggle. The essential thing is not to have conquered but to have fought well'*. These words are displayed on the electronic message boards during all Olympic opening ceremonies..

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## SOUTH AFRICA'S PARTICIPATION AT THE OLYMPIC GAMES =

### Part 1

The early history of South Africa's participation in the Olympic Summer Games was determined by the class distinctions for which the haughty Imperial British government was notorious. These class distinctions were inevitably influential in shaping the South African society as well as the local politics, with devastating consequences for South African sport due to the local and international reaction.

Just as it did in the other colonies, the British Imperial government of the 18<sup>th</sup> and 19<sup>th</sup> centuries regarded the non-whites of South Africa, as well as the Dutch speaking white settlers, as politically and socially inferior. The deliberate and purposeful policy of Anglicisation, as well as the British Government's eventual acquisition of full political control over the whole of South Africa by 1902, resulted in English speakers also taking control of South African sport. The class distinction and arrogant social discrimination of the British, which began as a form of linguistic racism, would eventually be carried over onto the sportsfield too and it had a profound influence on all South African sportsmen and –women because membership of clubs, provincial- and national sports bodies and associations were firmly entrenched and regulated on purely racial lines since 1910. This discriminatory philosophy, which became an inherent part of the white community of South Africa's life style, led to the non-whites' struggle for equal recognition. Eventually this degenerated into open conflict which was not only confined to the political arena, but also spilled over onto the sportsfield, resulting in the total international sports boycott



of South African sport, which was lifted only in 1990.

There is speculation that South Africa considered sending a team to the first Olympic Games in 1896, but that the Jameson Raid of 1895 in the Transvaal and the consequent political tension put paid to the idea. The aftermath of the Anglo Boer War, which ended in 1902, caused great resentment of the British Government in the four colonies (the Cape Colony, Natal, the Transvaal and the Orange River Colony). However, several

leaders, including Sir Abe Bailey, Dr Leander Jameson and Mr Henry Nourse, saw sport as a means of bringing about peace and reconciliation. Two years after the Treaty of Vereeniging (in 1902), Sir Abe Bailey, at his own expense, sent a cricket team captained by Frank Mitchell to England.

Two years later (in 1906), a Springbok rugby team captained by Paul Roos was sent on a tour to England and in the same year a South African football team captained by Harry Heeley undertook a successful tour to South America. All these teams included players from all four provinces and made an important contribution to getting the reconciliation process under way.

South Africa's first participation in the Olympics was in 1904. At the time, General Piet Joubert was on a tour of America (USA) with his 'circus', which depicted the events of the Anglo Boer War. During the Louisiana Purchase Exposition, he was in St Louis to take part in the Anthropological Exhibition when three South Africans entered for the Olympic marathon. They were BW Harris (Aliwal North) and two Tswanas, Len Tau (Lentauw) and Jan Mashiani (Yamasini). Despite Len Tau's running off course for 1.5km when he was chased by a dog, he took 9<sup>th</sup> place. Although Jan Mashiani was in last place after 5km, trailing the leader Michel Spring by 14min, he finished 12<sup>th</sup>. BW Harris did not complete the course\*\*. South Africa's tug-of-war team - consisting of C Walker, P

Hillense, J Schutte, P Lombard and P Visser – came 5<sup>th</sup>. However, this participation in the Olympics was unofficial, since South Africa did not have a national Olympic committee yet. At a meeting of the IOC in 1907 a motion was accepted that the four British Colonies, the Cape Province, Natal, the Orange River Colony and the Transvaal be invited to take part in the Fourth Olympiad, as South Africa and an Olympic Committee, with Henry Nourse as president, to handle South Africa's affairs was founded on January 3<sup>rd</sup>, 1908.

Most publications refer to Len Tau and Jan Mashiani as Lentauw and Yamasini. According to Prof Floris van der Merwe they were Tswanas and NOT Zulus as reported widely. Prof Van der Merwe also refutes all references to BW Harris as being from the Transvaal. According to him Harris hailed from Aliwal North.

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## SOUTH AFRICA'S OLYMPIC EXILES =

### Part 1

The period of Apartheid and Separate Development was characterised by the retention of the white minority's domination at a time when it was the distinctive feature of colonial administration as well as when every anti-slavery, anti-racist and anti-capitalist politician declared it was the "most hideous crime against humanity". Apart from depriving millions of people of their right to dignity, it also forced many of South Africa's best sportsmen and -women to pursue their careers as exiles in foreign countries for the sake of taking part in the Olympic Games.

The first of these exiles was **Ronald (Ronnie) Eland**. Born in Port Elizabeth as a coloured person, it was his destiny not to represent his country of birth in weightlifting at the Olympic Games. Consequently he emigrated to Britain in 1947 and such was his

talent that he won the British title. He was chosen to represent Great Britain in the lightweight category at the Olympic Games of 1948 in London. At his best he could have been a medal contender, but unfortunately a bout of appendicitis ruined his chances and he finished in 13<sup>th</sup> position. He also competed in bodybuilding and was 3<sup>rd</sup> in the 1948 Mr Universe competition. Ronnie, who was a teacher by profession, also represented England at the Commonwealth Games and ultimately emigrated to Canada.

**Precious McKenzie** was the great-grandson of a Scottish big game hunter. He left school when he was 17 to join a circus as an acrobat, but the owner refused to employ him. The owner of the gymnasium where Precious, who was only 1.50m tall, used to train and practise his stunts, Kevin Stent, eventually persuaded him to take up weightlifting. He immediately fell in love with the sport and progressed rapidly to become the best bantam-weightlifter in South Africa. At the *South African Coloured Weightlifting Championships* just before the Olympic Games of 1960, he and Johnny Geduld both set new



South African records which were better than that of their white counterparts. However,

both were left out of the team to represent South Africa at the Games in Rome. The biggest insult to these two brilliant weightlifters was that Eddie Gaffney was included in the South African Olympic team in spite of the fact that he failed to post any total at the official Olympic trials.

In 1963 Precious left the selectors no other choice than to include him in the 'non-racial national team' to the World Weightlifting Championships in Stockholm. Because whites had the exclusive right to be awarded Springbok colours, the team was not allowed to wear the official national sports



emblem of the country. Consequently it was required of the team to wear a badge representing only the head of a springbok. Due to the policies of the South African government of the time, Precious was not regarded as a representative of the country as a whole, but only of the non-white community of South Africa. It was also required of him to leave the ranks of the non-white weightlifting association under SACOS and join a *special non-white weightlifting association* which was affiliated to SANOC. Precious was so humiliated by this that he decided not make himself available for the team to Stockholm. Instead, he decided to leave his hometown, Pietermaritzburg, and emigrate to England in 1964 where he found employment in a shoe factory (Crockett & Jones) in Northampton. When he was denied a British passport, the British Weightlifting Association took up the

matter with the Minister of Sport, Mr Dennis Howell, who assisted in Precious McKenzie obtaining his British citizenship. His perseverance, dedication and hard work eventually paid off handsomely when he was chosen to represent Great Britain at the Olympic Games of 1968 and 1972 in the bantam -weight category.

Precious McKenzie also represented England at the Commonwealth Games in 1966 as well as 1970 and won gold medals on both occasions. He won a third gold medal for England in the fly-weight division at the Commonwealth Games of 1974 with the British monarch as one of the spectators. He later emigrated to New Zealand and won a 4<sup>th</sup> gold medal in the bantam-weight category for his new country. In 1975 Precious was awarded a MBE in recognition of his invaluable contribution to sport.

The shy but talented Bloemfontein schoolgirl **Zola Budd** caused a sensation when she broke the 5000m world record in January 1984 at an athletics meeting in Stellenbosch. As a result of her grandfather being born in London, British citizenship was hastily and controversially arranged for her and on April 6<sup>th</sup>, 1984 she could escape the international sports boycott against South Africa. Zola was included in the British team to compete at the Olympic Games of 1984 in Los Angeles where she finished 7<sup>th</sup> in the 3000m after being involved in the unfortunate Mary Decker incident. In 1985 she won the World Cross Country championship in Lisbon (POR) and followed it up with a second World Cross Country Championship in Neuchâtel (SWI) the next year. The opponents of South Africa's international participation in sport regarded the Zola Budd case as a convenience passport and, although they could not prevent her from taking part in the Olympic Games, their emotional harassment as well continuous injuries forced her to return to South Africa in 1988. Zola, accompanied by her

husband and children, eventually moved to the United States of America.

**Cornelia Bürki** is another South African who took part in the Olympic Games of 1984. She grew up in the Eastern Cape town of Humansdorp as Cornelia de Vos and moved to Switzerland having married a Swiss national. She became a naturalised Swiss citizen and finished 6<sup>th</sup> in the 3000m in Los Angeles.

REFERENCES: Connock, M: The Precious McKenzie Story; Pelham Books, 1975, Eley, H: Zola – The Autobiography of Zola Budd, Partridge Press, 1989, Russouw, JL: Die Geskiedenis & Tradisies van die Olimpiese Spele; Unpublished series of radio talks, NOCSA, 2005



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# In the dugout:

## Q & A with Marchant de Lange

*Text: Rick de Villiers Images: Reg Caldecott*

### The Medalist caught up with the Protea's young express bowler, Marchant de Lange, and asked him about BMT and being the newbie in the national test squad.

**Q:** The most pressing matter first: how did it feel when you found out that you'd been picked for the SA cricket team?

**A:** *I was obviously very excited. It was a dream come true for me. I received a call from Andrew Hudson, who broke the news to me, but Gary Kirsten and Morné Morkel were some of the first to congratulate me. I had just finished a training session with the Titans and I was on my way home when I got the call.*

**Q:** Your debut test match was the 2011 Boxing Day test against Sri Lanka, in which you knocked over eight wickets. If you were nervous, you certainly didn't show it. How did you cope with the pressure and manage to do so well?

**A:** *I was a little bit nervous, which is normal, but I was really excited to be playing alongside my heroes and representing my country. Pressure will always be around but I'm just enjoying the challenges ahead.*

**Q:** You're turning 22 in October. As a relatively young guy, is it daunting sharing a locker room with greats like Jacques Kallis and Dale Steyn?

**A:** *I am really privileged to have such experienced players around me. It has been an eye-opener watching how the senior players go about their business on and off the field. They are true professionals.*

**Q:** Was it easy becoming part of the

team, or did you have to undergo certain rites of passage before you were wholly accepted?

**A:** *It was very easy slotting into the team. The team has a great group of players, and it is a very relaxed environment, so it's easy to find your feet.*

**Q:** Do you have a nickname in the team? Perhaps something like Merchant of Death?

**A:** *No, I don't have a nickname although everybody calls me "Channa".*

**Q:** What is the best part of being in the national squad?

**A:** *Representing my country is an honour that nothing else can compare to, and that's what makes being in the national squad so special.*

**Q:** Tell us a bit about your



## Vital Statistics

**DoB:** 13 Oct 1990

**Hometown:** Tzaneen, Limpopo

**Bowling style:** Right-arm fast

**Domestic Team:** Titans

**Best Test figures:** 8/126

**IPL Team:** Kolkata Knight Riders



involvement with the University of Pretoria and the HPC in particular.

**A:** *I joined the Tuks Academy in 2009 and I was coached by the current Proteas fitness trainer Rob Walter. The Academy was a great stepping stone to where I am now and I learnt a lot during my time there. The HPC has brilliant facilities, and it was a great environment to be in, especially as a young cricketer.*

**Q:** What has been the most embarrassing moment in your cricket career?

**A:** *The most embarrassing moment for me was bowling that no-ball on my debut T20 match against New Zealand in Auckland. The Black Caps needed 5 runs of the last ball, and I bowled a no-ball. Luckily I recovered, and Tim Southee failed to score of the actual last ball.*

**Q:** Which international team are

you most looking forward to playing against and why?

**A:** *I look forward to playing against all international opponents, since they are all good provide a decent challenge. However, I am really looking forward to playing against Australia. They are (and have always been) one of the top teams in world cricket, and I love the challenge of playing against some of the best players in the world.*

**Q:** You've recently been signed by the Kolkata Knight Riders and will be on show in the IPL very soon. Are you excited about the coming season?

**A:** *I am looking forward to the experience, although I don't know what to expect. It will still be interesting to experience another country and the challenges that come with it.*



# The game of chasing

*Text: Carla Venter Images: Reg Caldecott*

The lane in front of him is clear but on his inside and outside he can hear the familiar sound of spikes hitting tartan. The adrenaline is rushing through his veins as he picks up speed. He has less than 100m to close a 5m gap and to outrun the athlete on his inside. Yet, Willie de Beer doesn't get fazed by this. He loves the chase.

The tall 24 year old Afrikaans boy smiles when he speaks about a chase like the one mentioned above. "I don't know what it is, but when some one is in front of me I'd give everything to get past him. I never give up," he says.

Willie was one of the four relay athletes to beat the South African record in August last year. Willie, Shane Victor, LJ van Zyl and Ofentse Mogawane, won the silver medal against all expectations at the World Championships and improved the 12 year old South African relay record. America won the gold that day. "That day, all of us ran to our utmost best. I don't know how it happened. We

exceeded everyone's expectations," he says.

Willie is currently studying theology at the University of Pretoria but athletics has taken over most of his life. "I practise a lot but at least I love it," he says. He was born and bred in Pretoria but says he isn't a typical 'golden boy'. "Winning hasn't come easily. I've never been one of those natural talented athletes. I have to work very hard to win".

He has big dreams for the future but declares that he reached most of his short term goals in the past year. He was named Tuks Sportsman of the year in 2011 and he won a medal (and broke a record) at the World Championships. He also broke the elusive 46 seconds mark in the 400m. He wants to go to the Olympics and he is currently trying to better his personal best time of 45:68 seconds in the 400m. The qualifying time for the A-standard for the Olympics is 45:35 seconds. Oscar Pretorius being the only South African to qualify for this Olympics

thus far. There is a good chance that Willie will be in the relay team for the Olympics.

His pre-race preparations consist of pasta the night before, two nights of good rest and preparing his race strategy. "I'm paranoid, I'm always afraid I'll get sick or injure myself before a big (athletics) meet," he says while shaking his head. He had an injury in 2009 and couldn't compete for a year. "That brought me back to earth and I realised I'm more than just an athlete. There are so many different parts of being me".

He doesn't like to mention his athletics when he meets someone new. "Immediately the person (if he's an athlete) is competitive or they judge you".

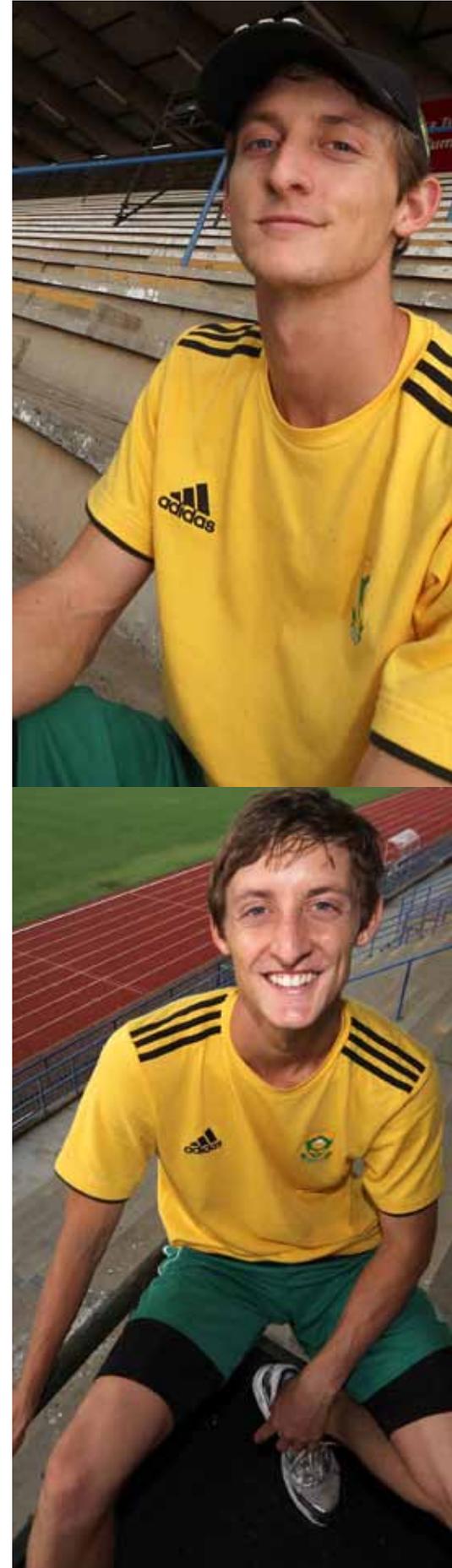
There are a few people who play a big role in Willie's success and motivation. "My girlfriend, Danielle, always keeps me grounded. She always makes time to come to my meets and supports me," he says.

Danielle is a physiotherapist and was the athletics team physio at the World Championships in 2011. Then there is his coach, Hennie Kriel. "He has taught me so much. He is the most positive person I know and it rubs off. He is a know it all but in a good way," says Willie.

Being an professional athlete also has a down side. "I never get to go on holiday. I miss my friends and family because I don't have a lot of time to myself." Willie is part of a big family, both of his biological parents married again and he says he now has four parents. With a handful of siblings there's never a dull moment.

In a short time this blue eyed boy reached almost all of his goals. "I'm searching for new goals but I know one of them is to go to the Olympics".

If his 'chase record' is any thing to go by it seems Willie will have no problem achieving this. As he himself says; he loves the chase.





# New heights, without a fuss

*Text: Carla Venter Images: Reg Caldecott*

Spiders, snakes, heights nor losing scare Craig Canham. The thing he is most afraid of is "The City".

Far removed from his little home town, Matatiele in the Eastern Cape, he sits, still wearing his sports wear after a hard day at TuksSport High School. His hours consist of practises, study, eating and some more practises.

The 1,95m tall athlete moved to the Jacaranda city at the end of 2010 – the same year he won the gold at the South African championship in the under 17 high jump. Craig is only 18 years old, yet he is currently the number three high jumper in the country, seniors included.

He looks uncomfortable, although we're in his territory (the HPC ). He says that he doesn't like compliments and bragging doesn't come naturally.

"I miss my family the most. I have four brothers and a sister. My mom, Irene, and my dad, Cedric, are the best parents anyone can ask for.

I'm afraid of the city, there are so many bad things lurking. I've seen people loose their life to alcohol or drugs here," he says. Craig tells the story of how his mom and dad, although both unemployed, managed to get him on a bus to Pretoria for athletic meets. "I never had a coach before I came here and now I am blessed with an amazing coach, Hugo Badenhorst," he says.



His personal best is currently 2:10m but he is hoping to improve that height to 2:15m to qualify for the World Juniors in Spain later in the year. "I have a lot of dreams. Qualifying for the Junior's is one and I want to win the gold at the 2016 Olympics," he says.

After a quick recovery from a back injury, which he confidently declares as a miracle, he is reaching new heights as one of South Africa's most promising.



He giggles nervously when asked if he ever had a big mishap "At the 2009 South African Championships I asked to borrow some tape from another athlete to mark my jump. He didn't really want to give me any so I made another plan. I was so nervous. It was my first big competition and I travelled far. When they moved the bar up to 2m, which was the highest I've ever had to clear, I jumped into it (the bar) head first. I forgot everything about jumping. I was so embarrassed".



He acknowledges he learned from experiences like these. "I'm very head strong and very competitive though I don't show it. I just need to clear my head before a jump," he says with a smile.

What does he miss the most about home? "Oh my mom's curry and rice. I also miss how our family used to talk for hours. I'd have six cups of tea in a session like that!". That's why, although his parents are hundreds of kilometres away, he still phones them before every meet. And no, he has no lucky underwear, no special dinner the night before, he has a simple solution – he always prays.



He misses home but it's "weird to be home some times". It's a very small town. The kind of town where you know your neighbour's business and so you share it with the rest of the town. Matatiele only got their first traffic light recently. "I think some of the people in my town get uncomfortable around me. They don't know whether I've changed.

Last time I was there an old friend shouted across the fence, for every one to hear, that he saw me on TV," Craig says with a shy smile. "Not a lot of people leave our town for the city, you know". But he says he would move back in the wink of an eye.

He misses the green lush mountains of his home town on the border of Kwazulu Natal but he came to Pretoria with a goal. "I have the best facilities, coach and opportunities. It doesn't always feel real, you know, being here".

The highlight so far in Pretoria? "Meeting my hero, Jacques Freytag. He says I'm the next world champ," Craig says while fiddling with his fingers. But he quickly adds that he still has a lot of work to do. He knows sport wouldn't last forever as he always keeps reminding himself. "I want to coach and give back to the community I came from".

He looks down and again reiterates the role his parents have played in his athletics. "They are my hero's. I don't know how they make ends meet but that's the thing with them. They always do, without making a fuss about it."

In four years time Craig Camham might be one of our golden athletes at the Olympics, you know, without making a fuss about it.

In a recent interview for the University of Pretoria's Perdeby newspaper the following was written in closing about South African Paralympian swimmer, Emily Gray.

# Nothing gray about Emily

*Text: Steven Ball Images: Reg Caldecott*

*"Described by Rolling Sport website as someone who 'tackles life with quiet determination and dedication – whether it is international swimming, succeeding at university or fighting cancer', few believe she will fail to make the team and wear the South African colours at the 2012 London Paralympics."*

This is truly an apt description of Emily specifically if you have known her for a while like we have in the TuksSwimming programme. The one thing that we most definitely have learnt is that there is more than meets the eye and Emily has an amazing story to share. An example of this is how Emily has taken on enormous roles in disabled sport in South Africa, where she has just completed her year as Nedbank Brand Ambassador and the SA Sport for Physically Disabled (SASPD)'s torch bearer.

Emily has formed an integral part of our TuksSwimming team over the last 4 years and the quote by Alexander de Seversky - *"I discovered early that the hardest thing to overcome is not a physical disability but the mental condition which it induces. The world, I found, has a way of taking a man pretty much*

*at his own rating. If he permits his loss to make him embarrassed and apologetic, he will draw embarrassment from others. But if he gains his own respect, the respect of those around him comes easily."*

- shows the respect, admiration and appreciation Emily has from her team mates and coaches for her attitude, dedication, level of motivation and always willing to challenge herself and her body. The strides or should we say strokes of improvement in Emily, has been enormous over the last number of years since joining our programme.

So who is Emily and what can we learn from her? We took some time to ask some questions and get a greater insight.

## **So why Swimming & what drives you to still be in swimming today?**

Emily: "I was a runner before the cancer, so sport has always been in my blood. After loosing my leg, swimming was the next best thing. The way the water 'holds' me, it's almost as if my disability goes away (especially when I was much younger). When I swim I like to see myself as everyone else"

"The goals I have set for myself and

the achievements of the past drives me as it hold so much promise"

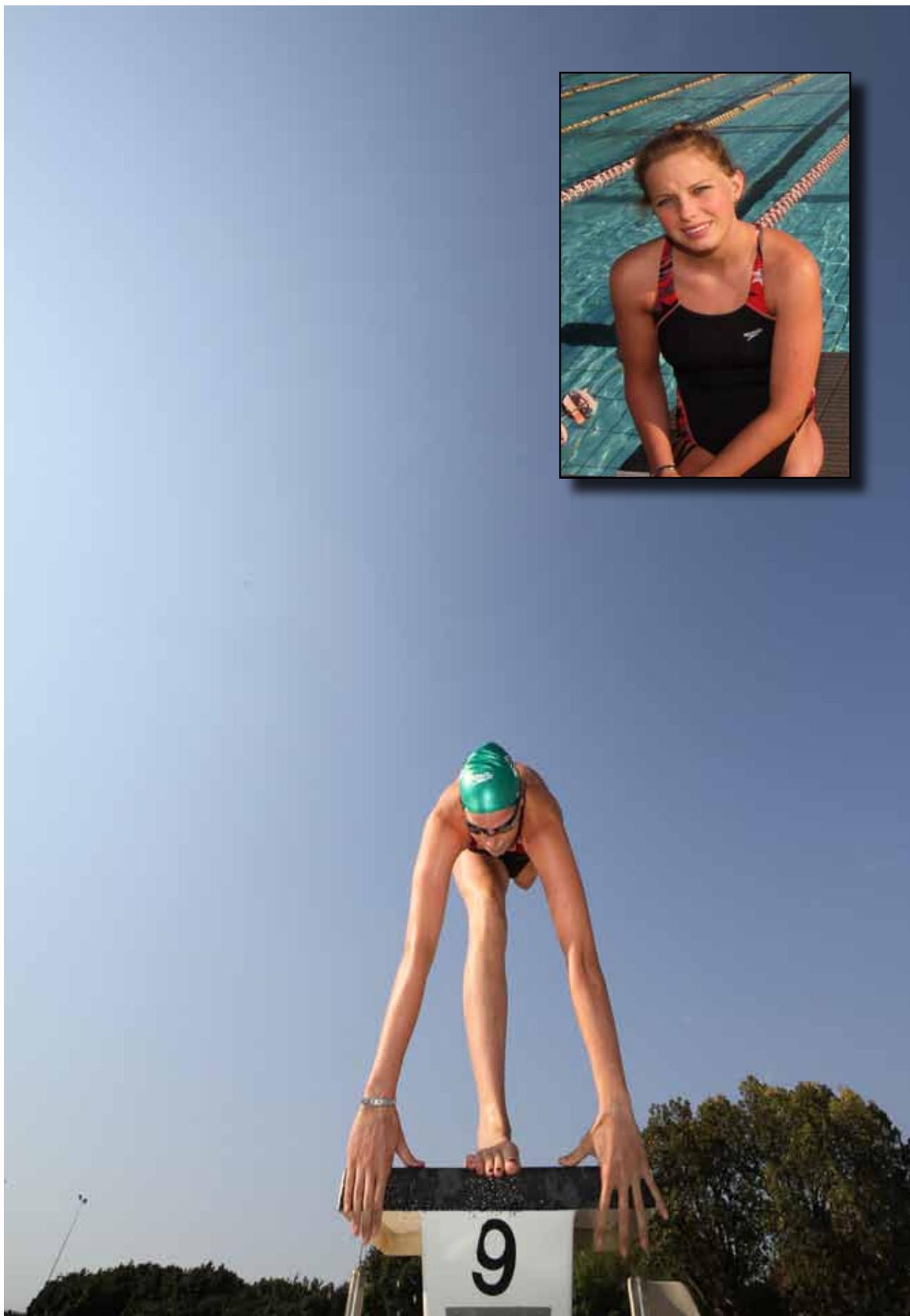
## **What age did you start swimming and why?**

Emily: "Ábout 12/13 years old. I was actually quite bad at it previously. I was a runner not a swimmer! I started swimming only after loosing my leg."

## **You had cancer?**

Emily: "I had what they called Osteosarcoma or 'bone cancer' of the Femur bone. Initially it was assumed that I had a muscle injury or injuries due to running, but I always had pain! The pain persisted for around 8 months with no way forward. I had been for treatments but nothing helped. Eventually I went to a Chiropractor thinking it was a pinched nerve. He noticed that the one hip was swollen which led to X-Rays and they found the Osteosarcoma. This led to the doctors starting Chemotherapy on me"

"Having over the period of time of treatment, learnt the different types of pain, for example the difference and being able to distinguish between bone versus muscle pain, I





would encourage athletes today to look into “injuries” and the type of pain a lot earlier. This holds true for me today as an athlete and I feel I am able to distinguish a lot better for myself when to worry and when not”

**So after the Chemo?**

Emily: “Well I had Chemo for about 6 months, in the drip form. So it was one week on a drip and three weeks at home. I had lost enormous amounts of weight during this time. I had lost lots of hair – it happens – and my sense of smell had become so sensitive, along with my sensitivity to cold. However we saw that the tumor was not reducing in size and in fact had increased, so the options the doctors gave was either a hip replacement, but the concern was there the cancer had already spread down the leg, or amputation. So we made the call and amputated”

“After the amputation we had 2 more months of Chemo to ensure the cancer was all gone!”

**How long after did you start swimming and who has coached you since then?**

Emily: “After the wound had healed properly, which was about 6 months later, I started swimming. My dad took me to the Mandeville Sports club in Johannesburg to try out different sports, but I realised that swimming was best suited and I felt the most comfortable.”

“At Mandeville I started swimming under coach Gregg Price and was with him for about a year. He really built me up and taught me how to swim. He built the program up systematically, that is the number of sessions per week, the volume and particularly worked on my strokes.”

After that I moved to coach Peter Williams, which was a big jump in training. He taught me a lot about strokes and my fitness improved significantly. However a shoulder injury crept in. Shortly after for various reasons I left and went to train with Coach Steve Haupt, after which I moved to the TuksSwimming program under Coach Igor Omeltchenko (May 2008)”

**What has coach Igor taught you and what has been your greatest success to date?**

Emily: “Igor has taught me a lot about discipline specifically in terms of the life of an athlete. Food, training and sleep are examples of areas I have learnt more about. Control of your own training is important and from a stroke perspective his input has been a huge investment in me”

“Well my 4<sup>th</sup> place at the World Championships in Eindhoven in the 400m freestyle in 2010 and most definitely making the Olympic team for the 2008 Beijing Paralympics stand out as memorable moments in my career to date.”

**What would you say are your ultimate goals in swimming and life and what do you see yourself doing one day?**

Emily: “To hold multiple world records in different events and most obviously to medal at the Paralympics are some of my swimming goals. As for life though I would like to live a full and happy one. ‘Live each day as if it were the last!’

To be able to travel and see the



world is a big dream of mine and if this could be through being involved in the medical field in an organisation such as 'Doctors without Borders' specialising in Paediatrics, I would be very happy!"

**So what has swimming taught you?**

Emily: "In life, if you want something, you got to go and get it! Discipline, dedication and self worth – how to appreciate my body and how to treat it. Focus is also always key"

**Who is a great role model for you and if you could anyone in the world who?**

Emily: "Oscar Pistorius and been an inspiration and role model for what he has achieved. I would however love to meet Mr. Nelson Mandela. He is such a legend and done so much for our country. I want to ask him how he was able to always remain so calm and emotionally stable through everything he endured?"

**So what do the next few months look like for Emily?**

Emily: "Hard training, lots of rest

and sleep, food and fast swims! If all goes according to plan the Olympics in London. Past London, well that difficult to see past it right now as everything is geared toward London Paralympics, but 2016 in Rio is a strong possibility!"

**What was your experience like as Nedbank Brand ambassador and SASPD torch bearer the last year?**

Emily: "Amazing! I learnt so much specifically from a business point of view in sport. Things like functions and corporate involvement and how to ensure you able to keep sponsors and important individuals informed and satisfied at all times"

**If you had a similar situation thrown at you again, such as the cancer at a young age or someone else was diagnosed with cancer at a young age, what would you say to yourself or that person?**

Emily: "Stay Strong! That you are actually able to get through difficult

times. Linked to life, you will actually be surprised how you can get through things!

Emily is always very appreciative of her sponsors over the last number of years namely the HPC, Speedo SA and VRP (Vitamin Research Products). This shows the character of Emily through and through. The words of Stephen Hawking summarises the character and mindset of Emily. A true champion in the making. On behalf of TuksSwimming and the hpc we really wish Emily well!

"It is a waste of time to be angry about my disability. One has to get on with life and I haven't done badly. People won't have time for you if you are always angry or complaining." – Stephen Hawking.

Only a handful of the current **hpc** staff members can lay claim to the fact that they have been at the hpc since its inception, and still work here today. Toby Sutcliffe, CEO of the High Performance Centre is one of the few. Toby worked as general manager at the ICON rugby academy when, in 2000, TuksSport, ICON and the University of Pretoria planned the establishment of a high performance centre which would include a sports school for the exclusive attendance of talented youngsters from various sport specific academies. His first official function at the hpc was as sales and marketing manager at the grand opening of the facility in May 2002.

Many things have changed since the doors opened on 10 May 2002, in large part thanks to Toby's initial advice in terms of business opportunities and his knowledge of the needs of the international sports market. It was not long before he was promoted from sales and marketing manager to CEO of the company in 2005. Since he took up the position of CEO the company has flourished and its turnover shown immense growth.

The road up to where the **hpc** finds itself today has - at times - been a rocky one, mostly because

of the pioneering role the High Performance Centre played in South Africa. Marrying high performance sport and education and streamlining it into an economically viable model required a special touch – and Toby proved to have just that touch.

Toby's success in establishing a business plan in the world of high performance sports services was evident in the response he received when he presented the **hpc** and its business model to sport services at the Association for Sports Performance Centres congress in Beijing in 2007. He was swamped by CEO's and general managers of prestigious sports institutions around the world, all requesting private consultation opportunities. At the end of the 2007 Congress, Toby was elected onto the ASPC board as Vice President, with the directive to represent Africa, a position he still holds today.

Achieving success in the fickle world of sports administration in South Africa requires someone with strong leadership qualities, vision, superior people skills, business acumen and an in-depth knowledge of sport. Looking back at Toby's road to becoming CEO, it seems that his current position was his destiny. Born and bred in

PE, Toby matriculated in 1976 at the prestigious Grey High School. After his compulsory military service in the Navy, he enrolled at the PE Technikon where he completed his Sales and Marketing qualification. While still a student, Toby was recruited by the late Springbok, Amos du Plooy, to work in the PE Technikon Sports offices. During this time he completed the South African Institute's Public Relations diploma.

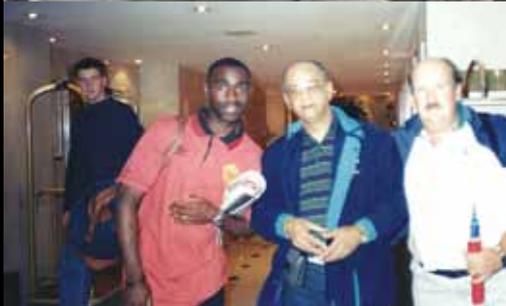
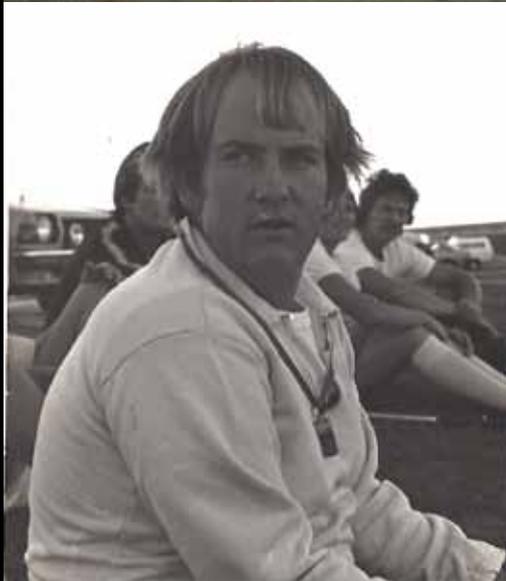
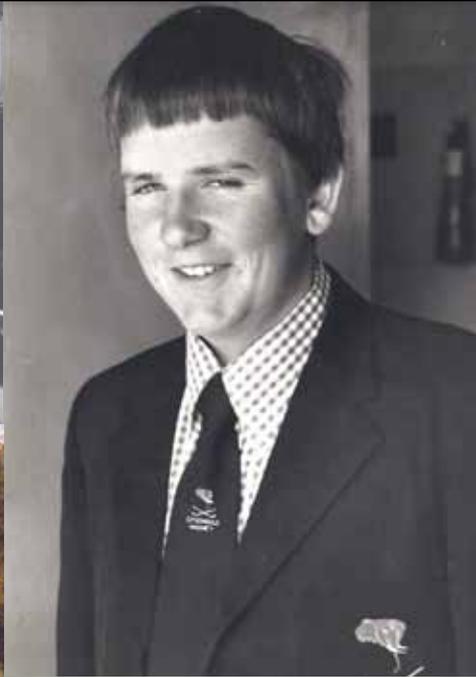
After ten years in the PE Technikon's sports office, Toby went into sales and marketing positions in the liquor industry before he moved onto an international electronics company. He was recruited as general manager of ICON Rugby when rugby became a professional sport, and then joined the hpc in May 2002 as sales and marketing manager.

Toby actively participated in hockey and cricket since his days as Grey boy, establishing himself as wicketkeeper and opening batsman in the cricket team, and centre back in the hockey team. When he retired from playing club level hockey and cricket, he took up golf at age 28. It wasn't long before he played league golf and won tournaments such as the National Nomad's tournament in George. He is still a feared competitor in any golf competition,



# Toby Sutcliffe

*Text: Rocco Meiring Images: Reg Caldecott and Toby's own collection*



His understanding of the constantly changing world of sport and the extreme dynamics involved at high performance level gives guidance and stability to the organisation as whole

but says what he enjoys most is playing golf with his wife and sons on holiday at Arrabella (tell that to all the guys he so smilingly puts to shame!). The “Sutcliffe family fourball” is a competitive affair with respective handicaps of 7, 7, 7 and 13!

Toby’s history of sports administration, umpiring and coaching goes hand-in-hand. Not only was he the youngest schoolboy (age 16) to receive a national grade in hockey umpiring, he’d hardly left the school benches when he started the PE Technikon sports office back in 1979 when it moved to Summerstrand.

In his capacity as sports administrator he served on many committees and in different capacities, the most prominent of which included the positions of secretary of EP Hockey, chairman of the SA Technikon Hockey Association, executive member of EP & Border Nomads Golf, general manager of ICON Rugby Institute General manager, vice president of the Association of Sports Performance Centres and his current position of CEO of the University of Pretoria’s High Performance Centre.

Toby’s sport prowess extended to coaching as well. He excelled in hockey coaching from grass route participation all the way to national level. He started his coaching career with mini-hockey where he ended up compiling the first ever National

Mini-Hockey coaching manual and acted as co-ordinator of the National Mini Hockey coaching. Toby also coached the EP u/21’s, EP senior B team, Border’s senior men’s team and ultimately the South African Technikon men’s side that toured England, Belgium and Spain.

In between coaching and umpiring hockey, Toby acted as part time cricket broadcaster for the SABC in both Afrikaans and English. He retired from hockey umpiring after 30 years of service, the last 12 of which he headed umpiring in South Africa. His most memorable moment of this stage of his life was when he umpired an International between France u/21’s and a South African combined team.

As cricket broadcaster he recalls the 1-day test in Port Elizabeth between Kim Hughes’s Rebels and South Africa, when Clive Rice’s hat trick clinched the victory for us, as his most memorable. Toby also commentated on the epic match when EP beat Transvaal’s “Mean Machine” against all odds to win the Currie Cup.

Looking back at his time at the hpc, Toby rates the 2010 FIFA World Cup and the role he played in directing the hosting of the Argentinean team as an unforgettable experience. The Argentinean Technical Director’s comments as having the best Team

Base Camp of all the teams confirmed the hpc’s mission to provide the best possible service to its guests. This service-driven mission

of providing the best possible environment for all our clients lies at the core of the ethos Toby wants his staff to embrace. He also remembers his promotion to the position of CEO and his successful presentation of the hpc’s business plan thereby securing the company’s future, as a major sense of accomplishment.

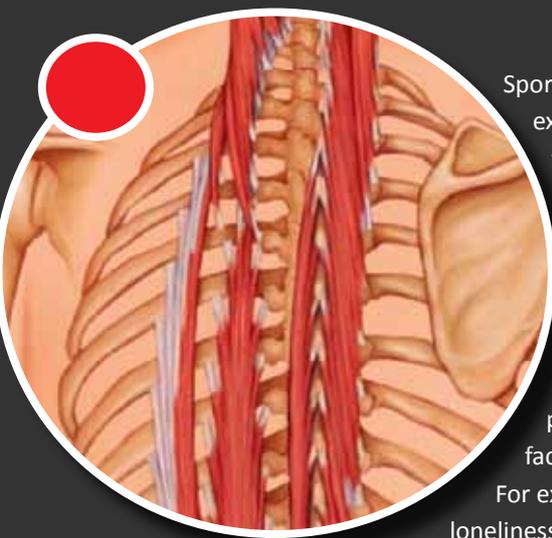
His understanding of the constantly changing world of sport and the extreme dynamics involved at high performance level gives guidance and stability to the organisation as whole. Toby values giving back to society through the medium of sport and focuses on making a tangible difference in an aspiring athlete’s life, irrespective of his or her level.

He believes that it is mainly due to the positive influence his parents had on his life that he has been able to cope with the 24/7 vocation of sports administration at the highest level.

When he’s not at work he values spending time with his wife Mandy and two sons, Murray and Duncan as most precious. Both Duncan and Murray study at the University of Pretoria while his wife works in sports administration at St Alban’s College. Toby is very proud of his family and the role they play in his life as father, husband and CEO of such an elite sports environment.

# The psychology of sport injuries

*Text: Monja Human and Maurice Aronstam, hpc*



Sport injuries are probably the most dreaded experience athletes might face during their sporting careers. Traditionally, sport medicine professionals have directed the major part of their research and rehabilitation attention towards the physical recovery of injured athletes. However sport injuries and injury rehabilitation involves not only a physical process but also psychological factors that impact on the injured athlete.

For example, anxiety, fear, depression, loneliness, separation, loss of confidence, threat or loss of status and identity, and acute and chronic pain are argued to be important psychological consequences of, as well as emotional responses to injuries.

One consequence and response that sport researchers have focused on, is the pain associated with injury. Pain is seen as a pervasive and debilitating obstacle for the injured athlete because it threatens and alters the athlete's

ability to participate in sport. Pain also has an impact on the rehabilitation process as it influences aspects such as adherence to rehabilitation programmes. Thus, an adequate understanding of injury pain requires knowledge of not only its biological substrates but also its psychological aspects.

Talking to athletes about their injury is an important part of injury diagnosis and rehabilitation, as it is thought that this talk or interaction, can increase adherence to rehabilitation programmes and reduce recovery time. One aspect of this interaction is the talk that centres on injury pain. Injury pain



is a key diagnostic feature during consultation and provides important information that can facilitate the rehabilitation process. Therefore, understanding how athletes talk about their injury pain, may bring forth new ways of dealing with this pain. Furthermore, better understanding may assist health professionals in providing better quality care to injured athletes.

**Different types of pain.**

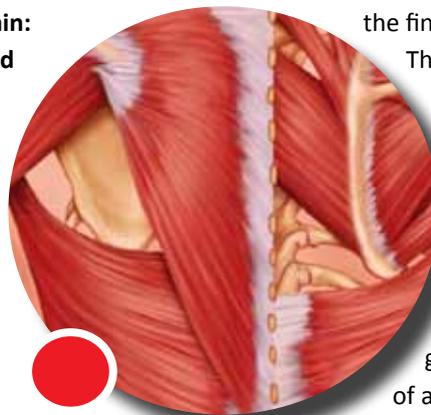
It is important that when athletes are injured they realize that there are different types of pain. Distinguishing between these types can give athletes a sense of control and assist

sport medicine professionals in treating them.

**Categories of pain:**

**Performance and injury pain.**

The two broad categories associated with pain are **performance and injury pain**. **Performance pain** tends to be acute, short in duration, and the result of voluntary action, and therefore, athletes may feel more in control of performance



pain. An example of performance pain is the short but acute burning sensation in a cyclist's legs during the final sprint of a race.

The cyclist can use performance pain as an indication that she is reaching her physical limitations. Hence, the experience of performance pain gives athletes a sense of accomplishment and, therefore, may work to inspire athletes to higher levels of training and competition. Feelings of satisfaction, improved performance,

and an enhanced sense of well-being are common responses to performance pain. As a result, performance pain is viewed as positive, and a facilitating aspect of sports participation.

However, it is important to differentiate when performance pain starts to border on **injury pain** because injury pain is often indicative of tissue damage or injury. A cyclist who falls off her bike, rolls on her ankle and hears a load cracking noise, is an example of an athlete who is likely to experience injury pain. Injury pain signals danger to an athlete's physical and psychological well-being and can be perceived as a threat to their ability to perform. Therefore, injury pain is often perceived as negative and often leads to protection of the injured area. Injury pain is not subject to the control of the athlete and may be of either an acute, chronic, benign or harmful variety.

**Types of pain: Acute, chronic, benign, and harmful pain.**

Firstly, the distinction between **acute and chronic pain** is indicative of the duration that an athlete experiences pain. **Acute pain** is an intense pain that is most often short in duration, and is the result of tissue damage and trauma to the body. The perception of traumatic injury tends to provoke fear and anxious concern for the athlete's well-being, and therefore, the fear and anticipation of acute pain may be more severe than the

experience itself.

**Chronic pain**, on the other hand, is best conceptualized as the persistence of pain. Therefore, it is longer lasting pain, largely uncontrollable, and continues long after the initial injury. Perception of chronic pain may impair an athlete's social and psychological well-being.

Two other types of pain that need to be discussed are benign and harmful pain. **Benign and harmful pain** helps an athlete to evaluate and distinguish the status of pain, whereas acute and chronic pain provides information about the duration of pain. Athletes' differentiation between benign or harmful pain provides useful information in the rehabilitation process as awareness and assessment of benign or harmful pain may enhance their perception of control over the pain.

Therefore, an athlete may feel more in control of their pain if they are able to recognise, assess, and understand the type of pain they are experiencing.

**Benign pain**, though generally short in duration, is a dull and more generalised type of pain that is characterized by absence of swelling and lasting soreness. Benign pain can be a motivating factor that facilitates rehabilitation. Athletes can therefore, use benign pain to provide guidance and assurance that this type of pain sensation is a natural part of the healing process.

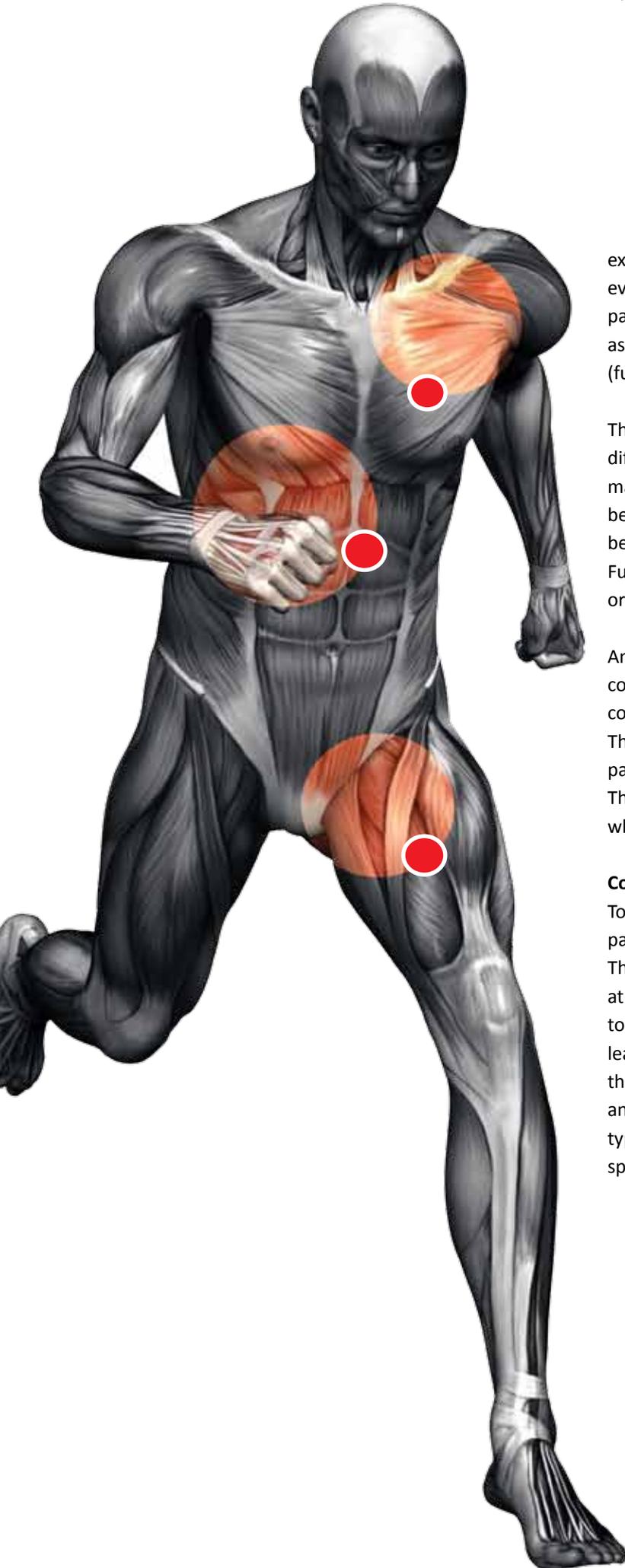
**Harmful pain**, on the other hand, is associated with sharp pain, prolonged soreness, characterised by swelling and localized to the injured area. Harmful pain can occur anytime during the rehabilitation process. This means that a client can enter the rehabilitation process with harmful pain, or harmful pain can be exacerbated by exertion, and activities, or exercises, that form part of the rehabilitation process.

**A model to help athletes understand pain.**

Pain could be viewed as a dynamic and reciprocal interaction between biological, psychological and socio-cultural variables that tend to shape an athlete's response to pain. This model argues that the biological substrate of pain affects both psychological factors such as mood, and the social context within which the person exists such as interpersonal relationships. According to the conceptual model of pain, pain begins as a biological event (**nociception**) that gives rise to psychological awareness (**perception**). From this follows a search for **meaning**, which subsequently serves as a guide for **action**.

The **perception** of pain is seen as a summation of inputs from multiple brain centres, including the centres that serve emotion and memory. Perception sets off a psychologically driven chain of events, the goal of which is to give **meaning** to pain. Consequently, athletes search for meaning is a process of making sense of their injury pain, and how this can affect their lives and sport participation. Pain acquires some of its meaning from prior experience, present state of mind, and future





expectations. That is, pain takes on meaning as a person evaluates initial perceptions in the light of memories of other painful events (past), current physical limits (present), and an assessment of how the injury will influence further activity (future).

The meaning that an athlete attaches to pain, leads to different and multi-layered **action**. Action, therefore, has many forms and includes responses such as distinguishing between different types of pain (performance, injury, benign or harmful), as well as interpreting or ignoring pain. Furthermore, action leads to decisions concerning whether or not to continue training or performing.

Another form of action includes the reporting and communicating of pain to significant others including coaches, parents, team mates or health care professionals. The way in which an athlete displays and talks about their pain can determine the way others respond to the athlete. Therefore, pain is a private experience that becomes public when athletes report and talk about their pain.

### **Conclusion**

To conclude, it is important to realise that sport injuries and pain is not only a physical process but involve much more. Therefore, although pain is a universal phenomena, each athlete perceives pain differently. Pain is perceived according to a variety of physical, psychological, and social factors that lead athletes to attach unique and different meanings to their pain experience, which in turn influence their actions and behaviour. Distinguishing and talking about the different types of pain can give athletes a sense of control and assist sport medicine professionals in treating them.

# INTEGRATED APPROACH

## THE MISSING TO REHABILITATION STABILITY FACTOR

*Text: J.J.W Swart (BPhysT) UP*

Why can this guy squat on the physioball and you can't? Seems a bit unfair, seeing as you have been diligently attending training sessions, pushing yourself consistently while steadily increasing the load and intensity. So...

Why does this exercise remain so elusive?

Understanding the requirements of the body can give us insight into the execution of the movement. The human body needs mobile joints to function correctly, but the control of mobility and the ability to stabilise dynamically is often lacking.<sup>[1]</sup>



Figure 1: Squatting on the ball, the ultimate squat.

The approach most athletes think about when coming to physiotherapy is the traditional stretching the "tight" muscles and strengthening the "weak" muscles.<sup>[2]</sup> Unfortunately this is sometimes true. Focusing on muscle imbalances as the only culprit results in stability and motor control (control of mobility) frequently being overlooked in the design of rehabilitation and performance programmes.

As our understanding of functional anatomy and biomechanics

improves, so does our knowledge of motor function and recruitment. We now know that we can classify muscles into mobilisers (responsible for movement) and stabilisers (responsible for stability at low loads). We can further sub-group stabilisers into local (control translations at small joints e.g. the spine) and global stabilisers (controlling motion through range). This knowledge enables us to diagnose dysfunctions within these systems and give the appropriate intervention to correct it.<sup>[3]</sup>

This leads us back to the ball squat. In order to achieve this feat of control and strength, the balance between the local and global stability system should work in harmony with the mobiliser system without any compensations. Compensation occurs in order to accomplish a functional task, despite the potential danger to human body (develop pathology or incurring injury).<sup>[2,3]</sup>

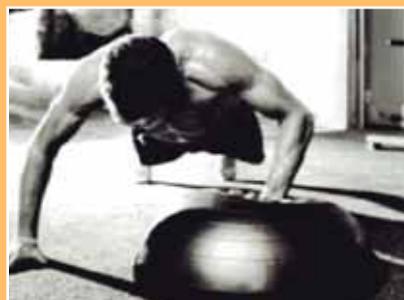


Figure 2: Lance Armstrong incorporating functional stability training into his programme.

A compensation commonly found in elite athletes are an excessive increase in the global stability system's force production and a substitution by the mobiliser systems for local stability.<sup>[4]</sup> This results in a co-contraction i.e. bracing movement especially during spinal, shoulder and pelvis stability exercises. Muscular co-contraction does not equate good stability especially if the exercise is performed at low load.<sup>[1,2]</sup>

Correct application of these exercises requires that breathing should not be affected, so if you hold your breath you are bracing not stabilising. Normal rotation should be able to take place with eccentric control and not restrict the movement, so if you are isometrically eliminating rotation you are bracing not stabilising. Finally reliable low load activation should occur consistently without fatigue, so if you are using different muscle firing patterns for the same exercise you are bracing not stabilising.<sup>[3]</sup>



Figure 3: Core training - Stabilisation at trunk while moving the extremities.

Performance depends on the correct integration of various factors including motor control. Incorporating functional stability as a component in rehabilitation is essential. Combining physiotherapy with the integration of exercises and manual techniques to facilitate the correct balance between mobility, strengthening and motor control (stability) is the basis for functional rehabilitation.<sup>[3]</sup> These principles are found in a variety of body-weight exercise systems that emphasises motor control for example Pilates and Yoga.<sup>[5]</sup>



Figure 4: Yoga and Pilates not what you think!

The above mentioned systems value lie not only in their stretching and strengthen ability (read strengthening not hypertrophy), but their greatest value lie in their ability to re-educate motor control. This results in improved neuromuscular control and correct muscle firing patterns, allowing for improved functional stability. Without a stable base, force production becomes ineffective as some energy is used for stabilisation.<sup>[4]</sup> Incorporation of functional stability into your training might just be what you have been missing all these years!



Figure 5: The human flag, not showing off but displaying a fully integrated motor system.

### Improve your stability:<sup>[6]</sup>

1. Prone on elbows with trunk, hips and knees in neutral alignment. Bend at the knee and extend the hip past neutral by moving the heel towards the ceiling. Hold for one second and return to parallel. [Figure 6]
2. Side-lying on elbow with shoulders, hips, knees and ankles in line. Raise the top leg up towards the ceiling keeping the foot of the top leg horizontal. Hold for one second and lower leg. [Figure 7]

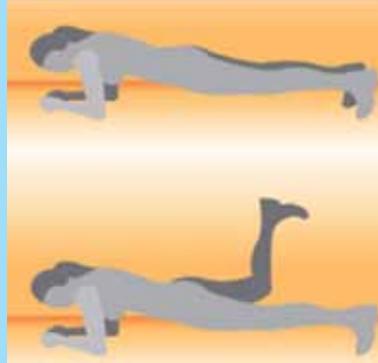


Figure 6: Front bridge with hip extension and knee flexion



Figure 7: Side bridge with abduction

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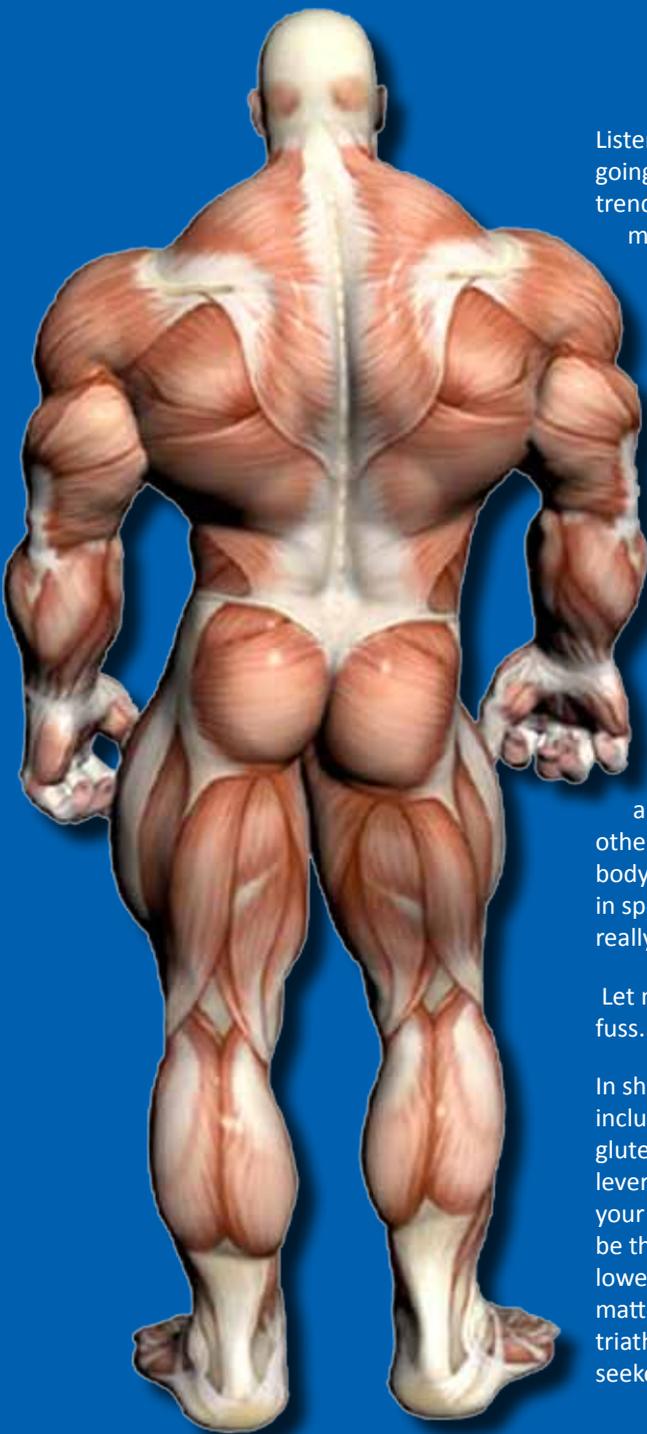
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# Are the Glutes really KING?

*Text: Amy Bathgate - Biomechanics & Video Analysis, hpc*



Listen to most of the “catch phrases” going around, the modern training trends and the general idea behind movement principles today and it won’t take long before you start hearing something about the gluteus muscle group. “They are the biggest, most important muscles in your body – so use them!” “The glutes are key.” “If you strengthen your glutes everything will fall into place.” “Your glutes aren’t firing properly.” I, myself, have been caught up in this. It makes so much sense. Research has correlated weak or poor gluteal functioning with many injuries from lower back pain, to knee ailments, to ITB and many, many others. The glutes seem to rule the body to a certain extent, especially in sporting activities... But do they really??

Let me try to, firstly, explain all the fuss...

In short, too many people (athletes included) have weak or dysfunctional gluteal muscles. And due to the leverage advantage they have over your legs, the glutes should always be the primary muscles that drive lower body movement. It doesn’t matter whether you are a golfer, a triathlete or just a weekend fun-seeker, your glutes are undoubtedly

important if you want to move efficiently. So where or why does it all go slightly haywire?

There are two main reasons:

## **1. Inhibited glutes** (Reciprocal inhibition)

In this situation the gluteal muscles are neurologically shut down and do not contract effectively. The body is amazing in the way it protects muscles by relaxing them when the opposite (antagonist) muscle is contracted or tightened. This is a built in injury prevention mechanism that we cannot control. When we look at the hip area, specifically, the glutes are often inhibited in this way and unable to perform their primary functions due to the excessive activation of its antagonist, the hip flexors (particularly the iliopsoas). Our modern lifestyles, the amount of sitting we do on a daily basis and the general lack of effective stretching leaves them almost permanently in a shortened position which becomes “normal”. As the hip flexor group shortens, it pulls on the pelvis and the ideal neutral pelvic posture (in which the glutes are most effective) becomes compromised, creating either an anterior or posterior pelvic tilt.

## **2. Relative glute weakness** (Synergistic dominance)

Here the glutes DO fire correctly, but are not as strong as other lower body muscles (eg. quadriceps), thus the body will naturally use the stronger muscles to do what the glutes SHOULD be doing, resulting in inefficient performances and compensation patterns. Even when performing exercises or movements aimed at strengthening the glutes (squats, lunges, deadlifts, etc.), the majority of the work will be done by the strongest muscle groups involved. (Natural body structure and technique employed during exercise will obviously also affect this dominance.) What happens is that people who don't have *naturally* great glute activation patterns and don't have *naturally* good muscle balance (ie. glutes stronger than thighs) get in the gym and do exercises that SHOULD target the glutes, but end up emphasizing their imbalances and strengthening the strongest muscle group. You need to be strong, but you need strength in the right places – efficiency reduces injury risk.

Looking at these two more closely, we see that they go hand in hand, as well as in isolation, because the hip flexor muscle group includes the anterior thigh muscles, meaning that if the glutes are RELATIVELY weak, chances are often good that the hip flexors will be either overactive, or tight, or both. So thats easy then – just stretch the hip flexors and problem solved? Well.. No. What if the hip flexors are weak or lacking in optimal strength?

To have optimal glute activation, you need good femoral control. *Femoral control* means the muscles that attach on the upper thigh bone from up around the waist (the psoas and glutes) should be fully in control of the thigh bone, rather than those that attach lower, such as the TFL. This correctly pulls the head of the femur tight into the hip socket preventing excessive movement. If the hip flexors (particularly psoas) is weak, flexing the hip will be done by the muscles that attach lower down on the hip and thigh end up doing the work. This often leads to a

posterior hip tilt and sacrifices good activation patterns for activation of the TFL and hamstrings – also affecting the positioning of the femur head in the hip socket.

So all in all... The topic of glute activation and the practice of prescribing a ton of glute activation exercises is very popular these days but if you create the proper posture and have the right muscle balance you won't need to use glute activation exercises because the glutes will naturally activate. The key is getting your body

working efficiently so that ALL your movements are driven by the correct muscles.

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**What is Biokinetics?  
What are common  
issues faced with  
rehabilitating  
athletes?  
And treatment  
recommendations**

# Where does Biokinetics fall in the integrated approach to exercise?

*Text: Shelly Malan, Biokineticist, Institute for Sports Research*

## What is Biokinetics?

Before we can understand where Biokinetics fits in the rehabilitation process, we need to have a clear definition of what a Biokineticist is. The word Biokinetics is taken from the Greek word "BIOS" which means "life" and "KINESIS" which means "movement". In other words, it refers to the maintenance of quality of life through the use of physical activity (Grenfell, 2010). A Biokineticist is a trained professional who specialises in final phase rehabilitation for a variety of conditions. These conditions include rehabilitation for:

- Injuries
- Surgeries
- Special populations with special needs such as diabetes, cancers, cerebral palsy etc.

This is achieved by conditioning individuals according to their needs by means of a scientifically based physical activity programme. However Biokinetics is not limited to the list above, it is also concerned with promoting health both in work environments and at home, as well as the maintenance of physical abilities (BASA, 2012).



## What is the Role of a Biokineticist in the rehabilitation process?

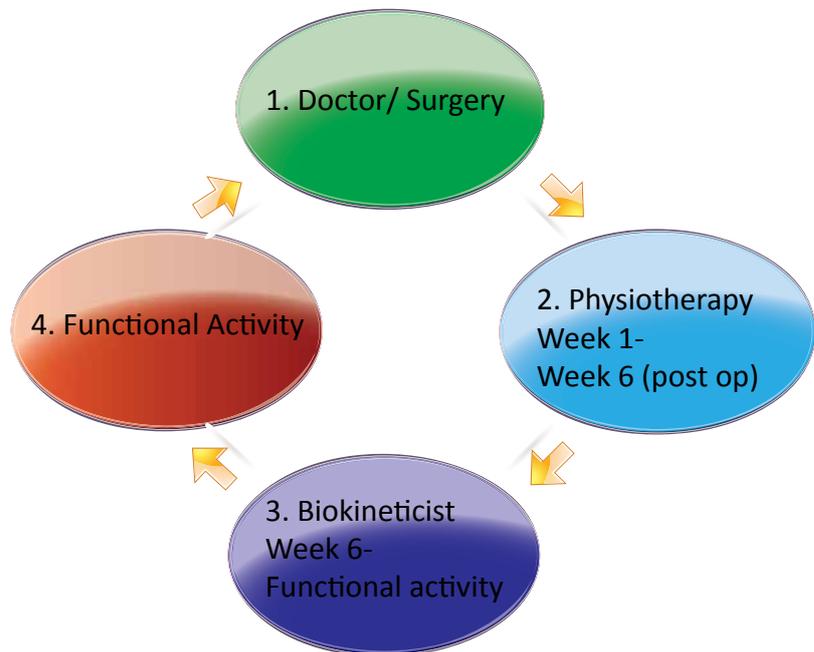
Now that we understand what Biokinetics is, we must identify where it fits in the rehabilitation process. As previously mentioned Biokinetics is final phase rehabilitation. In an ideal world, there are four phases of rehabilitation, namely:

As each situation and injury is specific to the individual involved, this order and process is changed and adapted to be the best rehabilitation process for that particular condition. For example, an individual may see a Biokineticist before they go in for an operation (phase 1) to condition their muscles in order to decrease the time required for rehabilitation after the operation (Ditmyer, Topp, Pifer, 2002), this is called "Pre-rehabilitation".

When the patient comes for rehabilitation, the goal for the Biokineticist is to regain the patient's pain free functional activity that. This is achieved with specialised programmes that target the patient's individual needs. Programmes are then updated weekly or monthly (depending on the patient) by means of:

- More difficult exercise,
- Increasing weight and sets,
- Involving balancing in the exercises,
- Including more sports related exercises,
- Including exercises that mimic daily activities (this is more for your elderly patients, who have undergone replacement surgeries).

As previously mentioned, Biokinetics is not solely for rehabilitating those recovering from injury or surgery, there is also a big need for it with regards to rehabilitating people who suffer from hypokinetic diseases.



Time is often an excuse as to why people choose not to exercise, be that for rehabilitation purposes or for maintaining healthy bodies.

Hypokinetic diseases are diseases caused by “lack of movement”, unhealthy diets, smoking and even stress (Moss & Lubbe, 2011) (Steyn,Fourie, Temple. 2006). Examples of such diseases include:

- High blood pressure
- High cholesterol
- Heart disease
- Diabetes
- Obesity

Biokineticist are qualified to help individuals with these conditions by means of researched and scientifically proven exercise programmes. Even more importantly, they can help prevent these conditions from occurring, especially for those who may be at risk for certain diseases, such as obesity and cholesterol. The same can be done for those who suffer from chronic conditions such as arthritis, osteoporosis, multiple sclerosis, cancer, and epilepsy, to name a few.

Time is often an excuse as to why people choose not to exercise, be that for rehabilitation purposes or for maintaining healthy bodies. This is why Biokinetics has a specialised field namely: Corporate Wellness. This is when Biokineticist are either employed by businesses or contracted out, to oversee the wellness of the employees. This endeavour has grown profoundly over recent years, as research has shown, for example the study by O’Rourke and Sullivan (2003) stated that for every dollar invested in wellness programmes, participating companies found that it saves \$ 3.95 in medical expenses.

### What service can you expect when you go see a Biokineticist?

An individual requiring treatment for any of the conditions previously mentioned can expect the following from a Biokinetics evaluation (Grenfell,2010):

- Have a thorough medical history evaluation.
- Measurement of blood pressure and heart rate to assess the likelihood of possible health complications.
- Range of motion evaluation to assess flexibility. Poor flexibility can impair one’s ability to perform certain activities (sport or normal tasks of daily living) properly.
- Assessment of body composition and waist to hip ratio. These can help determine one’s risk for coronary heart disease.
- Measure muscular strength, endurance and power.
- A postural analysis to identify any deviation which have either lead to injury or will prevent a proper recovery.
- Assessments of the core stability, and the ability of “stabiliser muscles” to function properly.
- If so requested a cholesterol and glucose test can be conducted. In addition, specialised equipment that may be requested include; electrocardiograms (ECG), Biodex (both used for balance or muscle strength), and similarly the Cybex (for muscle strength). This is subject to availability at certain Biokinetic practices.

Once the applicable assessments have been made for the specific condition, the Biokineticist develops a scientifically sound exercise programme based on the results. The Biokineticist will require a one-on-one training session to carefully explain the programme, thus allowing the patient to perform the exercises to make sure they are performing them correctly and to allow for any uncertainties to be cleared up. Programme updates can be made anywhere from weekly to every six week depending on the condition. One-on-one, personal training can be requested as well as group training (Grenfell,2010).

This special attention to patients’ individual needs ensures for quality management and best possible service.

For more information please contact the Institute for Sport Research (ISR) at the University of Pretoria.

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# Institute for Sports Research

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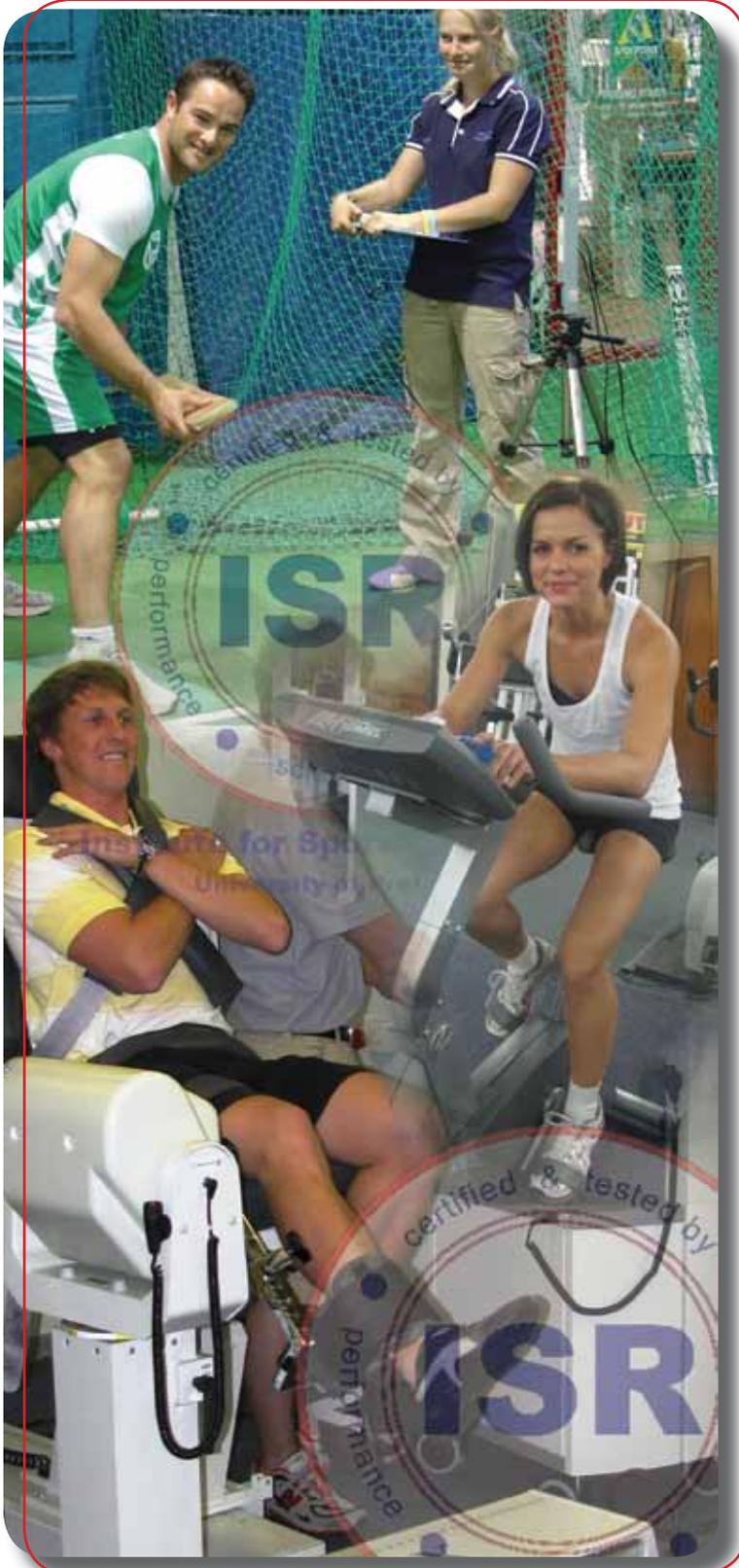
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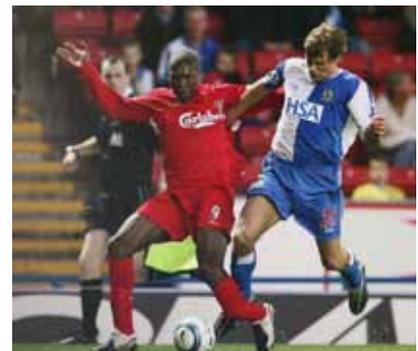
# From Rehab to the Training Field

*Text: Wayne Coldman, hpc*

Injuries are a part of sport, it is something that is unavoidable. How we deal with the athlete and the injury is crucial is the athletes chances of a successful return to sport. Most athletes and parents know the correct steps of this process but seem to cut the rehab process short and therefore increase their risk of either a compensation injury or a return of the original injury.



Injuries can be placed into 2 categories. Avoidable injuries such as muscular tears, chronic overuse injuries and Unavoidable injuries such as bone breaks due to impact. Unavoidable injuries are simpler to work with as the cause of the injury was very simple to diagnose, however, with avoidable injuries, we need to find the underlying movement dysfunctions that is causing the athlete problems. If we do not find the underlying cause and correct it, the athlete has a great chance of repeated injuries in the area.



In the case of an avoidable injury, the first few steps are simple. 1) Apply post-injury recovery techniques (RICE). 2) Contact your doctor and schedule an appointment. 3) See your physio based on the





doctor's assessment. 4) Rehab with physiotherapist. 5) Rehab with a biomechanist.

Step 5 and into sport is where the rehab process falls short for most athletes. The problem is we have never addresses at the athlete's abilities and level of performance before to return to the sport. Most athletes return when they are pain free. They skip the last phase but this where we can address all their imbalances and dysfunctions. Once the athlete has successfully completed the first 3 steps, it is crucial that we test their functional state. I like to test this all my clients that have either; been on the injury list as 6 weeks, been on crutches which places the body under an unusual type of strain and all young athletes. The High Performance Centre uses a functional movement screen to help us identify any problematic areas and movement dysfunctions. We have identified this as a crucial step in helping our athletes and giving them the best chance of a successful return.

The athletes that are returning from injury, as well as the athletes that have been identified with a risk of injury, are kept out of the

full training system. By taking our athletes out of the main system, we relieve them of them of unneeded stressors that normally cause all the problems. Stressors such the pressure to progress, social acceptance and performance based goals instead of process based goals. These groups also provides the trainer to work with smaller groups to increase individual attention and most importantly, allows the athlete the freedom to work at the areas of concern at their own pace. Every athlete will progress though the rehab process differently depending on their personality and mindset. The latter is a very important aspect of the rehab process that most people skip past without understanding the need for psychological healing too.

Some athletes progress from rehab back into sport as if it was just another day at training but not all athletes react the same way. An injury can sometimes be a very traumatic event for the athlete, the pain and strange feeling in the area can causes a loss of confidence and fear. This means the athlete could be physically ready long before they regain full confidence in themselves

or the injured area to perform the task. Instilling confidence is just as important as fixing the injury. We strive to create an environment which provides our athletes with the opportunity to work on getting themselves stronger and better than they were before. We work within a very dynamic system in which the athletes have a goal based environment to speed up the athletes return to the playing field but WITHOUT comprising the full rehab process. Complete the rehab process; make sure you take the opportunity to address all underlying potential risks to yourself, your athlete and your child.





## SSL Powered by PVM coming to South Africa

### General Background information

#### Who is PVM?

PVM is part of the Provitamin group of companies and PVM stands for Proteins, Vitamins & Minerals. The company was established in the late 1960's as a result of intensive scientific research undertaken by the National Institute of Food Research of the CSIR (Council for Scientific and Industrial Research).

As a result, PVM Nutritional Sciences became one of the first companies to manufacture clinical nutritional products to combat severe malnutrition and produced the World's Original Energy Bar®, based on an earlier product developed to provide essential nutrition for military personnel in combat. PVM has 3 divisions and we produce quality nutritional products and provide various scientific services to:

- Institutional / Therapeutic / Clinical Nutritional Market
  - Clinics & Hospitals
  - Feeding Schemes
  - NGOs
- General Health & Wellness Market
- High Performance Sports Market including Sport Science Lab

For over 40 years PVM has been

involved with numerous elite athletes across various sporting codes. They include World champions, Olympic medalists, and various Provincial and National teams not only in South Africa but internationally as well.

#### Who is Sport Science Lab Powered by PVM?

#### Making a Difference - Building the Perfect Athlete

Since 2005 PVM has been involved with the Toyota Cheetahs not only as a major sponsor but we are also sub-contracted to condition the players. PVM recently acquired exclusive rights from Sport Science Lab in California, USA – a world leader in the high performance sport market. SSL has a proven track record in the sustained improvement of athletic abilities of both athletes competing at the elite level as well as during their developmental phases of children.

The SSL knowledge, services and equipment employed by SSL are unique and exclusive to SSL, and are above and beyond the interventions of existing high performance centre's, not only in South Africa. SSL South Africa will be headed by Niel

Du Plessis PVM's head sport scientist and currently in charge of the conditioning of the Cheetah players. PVM intend to open a SSL in South Africa during 2012

#### SSL –California USA

Sport Science Lab is located in San Juan Capistrano, California. The \$50 million athletic complex is state of the art and rivals any facility in the USA.

Sport Science Lab is a company founded by Gavin MacMillan. The focus of SSL is the continued development and improvement of athletic training modalities that improve all aspects of elite sports performance. SSL offers training programs for athletes of any sport and any caliber with the single goal of improving performance. Improving general fitness is also available for those who wish to train like athletes do.

What differentiates the SSL program is that we prepare our athletes to be able to handle whatever adversity they might encounter. We are truly trying to build the Perfect Athlete by improving all of the qualities elite athletes require to be successful. Athletes need coordination, rhythm, timing, balance, proprioception, joint mobility, muscle flexibility,

muscle balance, all types of strength, awareness of space, reactive ability, foot strength, biomechanical efficiency, mental abilities, confidence, and of course sport specific skill.

Conventional training methods that are primarily focused on the maximum weight lifted in a linear fashion do not adequately address the needs of ANY elite athlete. Conditioning programmes in general fall far short in terms of properly preparing athletes for their specific sport. We address all of the needs of each athlete from head to toe and it starts with a proper evaluation. By having a firm understanding of the human body and how it functions in sports, customized equipment has been designed and manufactured, to improve movement capabilities and to decrease the risk of injury during training and competition. Children are often exposed to sports with little or no foundational preparation in how to use their bodies before they are asked to compete. That is why most become a discarded statistic and the few exceptionally gifted ones survive the current system to continue to move on to higher levels of their sport. SSL intend to change that. Children need to be taught to run before they play in a sport that requires running. They need to be taught to hit and throw before they step foot on a baseball or cricket field. If not, the chances for success are slim to none.

Whether it's improving sports performance, rehabilitation or general fitness, Sport Science Lab has the tools to fulfill the needs of every person that walks through our doors.

### What is PVM's involvement with the Cheetahs?

Toyota Cheetahs are Powered by PVM Nutritional Sciences. PVM is the official performance nutrition sponsors of the Cheetahs and are subcontracted to condition the players. PVM's interventions during 2011 and subsequent increased sponsorship investment enabled the Toyota FS Cheetahs to retain/



resign certain key senior players which would have been lost to other franchises.

PVM has also recently acquired the exclusive rights for Sport Science Lab (SSL) in South Africa a world leader in the scientific field of conditioning and training of athletes. SSL South Africa will be headed by Niel Du Plessis PVM's head sport scientist and currently in charge of the conditioning of the Cheetah players

### PVM Sponsorship enables the contracting of certain top Cheetah players

It is with pleasure that we can announce the renewal of a major

sponsorship agreement with PVM Nutritional Sciences totalling R10 million over the next two years. PVM a leader in the field of performance training and nutrition (PTN) and producers of the Worlds original Energy Bar ®has been an integral part of the successes of the Toyota Cheetahs since 2005. PVM's increased sponsorship investment, given the uncertainty about Super Rugby, is evidence of PVM's loyalty, commitment and confidence in the

Toyota Cheetahs and indeed the Free State province at large. Our relationship and sponsorship agreement with PVM is unique in the world of sport sponsorships. Above and beyond the sponsorship agreement, whereby PVM looks after the nutritional aspects of players and are the exclusive provider of performance nutritional products to players, PVM are also subcontracted to condition the players - a fact that few people are aware off. Niel du Plessis, PVM's head sport scientist is in charge of the fitness and conditioning of the players, full time. More recently PVM acquired exclusive rights from Sport Science Lab (SSL) in California USA . SSL is a world leader in the high performance sports

market and we are extremely excited about having access through PVM to the SSL expertise. PVM is therefore not only part of the Cheetahs team set -up but is indeed our high performance partners.

Lastly we want to convey our gratitude to PVM for their interventions in 2011 and subsequent increased investment that directly enabled the Toyota Cheetahs to retain / resign certain key senior players, which would otherwise not have been the case.

**Official Press Release: Harold Verster: MD Toyota Cheetahs**

# There is more to injury management than ice ...

While ice, rest and physical therapy are significant in the treatment of injuries, researchers are discovering that what an athlete consumes after being injured and during treatment can either delay healing or promote recovery.

The healing response is illustrated in three stages:

1. Inflammation starts at the time of injury and continues for 4 – 6 days and is in place to clear out injured tissue debris.
2. Proliferation starts 3 – 4 days post injury and lasts up to 2 weeks. During this stage there is synthesis of epithelial cells and collagen to form temporary replacement tissues.
3. Remodelling starts in the second or third week and can continue for over a year. During this stage there is formation of new tissues nearly as strong as the original tissues.

By understanding the process of injury and injury repair, different nutritional angles can be implemented to support injury recovery as follows:

1. Nutritional strategies that promote, yet manage, **acute inflammation and pain**.
2. Nutritional strategies for supporting **immune function**.
3. Nutritional strategies that support long term **tissue healing and regeneration**.

Deficiencies of key nutrients will impair the above mentioned critical healing functions, e.g.

- **Vitamin C** and collagen formation
- **Vitamin A** and epithelialization
- **Zinc** and cell proliferation
- Mild **protein** deficiency impairs healing process

## Nutrition applied to sports injury and rehabilitation

*Text: Nicki de Villiers, hpc*



### NUTRIENTS INVOLVED IN HEALING

#### ENERGY

Tissue repair requires cellular functions of protein synthesis, macromolecule synthesis and nucleic acid synthesis. For all of these processes the provision of energy is essential and a steady supply of raw material is required for cellular energy production. Energy intake also triggers hormonal responses, especially insulin, glucagon, somatotropin and intestinal neuropeptides which all play a role in the healing process as well as homeostasis.

Major injury alters an individual's nutritional requirements. Studies suggest, for example that athletes who have broken their femur may experience an increase in resting energy requirement of around 20 per cent. Comparatively speaking, an athlete will have to eat less during injury recovery than during training and competition. Yet the recommended intake during injury will still be higher than the resting energy recommendation as illustrated in the table below.

	<b>Male athlete</b> <b>14 years old</b> <b>168 cm</b> <b>63.6 kg</b>
<b>Calculated Basal Metabolic Rate</b>	<b>6 770 kJ</b>
<b>Energy needs when Sedentary</b>	<b>8 100 kJ</b>
<b>Energy needs with Daily Training / Competition</b>	<b>11 500 kJ</b>
<b>Energy needs during Injury Recovery</b>	<b>9 700 kJ</b>
<b>Although energy need during injury is less than during training, it is still more than when sedentary</b>	

## PROTEIN

One of the metabolic responses after injury or surgery is a net loss of body protein. The duration of protein loss is 3 to 6 weeks when protein intakes are usual (0.8 g/kg/day). Thus, it is important to ensure adequate protein intake during times of stress or injury. Amino acids, the breakdown constituents of protein, are basic building blocks for the construction of proteins, especially collagen, elastin, proteoglycan core proteins and non-collagenous matrix proteins. Other proteins with specific effects on musculoskeletal healing include hormones and amino acid neurotransmitters that regulate hormone synthesis and release.

Protein depletion appears to delay wound healing by:

- Prolonging the inflammatory phase
- By inhibiting fibroblast, collagen and proteoglycan synthesis
- Inhibiting wound remodelling

## FAT

Apart from its function as energy substrate, fats are dietary and metabolic precursors for steroid hormones and eicosanoids.

Eicosanoids are powerful hormones that mediate many cellular and tissue functions. Much has been said about omega-3 fatty acids and the role it plays in musculoskeletal healing. The rationale for the use of fatty acids is to modulate eicosanoid synthesis to enhance production of anti-inflammatory eicosanoids and reduce production of pro-inflammatory eicosanoids. Therefore, a diet high in trans-fats, omega-6 rich vegetable oils, and saturated fat will be pro-inflammatory whilst a diet high in monounsaturated

fats and omega-3 fats will be anti-inflammatory. To achieve a diet with optimal fat balance, increase the intake of olive oil, mixed nuts, avocados, flax oil, ground flax and other seeds to include some of these fats daily. Add 3 – 9 g of fish oil each day whilst reducing omega-6 fats, e.g. vegetable oils, corn oil, sunflower oil, safflower oil, soybean oil, etc. Even if the modulation of eicosanoids is a possibility, the slow turnover of cell membrane phospholipid fatty acids will delay clinical responses and therefore the make the use of fat modulation in short-lived or acute situations unsuccessful.

## CARBOHYDRATE

Carbohydrates are critical in sports injuries for their caloric value - supplying the energy needed to support healing - and the micronutrients they bring with them in food sources. They although do not usually directly repair tissues, as they are not part of the structures of cells the way proteins and fats are. However, carbohydrates are the preferred fuel source used during exercise.

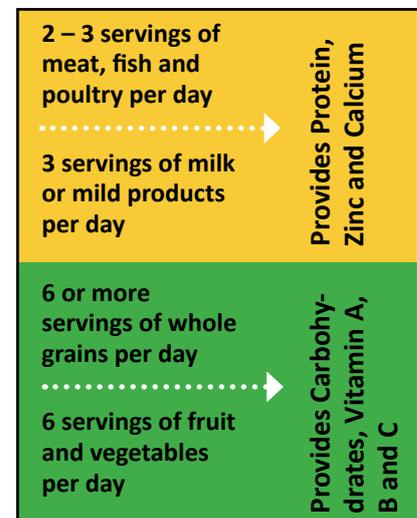
## MICRONUTRIENTS

When it comes to injury, vitamins A, B, C, and D as well as calcium, copper, iron, magnesium, manganese and zinc can all play important roles. Vitamin E may slow the healing process and therefore it is not recommended to take vitamin E supplements during injury. Vitamin A support epithelial and bone tissue development and stimulate the immune response. Vitamin C plays a critical role in collagen formation and acts as an anti-oxidant. Zinc is essential for DNA synthesis, cell division and protein synthesis, all

necessary events for tissue repair. Magnesium plays a key role in protein synthesis and amino acid metabolism. Manganese is extremely important for the synthesis of proteoglycans, which are essential for the repair of connective tissue.

## PRACTICAL TIPS FOR ATHLETES NURTURING INJURIES

- Maintain adequate energy intake
- Decrease the intake of highly refined or processed foods
- Increase the intake of fresh fruits, fresh vegetables, whole grains
- Avoid fried and greasy foods
- Maintain protein intake of 1 – 1.5 g/kg body weight/day
- Take a multivitamin and mineral supplement every day
- Maintain a good hydration status
- Try to get back on a regular eating schedule as soon as possible
- When you are up to it, try to achieve:



## Cross Training Made Easy



*Text: Wayne Coldman, hpc*

Cross training is becoming an increasingly important in today's world. Schools sports has changed and people are will argue to the cows come home as to whether this is a good or bad thing. My position is simple. It's bad! Children are playing less and less and discovering less and less. The fact that the discovery process in developing children is decreasing, means that children are starting to play competitive sport under equipped physically. Under equipped athletes are at a higher risk to injury and have also created a lower ceiling of performance. Competitive sports in schools have changed our focus and the goals we set in a negative way. We value winning at a young age above the lessons we teach. Winning sets a timeline for performance in sport and this should not be our focus when working with young athletes. Our focus needs to be on the athlete and not the result. If we focus on the athlete and look to do what benefits them most, we will find that we are on the wrong track sometimes. When we start to focus on the athlete, we will start to understand the need for increasing the athletes skill set and the importance of doing them correctly. When we value words like precision and accuracy over progression we will see the value of first achieving the basics before we start the move forward.

The foundation needs to be built, wide and strong.

The problem is simple, how do we create an environment in which ALL athletes can practice and thrive? To find a solution we have gone back 30 years.

The High Performance Centre has built a crossing training jungle gym (similar to the old trim parks) to help us address these problems. The jungle gym provides the trainers with more options to work with and provides the children with the following:

1. Creative, Safe environment
2. Gets them Outdoors
3. Provides more training options than a gym
4. Vast space
5. Fun and Playful
6. Easy and Quick to progress
7. Functional

These factors help provide us with a challenging and goal driven environment in which achieving a skill is the focus and not arbitrarily just lifting weights or doing movements in a gym.

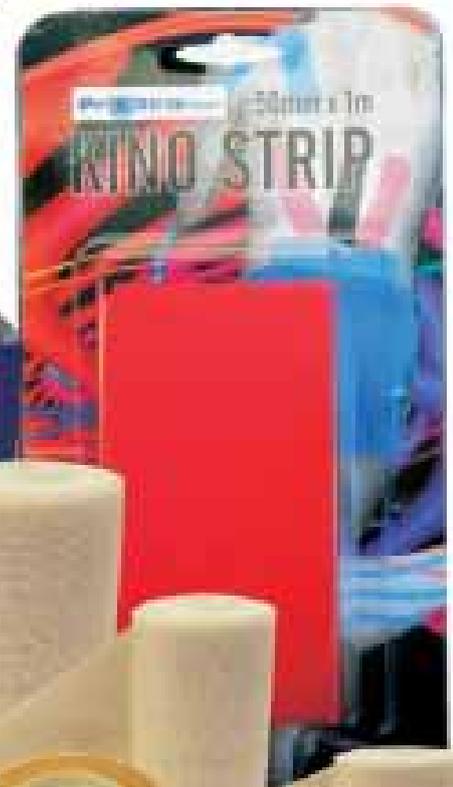
The jungle gym has many benefits for the children but most importantly is the way it changes the focus of the training or preferably, practice session. It changes the focus from

the traditional mind set of improving sport specific movements and strength in those movements to rather increasing the athletes skill set that they have to work with. The jungle gym allows us to do a vast array of exercises not always viable in a "gym" setting, thus increasing the exposure of different skills to the children. We are then able to create an environment in which the children can practice and learn new exciting skills without the pressure of progressing with the group. It is important to remember that each athlete is different and some will find some skills tougher to grasp. The athletes can then individually progress through these different skills as they prove competency and move onto more complex skills. This is one of the most important aspects of the discovery process, children playing and learning what their bodies are capable of doing while having fun. The jungle gym provides us with options, space and a fun environment, all positive aspects that promotes a healthy learning environment. It helps us address the issues that we face in trying to do help give our young athletes the best chance possible of success. "Imagination Decides Everything".

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# To win requires mastery of skills

*Text: Mary Ann Dove - Performance Coach and Co-founder of Positive Sport Parent*

In our first article we provided some guidelines on how parents can assist their children in positively managing the challenges that the sporting environment poses on a regular basis. One of these guidelines was, *“Recognise that development into a competent sports man or woman is a process that takes time and patience to master the skills necessary to succeed either as a participant or a competitive athlete. Each child is unique and will develop at his/her own pace, taking part in the sports that he/she comes to enjoy through exploration and performance.”*

This article explores this concept in some more detail.

The one thing we all seem to agree on is that the objective of sport is to win. What we don't agree on is what makes someone a winner and the process it takes to master the skills required to win. How many times do we hear the first question a parent asks their 8 year old – “Did you win?” Perhaps the question should be, “What did you learn?”

There are 2 kinds of winners:

- **Winners on the scoreboard often referred to as “ego orientation”.** This tends to be the traditional definition of a winner. A winner on the scoreboard can in fact be outplayed in every facet of the game but still have more points or goals. I don't have to remind you of a rugby match played on Sunday 9<sup>th</sup> October 2011 in New Zealand, where the team who played the best, did not win! Why, because there are very often factors beyond the sportsman's control. You can only control those aspects of your performance that you are in control of.

“If winning is defined as only those that finish first, then 97% of all participants at the Olympic Games would be losers!”  
*(Unknown)*

That brings us to the second kind of winner.

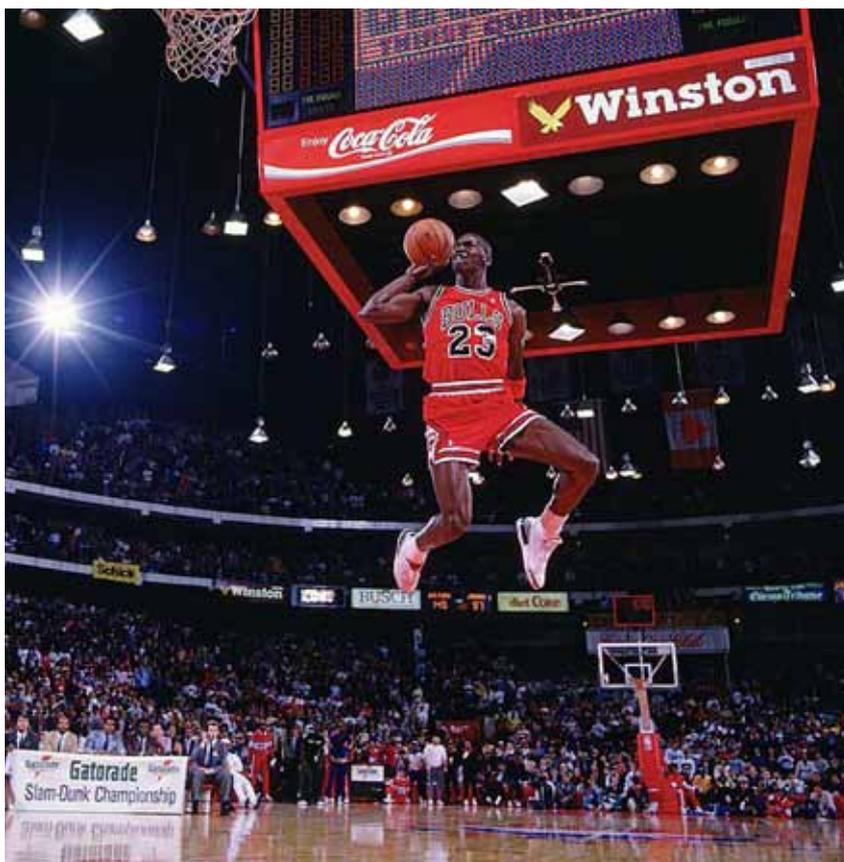
- **Winners in terms of mastery or “process orientation”.** A mediocre performance can still win a race whereas a magnificent performance may still lose the race, if others perform better. We can only control our own performance and hence the importance of focusing on mastering the skills (physical, technical, tactical and mental) to give ourselves the best possible chance of success.

Research at the 2000 Sydney Olympics indicated that athletes with a mastery orientation won more medals than athletes coached purely with a scoreboard orientation.  
*(Dr Joan Duda, Chair of Sports Psychology at the University of Birmingham (UK))*



Mastery Orientation	Scoreboard/Ego Orientation
Effort focus – did I give my all?	Results focus – how many points did I score?
Learning and continuous improvement which is within your control	Comparison with others and the scoreboard as arbiter
Mistakes tolerated as part of the improvement process	Mistakes avoided because they lead to poor results on the scoreboard
Decreased anxiety because in control	Increased anxiety leading to decreased performance
Increased self-esteem and self confidence	Decreased self esteem
Increased resilience – ability to bounce back faster after a setback	Decreased moral reasoning causing increased temptation to do whatever it may take to influence the scoreboard

The table above highlights the differences between mastery orientation and ego orientation.



"I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."  
 (Michael Jordan)

The mastery of skill development is a process that takes place over a period of time and for successful and optimal performance this process needs to proceed through all the necessary stages at the appropriate developmental ages of children. This can be summarised as follows:

Approximate Developmental Age* (years)	Skill development
6 – 8 or 9	The essential skills such as skipping, hopping, jumping, throwing, catching, hitting and swimming required as the foundation for more complex physical activities and sports
8 or 9 – 11 or 12	General sport skills suitable for a variety of activities and sports
11 or 12 – 15 or 16	Sport specific physical, technical, tactical and mental skills to compete at higher levels
15 or 16 upwards	Sport specialisation for "serious" competition or for non-competitive participants to become active for life

\*Developmental age refers to the degree of physical, mental, cognitive and emotional maturity of a child which may be different to their chronological age, i.e. their age in years since birth.

So how can you as parents encourage your children to develop a high mastery orientation? Here are some practical tips. By focussing on the process the results will take care of themselves.

- **Reinforce effective process goal setting.** For example, "What batting skill am I trying to improve during today's practice session?"
- **Emphasise the value of hard work & persistence.** "Did I put in my best effort today?"
- **Provide good coaching.** As a parent you should ensure that the coaches that your children are coached by are appropriately trained and accredited and that they follow a mastery approach.
- **Emphasise progress, not results.** Each child's progress should be "measured" against his/her own potential. We don't all have the ability or talent to be the next Roger Federer.
- **Reward skills improvement** as well as acknowledging those that perform at the highest levels.
- **Encourage critical self-observation.** Each child should develop the ability to assess their own progress.
- **Reflect on their own performance and encourage self-discovery.** By thinking about how a particular practice session or event went, children will learn to identify their strengths on which they can build and their mistakes which they can rectify through practice

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(www.positivesportparent.com)

**The doctor's role in the rehabilitation process, Common issues in managing injuries, treatment recommendations for a full recovery.**

# **Integrated Approach to Rehabilitation**

*Text: Dr Phatho Cele, hpc*

When I entered the field of Sports Medicine, it was (and still is) a relatively uncommon field of clinical medicine. My colleagues, family and friends would often probe curiously, asking why exactly I wanted to go into such a 'confined' field that services a 'limited' population. 'There's something about working with a person who *wants to get better*' I would say, 'Helping someone go beyond just well and strive towards optimal and supreme health and fitness. I want to contribute to excellence. I want to be a part of a team that makes a great athlete *extraordinary*.'

The Sport Physician forms part of a multidisciplinary support team that strives to support the athlete in their goal to achieve extraordinary results. The members of this multidisciplinary team will vary depending on the environment. In rural communities, the 'multidisciplinary team' may consist of the family doctor and/or physiotherapists alone. In contrast, the athlete in the city or in a high performance institution may have a team that consists of a number of role players: family doctor, physiotherapist, sports physician, biokineticist, dietician, psychologist, fitness coach, orthopaedic surgeon, podiatrist and other various

specialists. Each member of this team has specialised expertise which are important at different stages in the athlete's rehabilitation. It is vital that each member in the team knows their role, their strengths and limitations, and, importantly, recognises when to hand over to the next specialist.

The doctor's role in the multidisciplinary team is to make a diagnosis. The clinician needs to precisely identify the exact anatomical and pathological cause of the underlying problem. Correct diagnosis permits accurate and efficient treatment. Once the doctor has made the diagnosis, they are then responsible for liaising with the appropriate specialist and co-ordinating the management of the athlete.

In traditional medicine, the doctor is usually the primary contact practitioner who then refers to other medical/paramedical practitioners. In the sports setting, however, the athlete will regularly present to the practitioner they see most often or have the best relationship with eg the physiotherapist/coach. This highlights the importance of an integrated support team, as the contact person may need to refer to someone else so that the athlete receives the best management for

that particular problem. There are also situations in which more than one practitioner will manage the athlete simultaneously. Here, the importance of fluid communication and mutual respect come to the fore.

An example of an efficient and synchronous multidisciplinary team would play out as follows:

A rugby player injures his knee in a rugby match. The sports physician makes a diagnosis of an anterior cruciate ligament rupture and refers to an orthopaedic surgeon. While preparing for surgery the athlete will see a physiotherapist, who also continues management post operatively. Post op rehab is monitored by the sports physician and physiotherapist in consultation with the orthopaedic surgeon. Whilst in rehab, the athlete may also be consulting their fitness coach who will ensure that the athlete has a specialised cross training programme that will maintain their cardiovascular fitness without interfering with rehabilitation of the injured knee. The dietician role in rehab focuses on ensuring that the athlete is eating foods that will fuel the body's musculoskeletal and immune system so as to expedite recovery. When the physiotherapist and doctor are satisfied with the athlete's progress, the athlete is

then handed over to the biokinetics who guide the athlete in the next phase of rehab, optimising strength and functionality of the injured limb. The final phase of rehab involves the biokineticist working with the fitness trainer to ensure sports specific fitness and agility. A common complication of injuries requiring drawn out rehabilitation is depression and fear of re-injury upon return to play. The psychologist has a clear role to play in keeping the athlete motivated and helping overcome those mental barriers when the athlete returns to his sport.

The biggest challenge in sports medicine is remaining objective and holistic in one's approach to an injury. It is important that all practitioners involved in the athlete's management have a basic understanding of the biomechanics, and the mental & physical challenges involved in that athlete's sport. Often, an athlete will present with a complaint which actually points to a deeper problem. An example is an athlete presenting with excessive fatigue and poor performance who is treated with rest. While it is important to first examine training schedule, it is also important to know and treat the nutritional, psychological and medical disorders that may contribute to the athlete's condition. It is only the clinician with a broad approach who will adeptly pick this up. In any injury, especially those that recur, it is important that the clinician asks themselves why this injury has occurred and then manage the underlying cause. Ideally, then, treatment has two components: treatment of the presenting complaint and treatment to correct the underlying cause.

Of utmost importance in the management of any injury is athlete compliance to rehabilitation. This

begins by the clinician being able to help the athlete understand his problem and the causes thereof. It is only once an athlete fully comprehends the implications of a diagnosis, that he/she will be motivated to comply with recommendations. It is valuable for the clinician to establish a good relationship with the athlete, so that the athlete learns to trust their clinical judgment and recommendations. Importantly, even once the athlete is pain-free, they must progress through all the necessary stages of rehabilitation. This will ensure that the athlete reaches their pre-injury fitness level and more importantly, prevents re-injury. All members of the multidisciplinary team, including the coach, need to comply with this

protocol and encourage the athlete to do like-wise.

There's no 'I' in TEAM. This well known phrase epitomises the crux of the multidisciplinary team. No one practitioner can service the athlete entirely and meet every need they have. We all have different roles to play and various ways to contribute to the athlete's success. When we start to draw on each other's strengths and engage the experts at the right time, we start to see success and begin to achieve what we all strive for: a healthy athlete capable of extraordinary results.



# 6 point check of trail running

*Text: Ryan Hodierne, Sport scientist & New Balance footwear specialist*

As we look into the mechanics and movements involved in running on the trail, there are a few aspects that differ from running on the road however many remain the same as an athlete attempts to move forward as fast and efficiently as possible. **Running dynamics**

Running in general comprises the primary component of forward motion. There is limited upward movement and even less lateral movement. As we head onto the trails however, though forward motion remains the primary component; there is a lot of upward and lateral motion taking place as the athlete orientates himself. He/she also strives to move fluently and effortlessly over the terrain. Trail running can be regarded as more of a full body work-out as apposed to the lower body dominant nature of road running.

## **The Foot strike**

While running off the beaten track, one should strive to maintain a shorter stride length with a slightly higher leg/stride turnover. Light contact should be made with the ground to ensure good balance in the foot. In ground contact, the foot should strike the ground directly underneath the bodies' centre of gravity (below the hips) with a slightly bent knee to absorb the impact, much the same way as a car's suspension. Foot contact with the ground should be made with the mid-foot, which is the area more or less below the top lace hole of your shoe.

## **Trail posture**

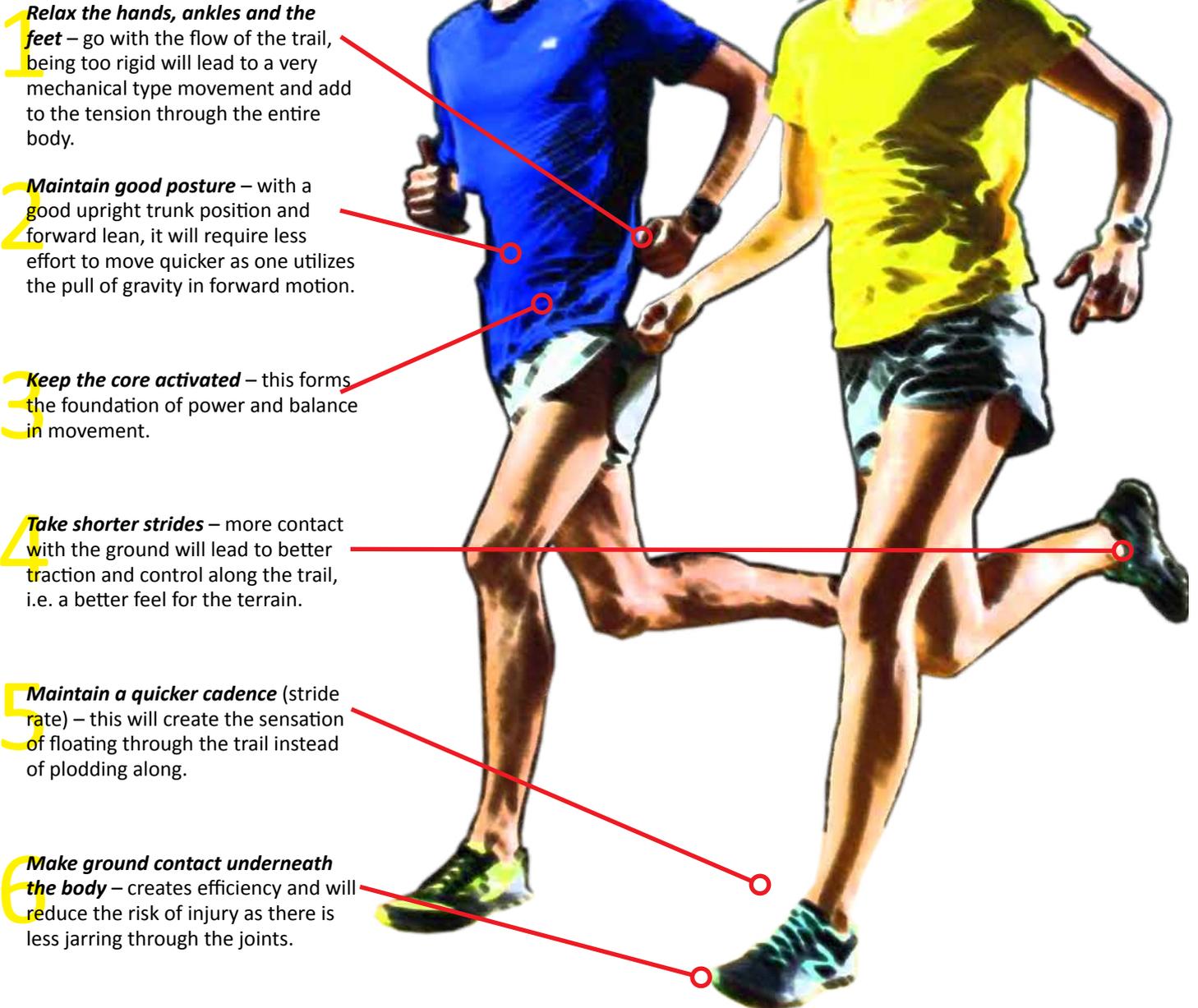
Due to the extreme gradient of the up hills and down hills along many trails, close attention should be paid on running posture when approaching and taking these obstacles on.

**Downhill:** when running downhill, avoid leaning back. The reason for this is that leaning back will enforce a heel strike which will in turn create less traction under foot thus allowing greater chance of slipping and sliding all over. This laid back running posture will also over work the quadriceps on the descents which will lead to an earlier onset of fatigue.

**Uphill:** When approaching an uphill, avoid slouching forward. Slouching forward will crunch up the diaphragm, making it more difficult to breathe. It will also force you off balance by displacing your centre of gravity.

Through research, a direct correlation has been discovered between a runner's normal posture and the form he/she adopts while running. The ideal is to run tall, activating the core stabilizers that will form the foundation of power and balance, coupled with a slight forward lean in the trunk to aid in forward motion by utilizing the pull of gravity.

Let us consider the **6 point check** while out on the trail:



**1 Relax the hands, ankles and the feet** – go with the flow of the trail, being too rigid will lead to a very mechanical type movement and add to the tension through the entire body.

**2 Maintain good posture** – with a good upright trunk position and forward lean, it will require less effort to move quicker as one utilizes the pull of gravity in forward motion.

**3 Keep the core activated** – this forms the foundation of power and balance in movement.

**4 Take shorter strides** – more contact with the ground will lead to better traction and control along the trail, i.e. a better feel for the terrain.

**5 Maintain a quicker cadence** (stride rate) – this will create the sensation of floating through the trail instead of plodding along.

**6 Make ground contact underneath the body** – creates efficiency and will reduce the risk of injury as there is less jarring through the joints.

Running on the trails will certainly strengthen you as a runner. I urge and invite all those that stick to the black stuff called “tar” to venture onto the trails and improve both their running form and strength and enjoy the flow and scenery the beautiful discipline of trail running provides.

By being more aware, you can improve your own running mechanics.

Run aware and with good form... your body will thank you and your times and abilities will show.

Hit the trails!

# Debunking the Dogma!

## Myths and Misconceptions in Sport Science



### Part III: Muscle Memory

*Text: Jimmy Clark, Institute for Sport Research, Department Biokinetics, Sport & Leisure Sciences, University of Pretoria*

#### What?

'Muscle memory' is a colloquial reference to the phenomenon that repetitively trained motor actions gradually require less conscious effort to execute. The classic example is driving a car – when someone is first learning how to do it, it requires significant conscious attention in making very purposeful movements, and they are clearly aware of their incompetence. Gradually, the motor patterns become ingrained, to the extent that the sophisticated coordination of actions requires little dedicated conscious effort. The person becomes 'unconsciously competent'. The activities can be as diverse as brushing teeth, speech, playing a musical instrument, riding a unicycle or climbing stairs, and may be relatively simple or immensely complex! However, 'muscle memory' is not simply limited to dynamic movements - there is evidence that resting muscle tone and body posture, both involving skeletal muscle activity, are the result of habitual muscle action becoming entrenched. Here's how...

#### How?

To understand the phenomenon, let's tackle some basic physiology... The funny thing is that 'muscle memory' does not 'reside' in the

muscle itself. Skeletal muscles (the muscles which stabilize and/or move the skeleton) are pretty much slaves to the nervous system. Motor neurons are specialized nerve cells which innervate muscle fibers (cells) and dictate their action. Many thousands of these motor neurons are located in the spinal cord and are themselves influenced by neurons located in various parts of the brain, as well as by receptors in the muscle. The pre-motor and primary motor cortex of the cerebrum is where a dedicated skeletal muscle activity is initiated, but essential input is required from the basal ganglia, gamma motor system and cerebellum to execute useful and coordinated movements, all together termed a motor pattern. More correctly then, one could speak of 'brain-muscle memory'! Repeatedly engaging a particular motor pattern over time stimulates adaptations in the neuron pathways which reorganize the involvement amongst the brain centres in performing that movement and allow for increased synchronisation and coordination of the motor neurons and therefore also the muscle fibers those neurons control. In this way, not only do the movements become more coordinated and appropriately graded to the task, but the conscious effort required for the execution is reduced.

Contrary to public perception, physical training is not purely an exercise in changing the body's periphery - it's not just about developing muscles and lungs and heart! While adaptations do occur in these systems to better handle the stress of exercise, any physical exercise is also 'training' the nervous system to enhance future exercise performance. Regular training allows the brain to 'learn' how best to synchronize and coordinate muscle action in performing an activity. The involved motor patterns are delegated to less 'consciously expensive' areas of the brain, reducing the perceived conscious effort required to maintain that intensity of work. Meanwhile, this permits access to previously 'unavailable' high threshold motor units that rely on higher effort, so you can work even harder.

#### Why?

Performing skeletal muscle actions is an expensive process for the body. Not only is the contraction and relaxation of skeletal muscle fibers inefficient from an energy point of view, but these actions depend on the complex coordination of many neurons and conscious effort, as described above. So performing a motor skill is really hard work. By 'delegating' repetitively practiced

motor patterns to parts of the brain requiring less 'conscious' effort and refining the neuronal pathways involved, motor tasks can be better executed, plus it frees up the conscious mind to attend to other tasks. At it's most primitive level, brain-muscle memory evolved to permit rapid and effective fight or flight responses while allowing important 'conscious' thought about the environment to improve the chance of survival. In modern life, it frees our minds up to multitask...

### Can it Impair Performance?

Since utilizing the entrenched motor pathways is your body's easiest way of executing a movement, repetitive activities run the risk of becoming 'contaminated' with movement peculiarities that may not be optimal. While we naturally tend to lean towards the most efficient way of performing an activity to minimize the energy cost of the activity, this may not always be the most appropriate pattern from an injury risk or performance point of view. The old adage of 'practice makes perfect' was, of course, refined to the more-correct 'perfect practice makes perfect'. Importantly, it appears to be the duration of the motor patterning which is the biggest factor in making neuromuscular changes rather than the severity of the problem. In other words, the longer the bad habits have been practiced, the less likely they are to respond to attempts to change.

### What Factors can Interfere with Muscle Memory?

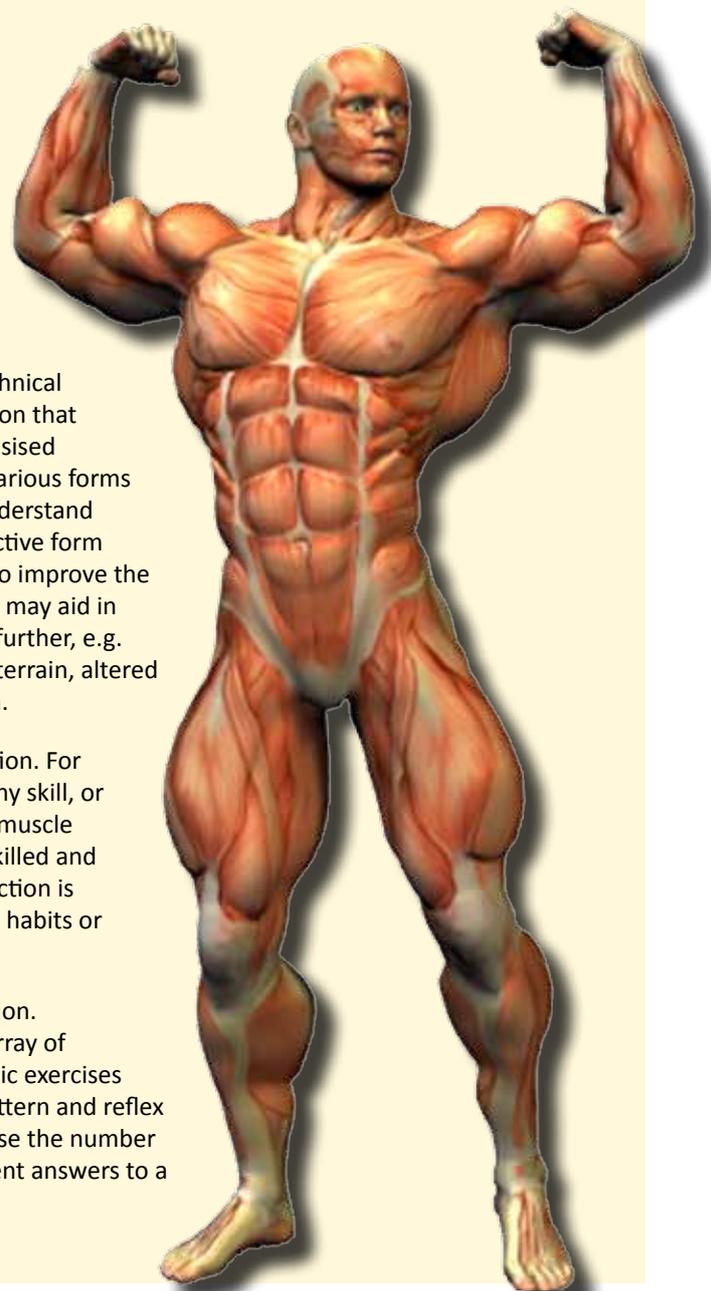
From the discussion above, it should be clear that anything which may interfere with the complex neural functioning leading to muscle action can potentially alter 'muscle memory'. The classic contracted shoulder and neck muscles associated with increased stress is a prime example. Besides mental or emotional stress, drugs, alcohol, body temperature, physical stress or

pain, additional or competing motor tasks, nutrient supply, hydration status and a myriad other factors can all affect neuron function and therefore, theoretically, brain-muscle memory and the execution of practiced motor tasks. So being in overall good health is important for executing movement skills well.

### How can it be Improved?

Purely from a 'brain-muscle memory perspective, the following points should be considered:

- More Training. Repetitive practice remains the mainstay of automating motor tasks. On its own, major gains can be made by simply doing the task more often, using a systematic and planned progression of course!
- Purposeful Technical Drills. There is a reason that coaches have emphasised movement drills in various forms for so long – they understand the influence of effective form performance. Drills to improve the 'feel' of a movement may aid in refining the process further, e.g. eyes closed, altered terrain, altered apparatus, and so on.
- Expert Instruction. For beginners learning any skill, or in the case of 'brain-muscle memory' changes, skilled and regular expert instruction is needed to break bad habits or establish good ones.
- Exercise Variation. Engaging in a wide array of flexibility and dynamic exercises may refine motor pattern and reflex pathways and increase the number of potential movement answers to a problem.
- Soft Tissue Therapy. Massage, for example, may have a role in improving the tolerance and activity of reflex pathways which influence the execution of motor skills.
- Finally, over-learning a skill, particularly when fatigued, may improve the neuromuscular performance during stressful periods, and reduce the susceptibility of the brain-muscle memory to interfering influences above. This is crucial for being able to execute the task under pressure and at high speed.



# The Evolution of TuksSport High School

*Text: Hettie de Villiers*

One might be forgiven for misguidedly thinking that when Herbert Spencer first coined the term “survival of the fittest” to draw parallels between his own economic theories and the evolutionary theories of Charles Darwin, he had a group of young talented South African athletes in mind. One might also be forgiven for believing that when Darwin further clarified the meaning of the phrase and stated that it is neither the strongest of the species that survives, nor the most intelligent, but the one most responsive to change, that he had a particular sport school in Pretoria in mind.

When then then-Minister of Sport, Ngconde Balfour officially opened the High Performance Centre of the University of Pretoria on 10 May, 2002, there were 30 eager faces amongst the crowd who shared in the almost tangible excitement of the day. Twenty seven were

aged between 12 and 16, and were the first pupils of TuksSport Study Centre, a sport school that formed part of the all-encompassing sports environment that the High Performance Centre offered. The remaining group of three consisted of two brave teachers and their principal.

When South Africa was re-admitted to world sports it created the opportunity for high performance athletes of all ages to compete with the best in the world. Young athletes who were previously restricted to school-level and local competitions now had the chance to measure their worth abroad. But the ever expanding sports horizons made it increasingly difficult for young sportsmen and women to remain competitive without some sacrifice to their education. It was in recognition of the need for a more supportive and flexible educational model than that offered

by mainstream schools, that the idea of a sport school was born – a concept quite common in most European countries, but up till then still unexplored in South Africa.

That was ten years ago, and the high school now situated on the Groenkloof Campus of the University of Pretoria bears little resemblance to the one-classroom school that first saw the light in 2002. Not only has the name of the school undergone some cosmetic surgery, the school has relocated twice – first from the Rugby Clubhouse to the rooms now occupied by the SSMU at the HPC, then to the three-winged building that lies sprawling to the side of the Groenkloof Campus. The number of academies has grown from two pioneering academies (gymnastics and tennis) to a total of eleven which include swimming, soccer (boys and girls) golf, table tennis, tae Kwando, cricket, judo, athletics, equestrian and squash.



2004 - A new school to be proud of



Behind the scenes at the 2008 Accolades



2006 Staff photo



2004 - The first Girls Soccer Academy to join the school



Grade 8's loving the new school at Groenkloof



2004 - Gymnastics Academy



Life's not all about medals - 2009



TuksSport High learners in their Protea Colours in 2009



Our first Market Day in 2006



Our first Matric Dance in 2003



2006 Prefects outside the school



Protea Basketball player and teacher Nakedi Mputla



Prefects of 2003



Matric Dance in 2003



Prefects of 2006



Staff photo 2006



Swimmers and coach Sandor in 2004



2007 Accolades

Teachers and learners have come and gone, each one contributing in their own way to the successes achieved at TuksSport High. The academic records tell its own story – the school has achieved a 100% pass rate in all the years but one, with 75% of the learners passing with university exemption. Year by year the top students have surprised even the gloomiest of doomsayers by achieving between 5 and 6 distinctions each. The inscriptions in the sports annals tell an even more illustrious tale and many top national sportsmen and women like Robyn Johannes, George Maluleka, Suzaan van Biljon, Andile Jali, Leon Knoll, Natasha de Vos, Wian Sullwald and Simpiwe Dlulu completed their schooling at TuksSport High School. In 2011 alone 3 learners earned their full Senior National colours, 36 their Junior National colours, and 77 learners received Junior and Senior Provincial colours.

Whatever changes have been made over the last ten years, the school's evolutionary development has always been and will always be determined by the sustained commitment to offer education of a high academic standard in a model sufficiently flexible to help top young South African sportsmen and women achieve their dreams.

There are, no doubt, many more changes to come, but we embrace such changes with enthusiasm and in agreement with Darwin's 'survival of the fittest' theory and his claim that 'a man who dares to waste one hour of time has not discovered the value of life.'



Top swimmer Suzaan van Biljon with her coach, principal and CEO of the hpc



Toby Sutcliffe with the guest speaker at the 2011 Accolades



2006 Accolades



TuksSport Study Centre



Who said there's no room for culture in a sport school



TuksSport High learners in their Protea Colours in 2009



Lunch packs before we had our own canteen



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# TuksSport News

## Dominating golf performances from women

So far 2012 will be remembered by the dominating performances of the women golfers from TuksGolf. The charge is led by second year student from Swaziland, Nobuhle Dlamini winning the Eastern Cape Golf Championships as well as the North West Province Golf Championships. The most spectacular achievement would certainly be during the 2012 TuksGolf Club Championships when Nobuhle defended her title successfully with a world-class score of 19 under par after only two rounds at Centurion Country Club.

Nobuhle is focussed on becoming a professional golfer after completing her studies in 2013 in SportSciences as well as at the PGA Academy.



**Nobuhle Dlamini**

## First major tournament victory for Lombard

The 2012 Northern Amateur Open Championships was hosted by Central Gauteng Golf Union from 11 – 16 March at Randpark Golf Club. This prestigious tournament is one of the most sought after tournaments to win by the top amateur golfers in the country, so much so that in recent years an international contingent was also present to compete for the top honours.

In junior amateur ranks the name of Zander Lombard is already a household name locally and abroad but it is only in recent years that the 17 year old golfer from Pretoria started to compete against the senior players in the country. Zander received his first senior provincial colours in 2011 representing Gauteng North at the Premier Interprovincial Tournament in Bloemfontein.

He steadily made his way up the rankings and is currently ranked 5<sup>th</sup> in South Africa and was also selected for the South African Team that played against Scotland at Leopard Creek earlier in 2012.

Lombard almost tasted victory at his home provincial championships, the Gauteng North Golf

Championships, after ending second to Toby Tree from England. Great work ethic, commitment and dedication paid off for him when he won the Northern Amateur Open Championships with a final score of 13 under par from his close friend Victor Lange from Johannesburg.

This is certainly the start of Zander Lombard's list of victories and we hope that this level of performance would continue and hopefully improve due to the work that he is doing with the specialists at the TuksGolf Academy and the hpc.



**Zander Lombard receiving the trophy from Central Gauteng Golf Union's President William Lucas**



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**TuksSport**

## Golf for the people!

Golf has always been an elitist sport in South Africa and especially at the University of Pretoria. Since 1929 when the Tuks Golf Club was established students that were introduced to the game during their childhood years, either through a father or family member, got the opportunity to compete in this sport due to the high skill level it requires in order to achieve success.

Through the years various attempts was made to establish golf on the sport campus and to provide training solutions for staff and students with very little or no success. During 2010 the project was approved to start building a golf specific training facility that would provide training solutions to all staff and students from all skill levels.

The facility is now open and provides training and coaching solutions to staff, students and the public. With 70 bays already constructed as well as state of the art coaching studios this facility already is one of the largest golf complexes in Gauteng. Shortgame facilities are currently under construction and the installation of floodlights will also provide members with the opportunity to make use of the facility during the evening.

Various coaching services and programs are available to choose from, catering for players from as early as 4 years of age for both boys and girls. Visitors are also welcome to make use of the facility with great specials for daily use as well as affordable membership packages.

The facility is operational 7 days a week from 09h00 – 18h00 except on Mondays when it opens only at 11h00 due to maintenance being completed.



## TuksGolf – 2012 Inter- varsity Champions

The 2012 Golf Intervarsity between the University of Pretoria and the University of Johannesburg was held this year at the prestigious facilities of The Els Club at Copperleaf. This championship layout designed by Ernie Els was a test for the players, requiring accurate tee shots and precision touch around the greens.

During the morning session's four-somes matches it was clear that the team from the University of Johannesburg didn't cross the Jukskei River without intentions of winning this battle. The foursome's matches were halved with both teams scoring 2 points all; laying a perfect platform for the single matches in the afternoon.

The singles matches were no different from the morning's matches with the lead shifting between the two teams. The first match was won on the last hole by UJ when Pilley beat Reardon from Tuks (2 up), a well-deserved win. The following 5 matches were dominated by the Tuks team with wins by Juan Swart over Labrou from UJ (4&3), Loyd Pollington over De Kock (5&3), van Niekerk over Barnes (1 up), van den Berg over Mycroft (8&7) and Loubser over MacDonald (4&3). These five straight wins enabled the team from Tuks to earn enough points to secure victory before the two Dixon brothers from UJ playing in the final two matches beat Neethling and Ferreira.

The final score was Tuks 7 – UJ 5.



**Team Tuks**

**Back: Pollington, Neethling, Loubser, Reardon**

**Front: Ferreira, Swart, van Niekerk, van den Berg (Captain)**

## Van Zyl crowned as champion

TuksGolf Junior Academy member, Franco van Zyl, competed in the Centurion Country Club's 2012 Junior Club Championships on Sunday 11 March. Franco, originally from Tzaneen, joined the TuksGolf Junior Academy in January 2012.

It is quite clear that the work that he is doing with the specialists are paying off due to his brilliant rounds of 73 and 69 to clinch the 2012 Junior Club Championships title at Centurion Country Club.



**Franco van Zyl receiving the trophy as Junior Club Champion at Centurion Country Club**

# INSIDE NEWS

## Podium performance from Tuks junior athletes in ITU Triathlon Premium African Cup



Abri vd Walt, Tuks Club member, finished in an amazing 1<sup>st</sup> place and Aidan Nugent, Tuks student and Triathlon Academy athlete finished in 3<sup>rd</sup> place in the Junior race of the 2012 ITU Triathlon Premium African Cup held in PE on the 18<sup>th</sup> March.



Dr Phatho Cele, Head of product - & service providing at Sport, Science & Medical Unit at the hpc, has been selected as the official medical doctor to Team SA for London Olympics.

## Tuks & hpc sponsored rowers on a trophy heist at Buffalo Regatta!!!



The tuks & hpc sponsored rowers did extremely well at the 125<sup>th</sup> annual Buffalo Regatta in East London from 17 – 18 February. Of great significance is the achievement by Peter Lambert, who won the grand and silver scull title; last done in 1994!



Marli Toerien and Colin Stier summited Kilimanjaro (January 2012)



Bantwana SAU17 group 2012



Dieter Voight (Pasella) and LJ van Zyl



TuksSport High learners and squash players Sean White (Gr 12), Callan Hall (Gr 8) & Boipelo Montwedi (Gr 10) at the NJSA Round Robin (4-6 Feb)



Khutso and Ansuné represented Gauteng North Inter-provincial Tennis Tournament



Mapumalanga Swimming

**Wian Sullwald, hpc sponsored tri-athlete the new SA Elite Triathlon Champ!**



Wian, finished in an amazing 3<sup>rd</sup> place in the 2012 ITU Triathlon Premium African Cup held in PE on the 18<sup>th</sup> March – winning the title as the new “South African Elite triathlon champion”.



TuksAthletics Academy & TuksSport High learners performed well at the SA Sub youth, Youth, Junior and u/23 championships held in Germiston from 29 - 31 March



Jovan Stephens won 1 Gold Medal and 1 Silver Medal at the Ten Club Trampoline Competition on 10 March.



SA Cross Triathlon Championship  
Tierpoort, Free state  
March 31, 2012

Theo Blignaut, hpc sponsored triathlete secured first position in the men’s race after dominating the 2012 SA Cross Triathlon Championships in a bitterly cold Bloemfontein, at the Tierpoort Dam on Saturday 31 March 2012.



The new age Impi Cricket Team



2012 TuksGolf Club Champions  
Senior Champ - Teagan Moore (-5),  
Ladies Champ - Nobuhle Dlamini (-19) & Junior Champ - Albert Venter (+3)



Swaziland’s Nobuhle Dlamini survived a late round wobble to end a three year wait with a brilliant wire-to-wire victory in the Sanlam Women’s Amateur SA Stroke Play Championship at Umhlali Country Club on Tuesday.

The Tuks Golf Academy student started with an eight shot lead and fired a final round two-over-par 73 to put the seal on a magnificent performance and a runaway victory.

Dlamini finished a full 10 shots clear of Mpumalanga’s Izel Pieters, who eagled the par-five 10th and parred the last eight holes for a 73 to sneak into second ahead of Free State amateur Lumien Orton and 17-year-old rising star, Lara Weinstein. Orton, back on the circuit after a year-long lay-off, carded a 76 while Weinstein saved her best golf for the final round and signed off on a 72.



Preston Naidoo, Grade 8 learner at TuksSport High School who has been chosen to be a *Gauteng Brand Ambassador*.

## Olympians' Training Venue of Choice!!!

Over the 10 years of the hpc's existence it is clear that it has developed into the preferred training venue of choice for international and national elite sports teams and individual athletes alike.

Since December 2011 up to now, the hpc hosted several international sports teams from countries such as Turkey, Slovenia, Belarus, Estonian, Denmark, Britain, France, Spain, Luxembourg and Sweden. During this period the German National Hammer and Discus throwers as well as Germany's High Jump Champ, the Welsh Ladies cricket team and the Angolan Paralympic all did their pre-training for the Olympics at the hpc.

The British team enjoyed their 10<sup>th</sup> annual stay at the hpc and vouched to be back next year, while the German Hammer Team who are a household name after 12 visits to the hpc are currently at the hpc for their final preparations for the Olympics.

The excellent training facilities (specialized gym, open 50m swimming pool), accommodation, great tasting meals, perfect weather conditions, altitude and the friendly/ professional staff were some of the reasons why these groups choose to train at the hpc.



Denmark National Swimming Team



Luxembourg Swimming Team



French National Swimming Team



Angolan National Paralympic Team



German National Discus Team



Welsh Ladies Cricket team



German National Hammer Team



Gunter Eisinger, Ariana Friederich, German High Jump Champ and Peter Hechhof



British National Swimming Team



National swimming teams: Turkey, Belarus, Slovenia and Estonia



Swedish National Swimming Team

## SWISS TENNIS, refined, experienced and effective.

*Text: Kirsty Querl, Sports Scientist, Institute for sport research*

Swiss tennis is based in the city of Biel and is the centre of a very well organised tennis Federation. Beni Linder is the head strength and conditioning coach with a wealth of experience, knowledge and inspiration to share.

Benedikt (Beni) Linder has been head physical coach for Swiss team since 2005 and before that worked as a freelance physical coach in a range of sports such as badminton, motocross, swimming Formula One and tennis. Pierre Paganini (Roger Federer's trainer for the past 10 years,) was his mentor before he took over as head coach at Swiss tennis.

Swiss tennis provided a unique opportunity to learn from their professionals to three individuals from around the world. Kirsty Querl was invited along with two coaches from Syria and Lithuania to spend 10 days observing and taking part in the physical conditioning of Swiss tennis players. This is the first time Swiss tennis has opened its doors to professionals from other countries. The courses and training opportunities are usually only available to Swiss coaches.

Swiss tennis headquarters are based in Biel but they have fifteen partner academies around the country that all have their own head coach and physical coach. All of these academies work on a curriculum distributed from Swiss tennis so that there is easy transfer of players and coaches around the country and excellent continuity within the system. They have three tiers of players which they consider to be the national team and they are based around the country this is a group of approximately 60 athletes.

**The major areas of discussion and learning during my visit centred on the following areas:**

**"Oriented training"** this is physical training of the conditional abilities and physical factors with similar movements to the game. This is

the attention to detail within tennis movement that needs to be emphasised during training. This training can be done to all physical components such as speed, strength, endurance, flexibility and coordination. This is a valuable concept as trainers are continually under pressure from coaches to make training more specific to their sport. Trainers should understand that this does not only refer to using the exact equipment used in a specific sport but more specifically reproducing similar movement patterns and demands of the sport.

**60- 100% versus 80% training principle.** Although this is not a new concept, it is very common for groups to get into a routine of certain intensity levels in their physical sessions. Training at 80% does not allow for effective explosiveness and dynamic accents. In a sport that tennis this is vital. The polarised training principle that applies to endurance sports is also a valuable tool when training for explosive intermittent sports.

**The complexity of speed agility and quickness training** is so complex that one can spend the majority of time focusing in this area. It can and should be broken down into many parts which can be worked on specifically as well as working on all-inclusive/complex speed which is a more general training approach. The modern game is about athleticism, foot force into the ground, dynamic balance, differentiation between small and large footwork are some specific areas that are often overlooked and unknown to players.

**Planning in the modern tennis calendar** is a complex process. This can only be effective and practical if it is done for each individual and as a dynamic process that has to be able to change from day to day. Multiple preparation phases need to be covered throughout the year to keep players in top condition. The time between these phases is crucial and should not be too long or too short.

The trip provided Kirsty with reassurance that the current methods used are accurate and also used by the best in the world but also provided a wealth of new ideas better understanding of tennis specific training and enhanced expertise in training tennis players. This trip allowed her to form friendships and working relationships of a long-term nature and an open invitation for the future.

A big thank you to Prof Kruger and ISR for the assistance in making Kirsty's trip possible.



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*Text: Lester Mills*

MISSING out on that coveted Green Jacket when Bubba Watson won a sudden-death play-off to rob him for the Masters crown at the Augusta National will hurt for some time, but Louis Oosthuizen has found a way to soften the blow.

'Winning other golf tournaments'. The 29-year-old from Mossel Bay won the Malaysian Open a week after the Masters in Augusta which help to cushion the blow, mentally and definitely financially. On three successive weekends, Oosthuizen finished third in the Shell Houston Open, second in the Masters, and first in Malaysia. So, of course, the money's been rolling in. Runner-up at Augusta was worth the equivalent of R6,75-million, the Malaysian victory was worth R3,25-million and added to the R2-million made in Houston means he made around R12-million in 15 days. Certainly more money than most people will earn in a lifetime. I must say that does sound obscene. With millions facing starvation on a daily basis here we have a single sportsman commanding so much money just in prize money. When it comes to earning "big bucks" Oosthuizen is naturally not alone. Many other golfers, tennis players, footballer's, basketball players and other professional sportsmen and women do enjoy the good life.

As the debate rages, however, I have been reminded that most of them actually probably do deserve what they get. Yes, there is a fair amount of natural talent which goes into it. Tiger Woods, for example, was handed \$10-million by sponsor Nike on him turning professional, before having won a single tournament in the paid ranks. Of course, he had been marketed brilliantly by Dad Earl in his junior years, but there was no doubting his talent. Hard work and hours and hours of practice also need to follow this talent. The world of professional sport is just so competitive. If you're

off your personal game or game as a team by just a fraction - you get swallowed up. Just ask Tiger Woods himself.

So, if people are prepared to fill stadiums to come and watch you or your team play, you are definitely doing something right and are obviously a marketable product which can generate bone fide cash flow.

Just think of the packed galleries of "patrons" who watched Oosthuizen at the Masters.

As an interesting aside here, the members at the Augusta insist that fans that come and watch the golf there are referred to as "patrons" and not fans or "the crowds." So powerful is this order that the TV network with the rights to broadcast have to have their commentators refer to them as such or face losing their contract. Also, have you ever wondered why the American dominated crowds are so well behaved at Augusta? Well, the things is, step out of line here by shouting too loud, having your cell phone ring or having one too few and you are evicted immediately and slapped with a lifetime ban. This same club also still does not admit women as members!

But back to sportsmen and women and their marketability.

With less than 100 days to go before the start of the 2012 London Olympic Games, it's another in the once every four years chance athletes in South Africa have to market and make a name for themselves.

Between events like the Olympics and to a lesser extent the World Athletic Championships and Commonwealth Games, world class athletes like Khotso Mokoena and LJ van Zyl have to rely on their own wits simply to survive. They have to therefore jump at the opportunity to earn some money. Being human though they also get injured, struggle for form etc.

They must at times then wonder if they have chosen the correct sporting discipline to be good at. Of course you can also be like Athletics Gauteng North (AGN) and

Tuks marathon Steven Mokoka. He made the headlines on day 1 of the Yellow Pages SA Senior Track and Field Championships in Port Elizabeth recently by running the third fastest time recorded in the 10 000m in this country to add the 10 000m to his marathon Olympic qualifying time. Mokoka's time of 27:40.73 was the third fastest time yet run by a South African, only SA record holder Hendrik Ramaala and nine time SA 10 000m champion, Xolile Yawa have gone faster. (PE 22.02.1999 and PE 12.12.1987 respectively).

Should Mokoka run an Olympic A-Qualifier again at an international meeting he will need to decide if he will run the 10 000m in London or the Marathon for which he has also qualified.

Decathlete Willem Coertzen, one-lap hurdler Cornel Fredericks and South African javelin throw record holder Sunette Viljoen all booked their places for the Games in July. They joined 400m hurdles ace LJ van Zyl, who qualified a week before at an inter-club meeting in Pretoria. But what about Caster Semenya? Her new coach and three-time world 800m champion Maria Mutola has obviously been cracking the whip and the double-lap specialist is making great progress. Mutola has set her to charge the goal of running a sub-two minute race on South African soil, a feat that was last achieved in 1991 when Zelda Pretorius ran a time of 1:58.85. Semenya reached the 1:59.90 qualifying time for the first time last year at the IAAF World Championships in South Korea when she relinquished her title to Mariya Savinova of Russia.

She needs to dip below the qualifying mark one more time before the June 30 deadline, to book a place for the Games and such has been her progress, odds are she will do that easily.

I reckon we (South Africa) are going to have a good Games medals wise in London. Watch out especially for our women's hockey team. Here's hoping!

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