

# the MEDALLIST

sport, science, knowledge

YOUR  
COMPLIMENTARY  
ISSUE





# "Tuks of Nicks"



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**TuksSport**



AB de Villiers, Caster Semenya, Victor Matfield, Bridgitte Hartley, Pierre Spies, Roland Schoeman, Faf du Plessis, Cornel Fredericks, Simphiwe Dlodlu and LJ van Zyl all have one thing in common. Aside from their international acclaim as some of the world's most highly regarded sports persons, they all have the University of Pretoria as a guiding force behind them.

The high performance centre (hpc) at the University is widely acknowledged as the best of its kind in the country. As South Africa celebrates 20 years of democracy, the University of Pretoria also acknowledges its achievements, both on and off the track. The University offers highly regarded academic programmes with a sport focus, as well as essential training and facilities for many different sport codes. Our research focus extends to sport and sport science in a bid to use knowledge to improve the competitiveness and physical performance of athletes.

Our academic performance, coupled with our sport prowess, has made Tuks a force to be reckoned with. We celebrate the achievements of our great athletes who show the world that the right attitude, hard work and commitment lead to success.

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Cover Image: Reg Caldecott



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Publisher: hpc, PO Box 14622, Hatfield, 0028, Tel: +27 12 362 9800, Fax: +27 12 362 9890  
Executive Editor: Toby Sutcliffe, toby.sutcliffe@hpc.co.za, Managing Editor: Leonore Jordaan, leonore.jordaan@hpc.co.za  
Layout: Maunée Meiring, maunee@iburst.co.za



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# from the **CEO'S** OFFICE

Research has proved that Olympic medals are won at least 8 - 10 years in advance and that high performance is a moving target and methods of producing better results are changing daily. It is also imperative that we understand that "It is not every four years, but every day!" and it is how we live our lives and train on a daily basis that will be the key that will either lead to us performing at the highest level or just being another participant.

This is what we at the hpc have been working towards since I took over as CEO some nine years ago. Before the 2012 Olympic Games we were merely thought of as Southern Africa's first elite performance sports facility as we had not yet had top performances to bench-mark the efficiency of the centre on.

Today, years down the line, we can boast the delivery of 3 of the 6 medals won at the 2012 Olympic Games in London, with a Gold, Silver and Bronze through our Rowing "Oarsome Foursome", Caster Semenya and Bridgitte Hartley. This year also saw our athletes winning five medals at the 2014 Commonwealth Games in Glasgow, with Cornel Fredericks, Khotso Mokoena and Zack Piontek all winning Gold, a Silver by Kate Roberts and a Bronze by Jacques van Zyl.

Further to this our rowing squad qualified four Olympic-class boats for the A-finals at the World Rowing Championships and Olympic gold medallists James Thompson and John Smith were crowned world champions in the men's lightweight double sculls posting a world-best time in the final, and the heavyweight pair of

Shaun Keeling and Vincent Breet were placed 3<sup>rd</sup>.

At the Senior African Athletics Championships in Marrakech, Morocco the hpc sponsored athletes Cornel Fredericks, Wenda Nel, Lebogang Shange, Khotso Mokoena and Orazio Cremona all won gold in their respective disciplines while Khotso Makoena added a Silver in Long Jump to his medal tally.

Bridgitte Hartley claimed a bronze medal in the K1 Women's 500m World Canoeing championships in Russia and Zander Lombard came second in the British Open Amateur Golf Championships. A number of our Judokas went on to win their respective African Championships and in swimming Karin Prinsloo won a number of events in the Mare Nostrum world swimming events. These are but just a few of the excellent performances by our athletes in 2014.

All of these international championships were a great stepping stone on the Road to Rio and gave us a good indication of just where our sponsored athletes currently are in their preparation for Rio 2016, two years from now.

The most exciting part of the journey that the hpc has travelled over the last 12 years is yet to come and, whilst we acknowledge what we have achieved, we also understand that the world of international sport is an ever changing world and that there will always be areas where we can improve upon. We also understand that with technological advances taking place on a daily basis we need to stay abreast of these latest developments or risk

being left behind.

We will from the hpc's sport science & medical unit, in partnership with the Institute for Sports Research and the Sports Medicine department of the University of Pretoria, which consists of some of the finest scientists and practitioners in South Africa, ensure that our athletes receive all the support and assistance they need to perform at the highest level.

2015 will also be an exciting year with the TuksSport High School moving into its new custom built School on the Sports Campus of the University thanks to a magnanimous donation from an anonymous donor. It is planned that the opening will take place in the third term of 2015 (July) and this will allow our learners more contact time with the teachers and the respective sport science and medical services, as well as with their respective coaches.

2014 has been a fantastic year and 2015 is a very important year as it is the start of the qualification process for Rio Olympics 2016. My thanks to the athletes, coaches, sport science and medical staff and all other staff at the hpc who have all contributed to another bumper year!

ONWARDS AND UPWARDS!

*Toby Sutcliffe*



# Success Ahead

*Text: Wilhelm de Swardt*

With their tally of eleven gold, three silver and three bronze medals in the period July to September this season, the athletes of the High Performance Centre (hpc) have good reason to believe that they are at the forefront of South Africa's sporting success.

Their winning streak started at the Commonwealth Games in Glasgow and continued through the World Rowing Championships in Amsterdam; the World Sprint Canoeing Championships in Moscow; the African Athletics Championships in Marrakech and the Inter Continental Athletics Cup in Marrakech.

The prediction by Toby Sutcliffe, CEO of hpc, that the hpc-sponsored athletes could win up to seven medals at the 2016 Olympic Games in Rio is beginning to seem quite possible.

Judging by their performances this season Cornel Fredericks (400-hurdles), Khotso Mokoena (triple jump or long jump); John Smith, James Thompson, Shaun Keeling, Vincent Breet (all rowing); Bridgitte Hartley (sprint canoeing) and Cameron van der Burgh (swimming) could all be medal contenders in 2016.

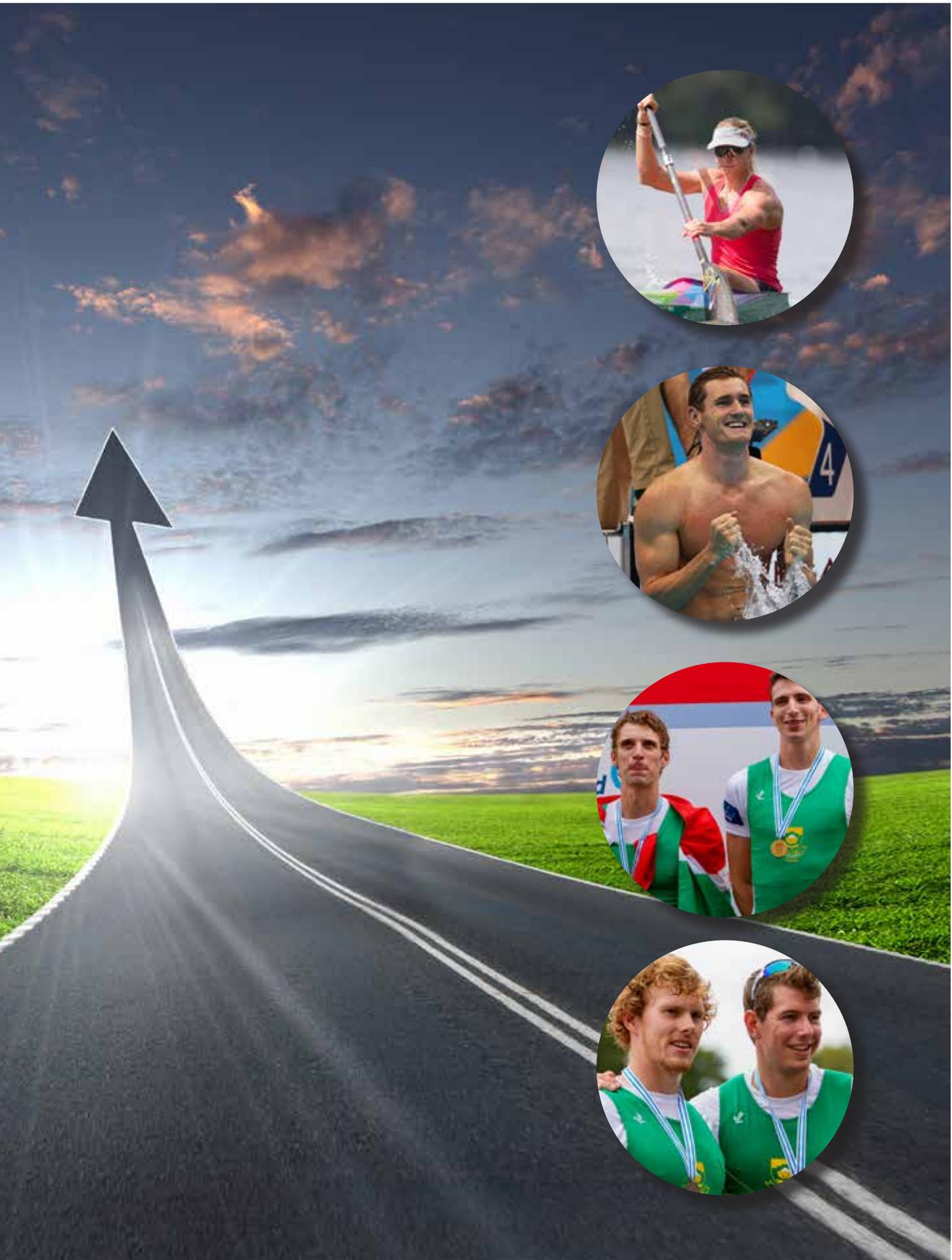
There are also athletes, such as Wian Sullwald (triathlon), who improved by leaps and bounds this season. At the end of last year Sullwald was ranked 75<sup>th</sup> in the world and currently he is ranked 35<sup>th</sup>. Knowledgeable people are quick to point out that Sullwald is currently performing better than the legendary Brownlee brothers from Britain, Alistair and Jonathan, when they were his age. It is a given that he will be stronger and tactically much more astute in 2016. So 'watch this space'.

There is much talk about the possibility of a medal for the South African sprinters in the 4x100 relay in Rio. At the Commonwealth Games in Glasgow Akani Simbine, Henricho Bruintjes and Ncincilili Titi (all hpc/Tuks athletes) and Simon Magakwe finished fourth in the final of the relay in a time of 38.35s. In doing so they bettered the record of 38.47s that was set in Edmonton, Canada, in 2001.

It will be safe to predict that more of the hpc-sponsored athletes will be in contention to medal at the Games in 2016, but Sutcliffe and his team of experts do not take anything for granted.

"Before the Commonwealth Games I attended a board meeting of the Association of







Sport Performance Centres. It was attended by representatives from most of the big sporting countries.

“One of the main themes that were discussed was the importance of being proactive in managing athletes in the build-up to the 2016 Olympic Games.

“Proactive management implies that an athlete’s lifestyle, mental state and eating habits are analysed. Regular blood tests will be done to check whether any shortages such as iron deficiencies, etc. occur. If deemed necessary, psychologists will also be involved.

“When watching the Commonwealth Games I noticed that some of our athletes who finished 4<sup>th</sup> or 5<sup>th</sup> seemed to lack that little bit extra to step up to the next level. It is something that can be rectified by being proactive, but this will only happen if the athletes, coaches and agents really buy into the expertise we offer at the hpc.

“One of my main worries is whether the agents of the athletes realize the importance of competing in an Olympic Games.

Many agents view athletes only as a source of income. They race all over the world, chasing money, but the importance of an Olympic medal on their future is totally disregarded.

“The athletes should realize that they will only begin to earn good money after winning a medal at the Games.”

A major frustration for many of the athletes who are being funded by the SA Sports Confederation and Olympic Committee (Sascoc) is that they have to keep book of their expenses because they are only remunerated after having submitted their receipts.

According to Sutcliffe this is not the way to do it.

“We at the hpc are prepared to do the bookkeeping for our athletes. It is a case of ‘cutting the stutter’ to enable the athlete not to lose focus of his goals.

“In fact, we want to do everything in our power to help the athletes to do only what they do best, whether it is running, jumping, throwing or swimming. At this

level it is the small things that could mean the difference between winning a medal and just missing to do so.

“Canada’s athletes performed very well at the previous two Winter Olympic Games, winning no less than 24 gold medals, 17 silver medals and 10 bronze medals. Their success was due mainly to the fact that their athletes were managed proactively.”

According to Sutcliffe he, together with Steven Ball, Roger Barrow and Danie du Toit have set up a panel that meets regularly with the coaches of the different athletes to discuss their various performances.

“The key question that needs to be answered at every meeting is whether the athletes are on track to achieve what they set out to do. If not, what can be done to help them doing so and, especially, what can be done by the hpc. We want to document everything from now until 2016 to make sure that it is done in an orderly manner and is not a case of hit or miss.”

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“Been there done that and got the T-shirt to prove it.”

Although this phrase has become rather hackneyed through overuse, it is still a good way to describe Cameron van der Burgh’s feats in swimming pools across the world.

Since 2007 not a year has passed in which he has not won at least one medal at a World Championships, Olympic Games or Commonwealth Games, long as well as short course. At the recent Commonwealth Games in Glasgow he won gold, silver and bronze medals – gold in the 50m breaststroke, silver in the 100m breaststroke and bronze in the 4x100 medley relay.

I met up with Van der Burgh while he and Giulio Zorzi were training in the gym at the Tuks athletics stadium as part of their preparation for the World Short Course Championships in December.

Having read through Van der Burgh’s achievements in the swimming pool I couldn’t help but wonder about his ability to stay motivated. How do you psyche yourself up for an event that you have already won several times?

In between lifting heavy weights the 26-year-old Van der Burgh responded –

“It is not true that it becomes more difficult to motivate yourself later in your career. Remember swimming is my career and I love to race. The fact that there is nothing higher to achieve does not mean that your hunger to win diminishes. The challenge for me is to see how many more races I can win before my career comes to an end.

“I am at a stage where I am beginning to realize that I am not going to swim forever. So I enjoy everything a little bit more, realizing that it might be my last World Championships, last Olympic Games, etc. This motivates me to make the most of every opportunity that comes my way and it is always important for me to perform at my best.”

Van der Burgh has broken quite a few world records in his swimming career. I asked him what is more important, winning a medal or improving on world records, considering that a medal is for keeps but you can only borrow a record.

While swinging something through the air with the greatest of ease that looks like a hammer belonging to the Greek god, Thor, Van der Burgh responds –

“Records are obviously important. Even though you may just ‘borrow’ it, it still means that your name will appear in the history books because you were the best swimmer in the world at a specific time, which is quite impressive. So for me records are important. I like the challenge of constantly pushing the boundaries. The ultimate would be to set a time that no one else can improve on.”

Van der Burgh has been following an intensive rehab programme during the past few weeks, trying to avoid surgery on a troublesome shoulder. He has been struggling with pain recently as a result of frequent competitions.”

“Many of the specialists and surgeons want to operate the first time they see my shoulder, but I prefer to take the rehab route. I will be forever grateful for the way I have been supported by a team of experts from the hpc. They have

done an amazing job.

“The support I am receiving from the hpc made me realize that, in order to stay one step ahead of the ever growing list of younger rivals, I need to have access to the best scientific minds.

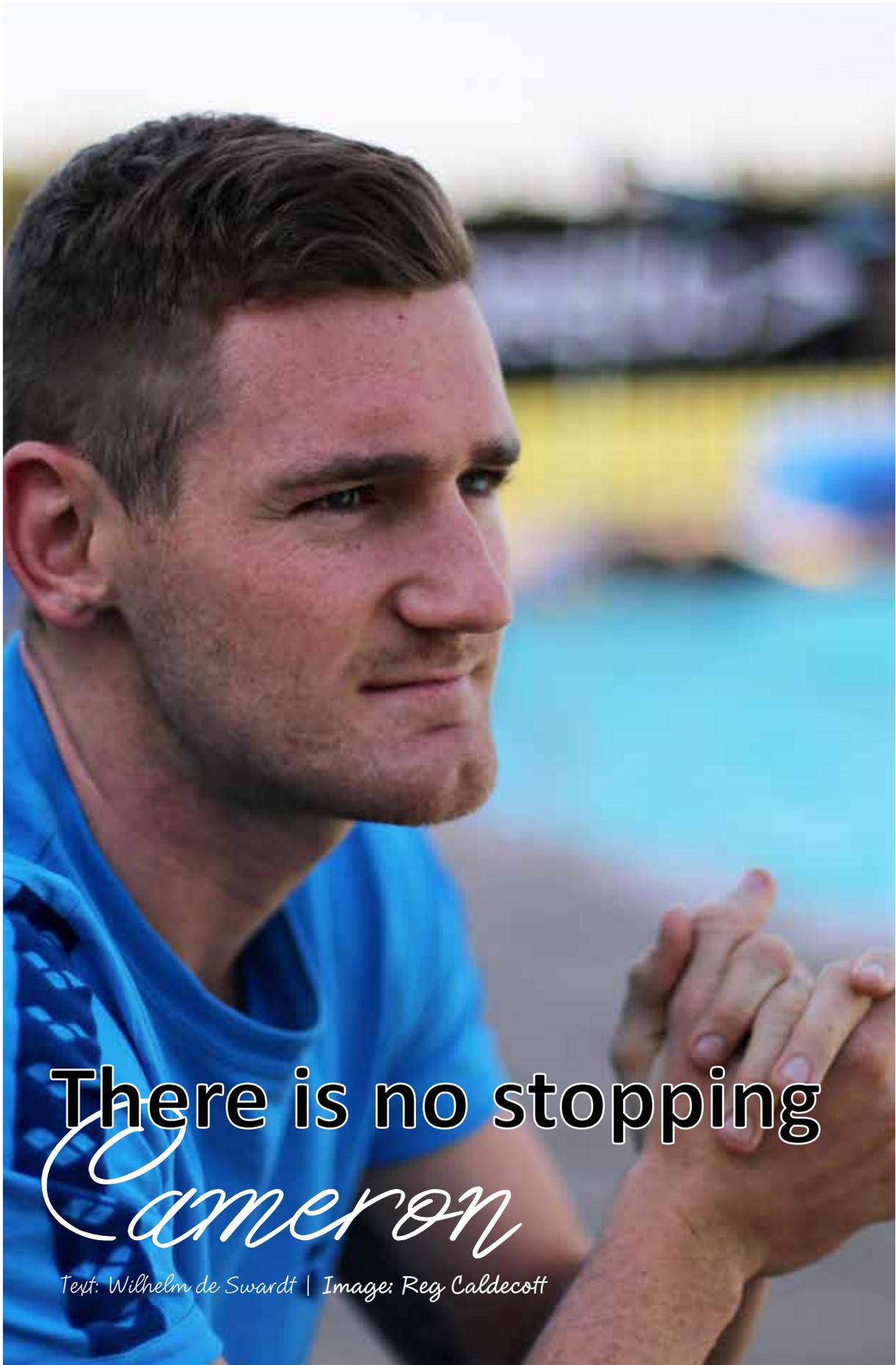
“Nowadays sport is no longer merely spending hours on end in a swimming pool or on an athletics track. In the professional era success in any sport is about marginal gains. That is the reason why I signed up with the hpc again. I am confident that with the help of their expertise I will be in with a real chance to medal at the 2016 Olympic Games in Rio.”

But it is a case of first things first. At the time of the interview Van der Burgh was completely focused on the World Short Course Championships in Doha.

“I will be swimming the 50 and 100 metres butterfly events and maybe the 200m butterfly as well if my shoulder holds up.”

Van der Burgh has been a dominant force in the 50m and 100m breaststroke events in which he often medalled. However he is not too keen on the 200m.

“I started off in the 50m breaststroke and then went on to compete over 100 metres without a problem, but I am not too sure about the 200m. It feels as if I am stuck in no-man’s land when I compete over the longer distance. It is not as if I do not have the endurance, but I just don’t have the speed to be truly competitive over 200m. At the short course championships it is a different ball game. Because you do more turns the 200 metres is more of a power-based event and that suits me.”



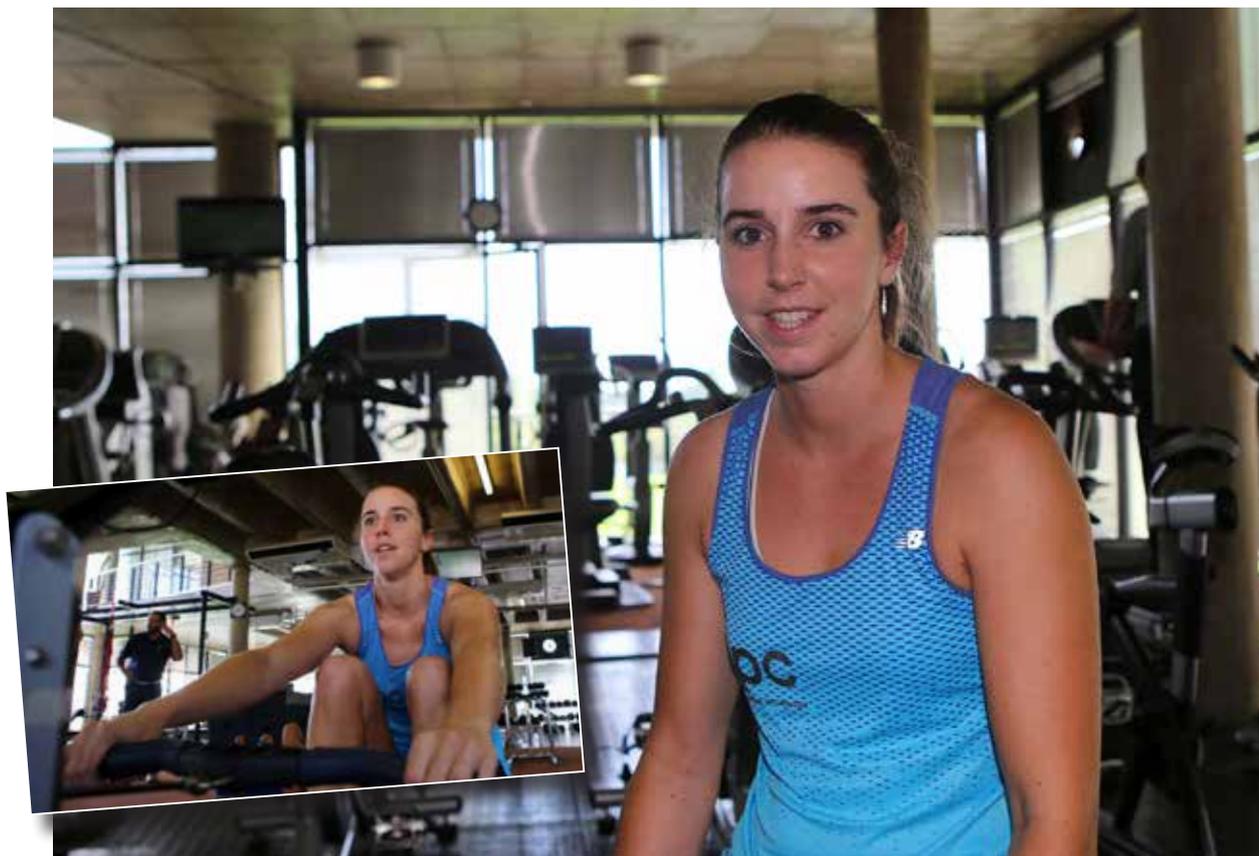
There is no stopping  
*Cameron*

*Text: Wilhelm de Swardt | Image: Reg Caldecott*

# Queen of all trades

*Text: Murray Sutcliffe | Images: Reg Caldecott*





My second interview in as many days found me once again seated at the HPC restaurant, awaiting one of the High Performance Center's most talented sportswomen. Much like my previous interview, I had no idea what to expect and hence decided to keep an open mind and expect the unexpected. Within minutes of being seated I was pleasantly graced by a pretty young lady whom proceeded to introduce herself as one, Kate Johnstone.

Kate is a 23-year-old Rower who was born in Johannesburg and attended St Stithians College. This fit young rower is not all stamina and brawn, however. In addition to being a champion rower, Kate has a degree in Architecture and is somehow managing to find the time to fit in an Honours degree in Real Estate whilst maintaining her intense training routine. These brains and work ethic are clearly hereditary as her parents both

boast successful careers. Her mom works in Market Research whilst her dad is a Hydro Geologist. Just in case the Johnstone name did not have enough to be proud of, Kate's older brother has his MBA.

Kate's achievements in rowing seem endless. To mention a few: she came first at the SA champs in 2009 and reached the final of the under 23's a couple years later in 2012 (both in the singles); then she came 8<sup>th</sup> in the Senior world champs in the doubles in 2013. When I asked her who her greatest inspirations were, she pondered over the question for a minute before coming to the realization that she cannot simply recognize one single person for inspiring her, but has instead had many influences. Her mom for instance has always been a big inspiration to her as she is a successful businesswoman who simultaneously raised two kids. She also states that "My biggest

role models are the people I train with. I learn from them daily".

Kate is especially complimentary of the hpc and the support she has received from everyone since she's been here. She explains how the facilities are world class and that she receives great backing from her coaches, who are always pushing her to her limit. Her advice to aspiring athletes – whether in her field of expertise or any other – is that you need to "be consistent in what you do, wake up every morning and train with the mission to do one thing better than yesterday. Believe in yourself and never give up."

Sometimes we may feel that we have a predetermined route to follow in life. Kate Johnstone is first-hand proof that we have the ability to apply ourselves to multiple trades. The world is a kingdom of opportunity and you decide how you want to rule it – just ask the Queen of all trades.

Any top South African athlete who hopes to represent his country in a lesser known sport at the 2016 Olympic Games, will have experienced the truth of this saying.

One of the highlights during the Commonwealth Games was the performance by South Africa's judoka.

Of the six judokas sent to Glasgow four have medalled. They were Zack Piontek (gold – Under-90kg); Ruan Snyman (silver – Under-100kg); Jacques van Zyl (bronze – Under-73kg) and Siyabulela Mabulu (bronze – Under-66kg).

The question is whether our judoka will be able to repeat this performance in Rio in 2016.

Piontek is quietly confident that they could be competitive, providing that the problem of getting the proper finance to enable them to prepare for the Games can be overcome.

“Winning a gold medal at the Commonwealth Games was special and it was certainly the highlight of my career. Unfortunately I have to be realistic. It does not necessarily mean that I will be able to win a medal in Rio as well. I still need to put in a lot of long hard hours of training.”

Therein lies the problem, not only for Piontek and his teammates, but for every athlete in South Africa who competes in a lesser sport. To train and compete only in local events or in other African countries is just not going to cut it. To have a realistic chance to qualify for the Olympics and be competitive as well, athletes need to compete internationally. This is the only way to gain the necessary experience, but it costs money and money is precisely what these athletes do not have.

“Gideon Sam, president of Sascoc,

promised that they will help all the athletes who medalled at the Commonwealth Games. He said we only have to apply for financial support, which I did,” Piontek said.

According to Piontek he needs to compete in at least ten major international meetings (Grand Prix and Grand Slam) if he wants to have a realistic chance to qualify for the Games. He also needs to train with international judokas to gain the necessary experience. This should preferably be countries such as Japan, Russia or France, because they are the dominant countries in the sport.

Roughly estimated Piontek will need about R600 000 to do this.

“It would be ideal if I could train in Japan, as well as Russia and France, because each country's judoka have a distinct style of fighting.

“The Japanese, for example, are more traditional in their approach. They prefer to fight straight up, trying to use their opponent's power against him. They always try to win with an ippon, even when they are ahead on points.

“The Russian judoka are more physical in their approach. They love to counter attack and will try to wrestle you down with brute force.

“It is interesting to watch the French because every weight category seems to have its own unique way of fighting. Some fight like the Japanese while others are more inclined to do it the Russian way. Watching the French in action is always exciting.

“In the build-up to the Games it is important to be exposed to all these different fighting styles.”

Piontek appreciates the support he is receiving from the hpc.

“If it had not been for the hpc I would not have won gold at the

Commonwealth Games.

“There are two people whom I specifically want to thank. They are Monja Human (sports psychologist) and Nikola Filipov (hpc's judo coach).

“I only started working with Monja recently but she has already made a big difference in my approach to judo.

“For example it does not help only to do hours of physical training every day. To be successful you should also be mentally fit. This means that you have to be able to visualize how you want to go about winning.

“Monja helped me to understand that there is a fine balance between being confident and being arrogant. Working with Monja has also taught me not get side-tracked by outside factors over which I have no control.

“The first time I realized that there was merit in what Monja taught me was at the African Championships. I was going through a torrid time in my fights in the heavyweight category and then competing in the open category afterwards. I just continued to lose all the time, but before the team competition I took time off to clear my mind and tried to focus on the sessions I had with Monja. It definitely helped. I managed to beat the judoka of Algeria against whom I had lost two days before. This was the beginning of the important turnabout in my approach going into the Commonwealth Games.

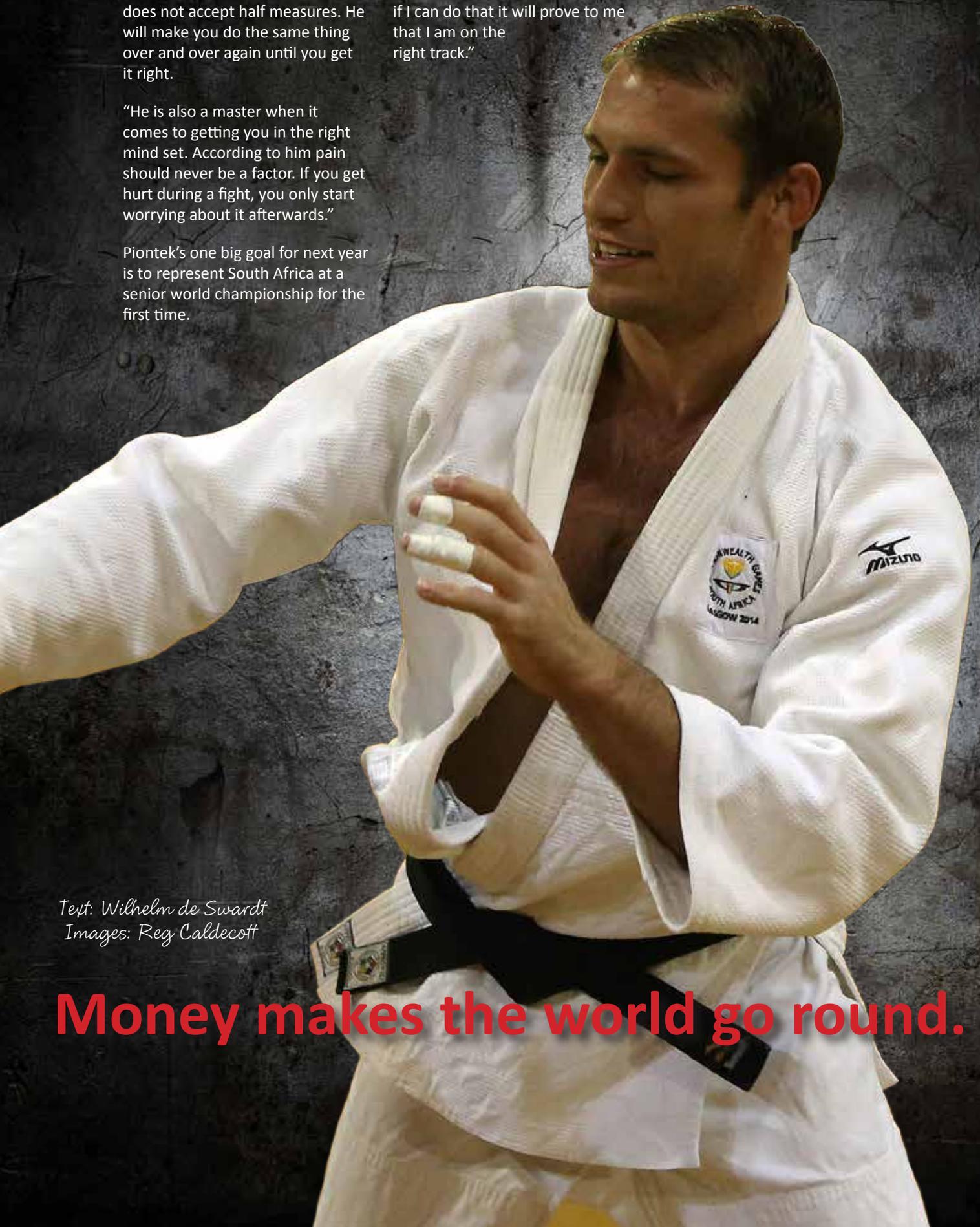
“Nikola is an amazing coach. What I really appreciate about him is that he makes sure that he always stays up to date with what is happening in international judo. He spends hours every day on the internet doing research, sending emails or skypeing the coaches of top judokas to exchange ideas with them.

of his way to ensure that we train exactly the same as most of the top judokas in the world. He is an absolute perfectionist. When he demonstrates a new technique, he does not accept half measures. He will make you do the same thing over and over again until you get it right.

“He is also a master when it comes to getting you in the right mind set. According to him pain should never be a factor. If you get hurt during a fight, you only start worrying about it afterwards.”

Piontek’s one big goal for next year is to represent South Africa at a senior world championship for the first time.

“I don’t say I am going to win. At this stage it is a case of one step at a time. I first need to qualify and, having done that, I will be happy to win one or two fights, because if I can do that it will prove to me that I am on the right track.”



*Text: Wilhelm de Swardt  
Images: Reg Caldecott*

**Money makes the world go round.**



# Throwing away Stereotypes

*Text: Murray Sutcliffe | Image: Reg Caldecott*

Sitting, waiting in the hpc restaurant, ready to conduct my interview with Orazio Cremona – having no idea what the man looks like or what he does – I was certainly in for a surprise. A great, big ‘bear’ of a man suddenly approached me and gestured a hand shake. I have been fortunate enough to interview some special athletes in my so-far brief career as a writer for the Medalist, and Orazio sure is one of them. Hand outstretched, towering over me, I offered the man a seat and proceeded to get to know him a little better.

25-year-old Orazio Cremona is a ‘Jozie boy’ who has strong Italian roots, though remains proudly South African. When he revealed the area to which he applies his trade, things became a little clearer. Orazio is a Shot put thrower. The three time South African Champion and

2014 African Champion embraces competition and revels in it. He accredits his competitive nature to his father, who was a South African Clay Pigeon Shooting Champion. Orazio also sees his father as his role model, for the simple yet unequivocally important fact that he has supported Orazio from the on-set and continues to support him now.

Orazio grew up in a family with three older sisters – even I would feel the need to throw heavy objects as far as possible if I had three older sisters growing up – and despite his success and all his achievements, he has not lost sight of what is most important to him: Family. With a BCom Economics and Marketing behind his name, Orazio aspires to follow in his father’s footsteps and take over the cheese company to which his family gives its name.

Having placed 4<sup>th</sup> in the Commonwealth games and 7<sup>th</sup> in the World Indoor Champs, it is evident that we have a future star in our midsts. However, he remains humble and complimentary of the other up-and-coming young athletes that the hpc is currently producing. Orazio’s advice to these athletes and others like them is to “think big” and “set the bar high”. He believes that one cannot achieve greatness without truly aspiring for greatness.

So before you show a reluctance to share a table with a big, intimidating shot put thrower, first think of Orazio. Sure he’s built like a grizzly, throws big metal balls for a living and probably has Italian hit-men on his speed-dial, but take a minute to get to know this future South African star and you realize that shot put throwers are among the friendliest of people.

Hennie Kotze can rightly claim to be a creator of champions in the 400m hurdles, but it is simply not in his nature to do so. If this statement should be made in front of Kotze, the unassuming coach would almost certainly respond by saying: “I have been lucky to coach good athletes”.

Even though there may be some truth in Kotze’s words, any athlete will admit that talent alone can take you only so far. To become a true champion you need a coach who has the technical knowledge to fine-tune your natural ability into an art. You also need a person who is able to nurture your talent and helps you to believe in your own abilities.

A quick glance at the results of the South African 400m hurdles athletes over the past decade shows that this is precisely what Kotze has been doing. His athletes have won numerous medals at the South African Championships, the South African Students and African Championships, as well as at the World Championships, Commonwealth Games and World Students Championships.

Kotze’s athletes have been dominating the 400m hurdles at the Commonwealth Games since 2006 by winning two gold (LJ van Zyl and Cornel Fredericks) as well as two silver medals (Van Zyl and Alwyn Myburgh).

The only medal that is still missing from Kotze’s coaching CV is an Olympic medal, but chances are good that this lapse could be rectified in Rio in 2016.

In a conversation with Kotze the reason for his success as a coach quickly becomes obvious. It is his belief that the human spirit can be enriched in various ways. He also believes that there is more to life than medals and titles.

His philosophy is: “Enjoy life, remain faithful, live everyday as if it is your last day and you will be blessed”.

Kotze is also quick to point out that much of his success as a coach should be attributed to Bessie Windell who coached him when he was an athlete.

“I can say without any hesitation that she was one of the best coaches ever to have coached South African athletes. Her holistic approach towards coaching made her not merely a coach to her athletes but a mentor as well.

“To this day I am still using some of her ideas in my coaching programmes.”

Windell died in 2008 after a long and brave battle against cancer.

As far as running the 400m hurdles is concerned,

Kotze was certainly no slouch himself. He earned Springbok colours in athletics for five consecutive years (from 1980 to 1985) and won South African titles in the 400m and 400m hurdles.

One of his proudest moments as an athlete was when he broke Gert Potgieter’s South African record in 1983. His time of 49.26 seconds placed him 16<sup>th</sup> in the world rankings at the time.

“Being the one to break ‘Oom Gert’s’ record after 23 years was really special. He was a role model to me and has always been a wonderful ambassador for the sport.”

He can stake another claim as far as the South African 400m hurdles records are concerned, because he was the coach who helped LJ van Zyl to run 47.66s in 2011.

To say that Kotze is passionate about coaching would be an understatement.

His personal website declares that coaching is more than just giving back to the sport to him. It is his mission to mean something to his athletes and to make a difference in their lives through his dedication and example. He sees every human being as a unique and perfect creation. Athletes are very special individuals because of the God-given athletic potential they have received.

He believes that any coach can command respect by being open and honest. The road to success can be achieved by coaching from the heart and it is also important to remember that the ability to be a successful coach is a gift.

“I am coaching from my heart and with true passion and I guess my athletes can feel it.

“I definitely grew as a coach by working with athletes such as Martin Willemse, Adriaan Botha, Alwyn Myburgh, LJ van Zyl and many others. Actually every one of my athletes played a part in helping me to develop a near perfect recipe for coaching the 400m hurdles, but as coach you can never sit back and say now I know it all. That is why I am constantly doing research and talking to coaches from all over the world.”

The three main highlights for Kotze as a coach was when Van Zyl won the 400m hurdles at the 2006 Commonwealth Games in Melbourne with Alwyn Myburgh finishing second; Van Zyl equalling his SA record time in Ostrava in 2011; and Cornel Fredericks winning gold at this year’s Commonwealth Games.

After Kotze completed his career as a serious athlete he competed in Cross Country and road races (10km up to 50km). He also finished the the Two Oceans as

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*Hennie Kotze*

*Text: Wilhelm de Swardt  
Images: Reg Caldecott &  
Lourens Uitenweerde/ EyeScape*





well as the Comrades marathon.

Kotze is married to Hanlie, a school teacher, who achieved national colours for high jump. Their two children, Hennie (jnr) and Heike, are also talented athletes.

Hennie (jnr) won the 110m hurdles title at the African Championships in Ethiopia in 2008. Heike represented South Africa as a junior in heptathlon and also played netball at a national level. This year she represented South Africa at the World CrossFit Games.

Understandably Kotze has little spare time, but when he does have a free moment he chooses to do gardening, listen to music and be outdoors doing hiking or mountain biking.

#### **Best 400m hurdle coaching achievements.**

\*Cornel Fredericks: Gold medal at South African Champs, African Champs, Commonwealth Games and the Continental Cup; winner of the Zurich Diamond League; second-best performance in the world for 2014.

\*Wenda Nel (Theron): Gold medal at South African and African Champs and finalist at the Commonwealth Games, 5<sup>th</sup> at the Continental Cup.

\*Alwyn Myburgh: World Student Champion and record 48.09 seconds (2001)

\*LJ van Zyl: set a new South African record of 47.66 seconds (2011) ... one of the best time in the world since 2011.

\* Alwyn Myburgh: Finalist Athens Olympic Games (2004).

\* LJ van Zyl: Finalist World Championships (2005) Helsinki.

\*Three finalists Commonwealth Games (2006) Melbourne: LJ van Zyl (gold medal with a Championship record of 48.05 seconds), Alwyn Myburgh (silver medal 48.23 seconds) Ter de Villiers 7<sup>th</sup>

\*First four positions during the Africa Champs (2006) Mauritius, LJ van Zyl, Alwyn Myburgh, Kurt Couto (Mozambique) and Ter de Villiers.

\* LJ van Zyl: Africa Champion 2010 Nairobi, Kenya.

\* LJ van Zyl: Silver medal Commonwealth Games 2010, Delhi, India

\* LJ van Zyl : Bronze medal World Championships 2011, Daego

\*Coached 11 men 400m hurdles athletes to perform the World Class standard of sub 50 seconds.

\*Represented Athletics South Africa and SASCOC as a team coach for several Major Championships.

\*Worked as a National Coach in Saudi Arabia for two years. Several of the KSA athletes broke Asian records and won medals at Asian, Islam or Arab Competitions.

\*Coached several international 400m hurdles athletes from Mozambique, Zimbabwe, Namibia, Botswana and the Netherlands.

# SPORT PSYCHOLOGY Department

## ADVENTURE-BASED LEARNING AND DEVELOPMENT PROGRAMMES

### How does it work?

It is based on the principle of learning through experience. It typically includes creating an experience, then reflecting on that experience, and finally knowledge is gained by transforming the experience into something that can be applied in future real-world situations.

### Adventure-based activities:

- **Low ropes course:** incorporating various challenges that take place on or a short distance off the ground.
- **Amazing race:** incorporating a combination of problem solving and decision making challenges as part of a set course to be completed.

### What is adventure-based learning?

It is the use of adventure-based activities for learning, focussing specifically on personal and team development.

### What are the benefits?

- Shared knowledge and collaborative learning from all members in the group.
- Breaks away from the norm of passive learning through lectures and notes.
- An opportunity to apply knowledge rather than just recite knowledge.
- To modify behaviour to improve your effectiveness.

### Description of Shadowmatch:

Shadowmatch is a tool that measures behavioural habits and compares these to a benchmark of the top performers in that specific environment. Behavioural patterns are crucial in developing competency in executing of a person's skills. Shadowmatch allows for the prediction of whether the situation will allow a person's habits to function optimally, allowing all energy to be used in executing of skills and developing competency.

For information contact: [karla.brown@hpc.co.za](mailto:karla.brown@hpc.co.za)

# When is the end the end of an athlete's career: Physical or *psychological* reality?

*Text: Maurice Aronstam and Monja Human, hpc*

We can commonly distinguish between two types of career termination. The expected end of an athletic career is seen coming and can be planned for. Included in this type can be the retirement due to age taking its toll on our ability to be competitive. The other type is the unexpected end of a career. This is unplanned and can include not being able to participate again due to a serious injury.

Calling an end to a career can be a difficult decision, and as can be seen in the amount of star athletes that retire and then make a comeback these days, it can be a difficult decision to live with. The research seems to indicate that the unexpected termination can be especially difficult, though many athletes also struggle with the transition of participating and then retiring, even if it was well planned.

Two components can be investigated when sport participation is considered, namely the physical participation and the psychological components involved.

Firstly, there is the physical participation in a sport. Athletes tend to follow distinct training routines requiring much dedication, often for many years, and after terminating a career, what is the time and routine

replaced with? Added to the routines of physical participation, some earned a living from sport, and the end of a career results in termination of income. The reality of the situation is that very few athletes earn the amount of money that they do not have to have alternative plans for when they end their careers. Working cleverly with your money or having another source of income when ending a career is a reality for most.

Helping the transition from physical participation to non-participation can include having something new that is worked towards. A new goal per se. This can be energising, help to keep focus and will replace some of the time that went into training, almost acting as a distraction from what's no more. If financial income is relevant, then another source of income is an important consideration for any athlete.

Secondly, ending a career also has a strong psychological impact. People assume different identities and can have numerous identities at any given time. People understand their experiences, decisions and actions based on what identity they assume. You can be an athlete, a team mate and a father/mother at the same time. When physical pain is experienced and the athlete identity is assumed,

someone might immediately consider the impact this might have on her training or upcoming competition. If a man assumes the father identity, and the same pain is experienced, he might consider how this will impact his movements while playing with his kids this weekend and not be too concerned about the impact of this on his ability to gym for a few days.

Psychologically athletes tend to develop strong identities with being an athlete. This is not surprising considering the investment of time and effort that is put into your sport. Even when not actively busy with sport, the athlete identity will still have its influence. What to eat while in a restaurant is influenced by assuming the athlete identity. This is done because we know that this has an impact on our ability to perform the next day. If your expectation is to live up to some level of performance then your decision in the restaurant will make sense to you, though not always to a friend as he/she might be assuming a different identity.

Research points to the necessity to plan for the psychological transition from an active sporting career to termination of your career. When the training and competition stops, does the athlete identity stay? A person might experience an imbalance



between the athlete identity they still assume and the sudden change in experiences that are not athletically related anymore. Suddenly the same choice in the restaurant does not leave you with such a sense of content anymore because there is no training that can be affected. This imbalance can cause psychological distress. Doubt, boredom, regret, anxiety, even depression can be the result if such distress persists. If a match can be found between your daily experiences and the identity assumed, a greater sense of content might be experienced. Some choose to keep similar experiences that match strong identities, and for example move into coaching roles within their sports. Some might also participate in their sport but just at a social level. This may even buy some time to develop your other identities and over a course of time move into another direction. Others have strong identities that were developed while they were still actively involved with sport, and move towards this as their dominant identity when they end their career.

It is generally regarded to be psychologically healthy to experience variation in your life, and so doing develop different identities. Each identity will offer a different outlook on your experiences, and maybe offer a way towards more positive experiences.

# The importance of a physiotherapist in the management of sport teams

*Text: T le Roux, hpc*

The team physiotherapist has become one of the most important assets any coach can have when working with a team. The physiotherapist brings dynamics to the warming up, conditioning, muscle activation as well as the recovery of the players. Due to the high intensity of matches, tournaments and training sessions a scientific approach towards the correct prevention, management and rehabilitation of sport injuries has become a necessity when managing any team.



## **Definition of the Sports Physiotherapist in team sport:**

The basic function of a Physiotherapist in Sport is the application of treatment by physical means: electrical, thermal, mechanical, hydraulic, and manual therapeutic exercises with special techniques. The Physiotherapist in Sport focuses its objectives in the field of sport and physical activity. Based on the definition of the WCPT \* on Physiotherapy in Sport, this is the set of methods, techniques and performances, which through the use and application of physical agents prevent, recover and readjust a person with sport or exercise injuries at different levels.

**The scope of Physiotherapy in teams sport:**

**Outreach in sport:**

The physiotherapist will advise the sports people and professionals linked to the team and perform any actions that help improve the conditions of avoidance of injury to the athlete.

**Prevention:**

The Physiotherapist in Sport should be alert to avoid as far as possible all those factors that might bring up injuries by sports in general and of each particular sport, associated injuries and / or consequences of injury primary, and its possible recurrence. This includes conditioning, training and pre-match activation.

**Recovery:**

The Physiotherapist in Sport should regain the functionality of the athlete as quickly as possible, accelerating the biological processes of recovery from injury, limiting his training as little as possible and ensure that they are reinstated to the team with the greatest prospects for success.

**Rehabilitation:**

The Physiotherapist's aim, after recovering from injury, is to put all his effort into the regaining of muscle strength and mobility. The Physiotherapist in Sport should regain the functionality of the athlete as quickly as possible, accelerating the biological processes of recovery from injury, limiting his training as little as possible and ensure that they are reinstated into the team, with the greatest prospects for success

**Teaching:**

The Physiotherapist in Sport should aim to improve all the facets of knowledge that contribute to the training of top professionals in team sport.

**Research:**

Physiotherapists in Sport should conduct studies that can contribute to the prevention of injuries, the treatment by the physiotherapist and the enhanced performance of the team.

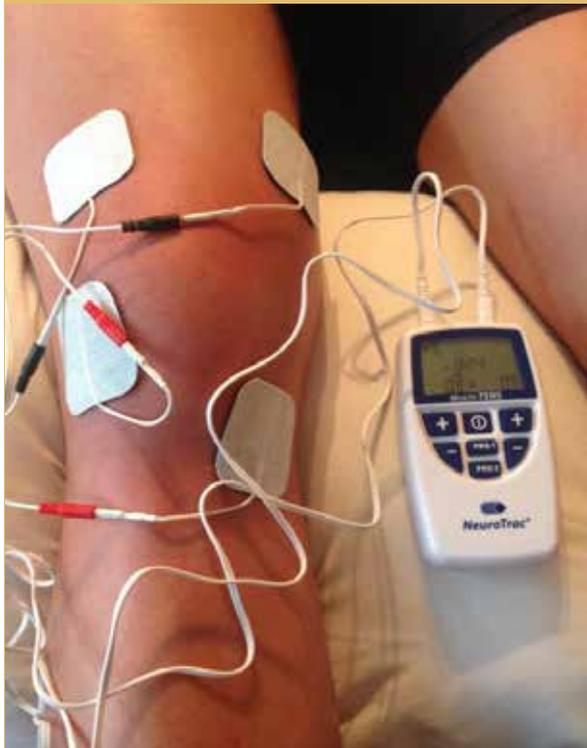
**What does the team Physiotherapist do in practice?**

- Assessment and Treatment of acute and chronic injuries on rest days.
- Stretching before training or matches.
- Muscle activation before training and matches.
- Pre match strapping / treatments.
- Medical cover at training sessions and matches.
- Medical screening and injury prevention.
- Liaising with management regarding the severity of injuries and the conditioning of the team.
- Referral for Scans / Surgery.
- Rehabilitation of the injured player.
- Recovery sport massages, hydrotherapy pool sessions and recovery ice-baths or contrast baths after matches.
- Psychological support during tournaments and matches.



**Assessment and treatment of acute and chronic injuries:**

- **Acute Injuries require early assessment and intervention**
  - Anti inflammatory treatment modalities.
  - Importance of compression and ice
  - Intensive Physiotherapy, strengthening, mobility and regaining function.
  - Rehabilitation of the injury and maintenance of full body strength.
  - Prevention of recurrence by giving home exercises, stretching and proprioception exercises
  
- **Chronic Injuries**
  - Ongoing management and training modifications
  - Ongoing rehabilitation



**Stretching and muscle activation before training or matches:**

- The physiotherapist is a specialist in the field of applying the correct stretching and stretching methods to prevent injury during the team warm up prior to a game.
- The use of evidence based muscle activation techniques to activate local and global muscle stabilisers before a game.



**Pre-Match Strapping and Treatment:**

- A large percentage of players use prophylactic strapping.
- The application of kinematic taping for muscle activation.
- Numerous players are playing with injuries and require treatment pre-match to improve performance.

**Medical Cover at Matches and Training:**

- Immediate Medical Management on the Field of play.
- Assessment and decision making on continuing play.
- Management of blood injuries, sprains, contusions and hydration of the players.

**Medical Screening and Injury Prevention:**

- Based on previous injuries and medical history of the player.
- Biomechanical assessment identifying weak links and treatment / rehabilitation programme.
- In season prehabilitation sessions X2 a week, small groups on rotation.
- Individual sessions.

**Liaising with Management and Conditioning of the team:**

- Introducing players back from injury.
- Reducing volume for players with chronic injuries
- Building preventative exercises into gym routines.
- Fitness to play
- Medical responsibility to the player.

**Referral for Scans and Surgery:**

- Close links with hospitals and consultants.
- Using only the best surgeons in the region.
- Able to refer at short notice.
- Discussions and joint management of athlete to ensure a quick and safe return to training / playing.

**Recovery after matches:**

- Cool down and after match stretching.
- Sport massages.
- Hydrotherapy pool sessions.
- Recovery ice-baths or contrast baths after matches.

**Psychological Support:**

- The player feels isolated when he is injured.
- Players spend a great deal of time in Rehab Centre.
- Long term injured players spend more time with medics than team mates.
- Injured players will talk to medics about things they will not mention to other members of the management team.
- Players know that conversations with the medical staff are confidential.

The overriding objective of the physiotherapist extends beyond the recovery of the player into the broader concepts of restoration of physical health and the prevention of a similar occurrence. The progress made in the player's rehabilitation will often dictate the team selection and performance of the team as a whole.



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A high performance environment is essential these days when we talk about winning medals at World championship events, Commonwealth Games and the Olympic Games. High performance is essential when we think of our elite athletes and their wellbeing at the High Performance Centre.

The question will always be: Are we on the right track and are we keeping up with changing times and methods in a very competitive environment?

All elite athletes should have easy access to a multidisciplinary team consisting of a sports physician, physiotherapist, biokineticist, sport scientist, biomechanical analyst, psychologist, dietician and massage therapist. Every team member an expert in his field. The team should work closely with the athlete's coach and they should have knowledge of the training and competing schedule of the athlete. This will enable the multidisciplinary team to function as a so called "planning and problem solving team" should the athlete encounter any problems or the need for a scientific intervention and planning arise. There should be weekly interaction between the different role players with regards to training, sport specific conditioning, injury prevention, recovery and

any other factors influencing performance. The athlete and the coach should trust this team and be comfortable with the team in planning and decision making. This team should ideally work with a small group of elite athletes to ensure optimal scientific attention. This will enable the athlete to focus on performance.

A high performance environment should allow elite athletes to have access to any resources they may need in performance and medical or scientific interventions. Data capturing and scientific analyses of training loads and injuries are also important to recognise and prevent certain injury trends and do proper training planning as well as periodization of training programmes. Proper dietary and supplementation education and planning should also be part of this process.

In sports medicine, high performance would not only be for the athlete to have access to the best medical care when he or she is ill or injured, but also have access to preventative medical information and interventions as well as medical procedures to monitor fatigue, overtraining and fitness. Issues like combatting jet lag or preventing traveller's diarrhoea during a hectic travel schedule should be easy for elite



athletes to overcome, because of proper athlete education in a high performance environment.

An elite athlete should have regular blood tests done to monitor possible fatigue and recovery at certain stages of the season. These blood tests would include tests like a full blood count, which consist of different measurements including haemoglobin levels, a reticulocyte count, platelets and a white cell count. These values can tell us certain things with regards to recovery after strenuous training and also the way in which the body responds to an episode of viral or other diseases including a common cold or an upper airway infection. It is also important to monitor overtraining syndrome and chronic fatigue syndrome in all elite athletes.

Studies done over the past few years have found decreased cortisol levels in patients suffering from fatigue. Cortisol levels also differed between men and women athletes, with lower morning cortisol levels found in women than in men. Cortisol helps the body fight psychological and physical stress. These studies also found that in cases of fatigue and chronic fatigue syndrome almost all bodily functions and equilibrium are disturbed. The accurate collection of samples to test for cortisol can be complex ranging from

saliva, urine and blood samples. Other blood tests will include ferritin levels to monitor an iron deficiency, B12 and folate, also TSH to monitor the function of the thyroid gland and glucose levels. Determining IgE levels for possible allergies and tests for liver and kidney functions might also be of use. A Monospot test to exclude glandular fever can also be done if clinically indicated. It is important to remember a holistic approach in the monitoring of the elite athlete. The sports physician should have information on the athletes training schedule, sleeping patterns, psychological stress, eating patterns and any other factor influencing performance.

The athletes at the High performance Centre have had great performances at Olympic Games and at different other international championships over the past few years. At the Sport Science and medical unit we are striving towards high performance excellence and we are planning some specific interventions together with coaches and the High Performance centre in the near future to empower our elite athletes to reach even greater heights and win more medals in Rio in 2016. We definitely have the expertise and resources to achieve this.

# High Performance

*Text: Dr Org Strauss, hpc*



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\*Source: Gregory L. Paul, Journal of the American College of Nutrition, Vol. 28, No. 4, 464S-472S (2009)



# Breathing in New Life:

## *The Invisible Support*

*Text: Wayne Coldman | Image: Reg Caldecott*

Life changes in the blink of an eye and the Life of Cornel Fredericks might never be the same again thanks to the season he produced in 2014. Cornel Fredericks went from being a young, promising and talented athlete in 2013 to being ranked number 2 in the world and cumulating the Continental, Inter-continental and Commonwealth Games titles along the way. He managed to put together a season to remember, but how did he go from talented and promising to producing?

2013 was not as kind to Cornel as one might have thought given the year he has had. Cornel suffered a number of injuries, including Achilles and hamstring problems. When I met up with Cornel in the end of 2013, his confidence seemed low and the mind and body seemed to be on different paths towards the same goal. I simply had one question I needed answering, "Why were we here?" What seems to be an extremely simple and easy question to answer can become a lot tougher when the road starts to get bumpy and uncomfortable. Why train every day? Why get up early, sacrifice so much of yourself and effort? Why put myself though so much pain and discomfort when no one can even guarantee a starting spot in the race, regardless of qualification. I always ask this question to all my athletes and I always seem to get the same reply, "Because I believe I am capable!" However these fleeting thoughts often fly straight out of their heads after a few weeks of hard training. "Talk is cheap but money buys the whiskey" We sat together and shared some ideas of what

we thought was possible in 2014 and what realistic targets we could achieve and the more we spoke the clearer the answers became for both of us. I would never say either of us left the table beaming of confidence, but rather a quiet resilience had been built up that would continue to grow and prove to be the difference over what was a long and tough 2014 season.

### Behind the 8-ball: State of Play

To start a relationship in a rehabilitation setting is extremely daunting for both the trainer and the athletes, but one I've become quite use to over the past years. Cornel was for all tense and purposes behind the 8-ball, and looking for a way out. His body was suffering, his mind was suffering and we had only had one choice, fight through or give up. The choice was simple but the journey was not. **We needed to put a plan together, a sequence of events that would lend the situation to becoming a positive influence on Mr Frederick's life and career path.**

### The Solution: Focussed Effort and Discipline

In the end of day, Cornel made two very simple changes. We changed from putting in so much effort for very little returns. "Training hard versus Training Smart". The concept seems to be well known but not well understood. We had a look at the timing of his sessions, and his ability to perform during the week and I found that he was constantly under pressure and always seemed to be surviving through training instead of thriving. This would not be suited to the goal at hand so the

following changes were needed to be made.

1. Physical Preparation before and after sessions
2. Decrease the Stress
3. Increased physical recovery through more contact
4. Technique and Movement
5. Positive Environment

These 5 points were very simple but the implementation process so far tougher than it reads. Cornel took his new training regime like a fish to water, and from the beginning, I knew that there was going to be a huge change in the world of 400m hurdling. He no longer came into training sessions without a plan. He could now relax and do what was required of him without undue stress of wasting time and effort. Focussed Effort was the critical change. We never did a single thing without being sure of the effects and adaptation it would create or disrupt in the body. Every repetition needed to be done with the mind 100% present and living in the moment. I believe he started to understand that effort wasn't good enough to be successful but we had to find more. We had to be able to account for everything we did and if there wasn't sufficient reason to apply energy, then we threw it out. Over the first three months, I seemed to be throwing more out of the program than into it and it worked! His physical changes were impressive but not radical. We continued to tailor the program to suite our plan. His preparation was better giving him every opportunity

in the world to have a great/productive session in EVERY session. His recovery improved due to a better schedule that was more suited to him and massive amount of work from both of us in terms of the time we spent together. His technique and movement skills improved dramatically through a lot of contact time in the gym and on the fields. When we managed to improve his focus in sessions through specific coaching and cueing drills but I still believe that the first 4 points on the plan were guided by the 5<sup>th</sup> point. Positive environmental changes seemed to make the biggest difference for Cornel. The environment we created and will continue to improve has allowed him to find success in training first and then move this to the international stage. Confidence is a delicate aspect that needs to be nurtured every day and by structuring all his sessions at achieving specific attributes, helped Cornel build up his physical and mental capacities. It is my belief that this was the defining aspect that glued the plan together.

#### The Future: More of the Same

The future is incredibly bright for Cornel and his super talented group of 400m hurdlers. He has grown as athlete and matured so much from the 2014 season. I believe that further improvements can be made for the 2015 season in all aspects as perfection is an eternal goal. I know that the confidence, experience and knowledge that he has obtained throughout 2014 will only serve Cornel well in 2015 and beyond. We are excited to start the preparation leading into an extremely tough 2 year period that will include the 2015 World Champs and Rio 2016. If Cornel continues to show the application, discipline and determination he did in 2014, then the future is bright for this amazing young man.





A key element of the physical preparation of athletes is the taper period in the weeks immediately preceding competition. The key objectives for an effective taper are to; (1) maximally reduce accumulated physiological and psychological stress of daily training and to (2) restore training tolerance and further enhance training-induced adaptations.

The expected mean improvement in individual performance time with an effective taper is about 2-3%, ranging from 0-6% in trained athletes<sup>[9]</sup>, which varies according to sporting demands. This can make a substantial difference to the outcome of competition performance in many sports based on time; however more work is required to identify the effect of tapers in sports determined by other dimensions such as mass, distance or points scored. The primary question for coaches and athletes is how to manipulate the volume, intensity, frequency, duration, of training and the pattern of taper to enhance or optimize performance.

#### **Volume of training**

In many sports, particularly endurance based sports; training volume is the main currency of the training programme. Many coaches fear a potential loss of fitness when training volume is markedly reduced. However, if manipulated correctly, benefits with reductions of up to 85 per cent in total training volume can be experienced<sup>[8]</sup>. In general, endurance athletes should have less reduction in training volume than sprinters, or strength and power athletes. Thus, the recommendations are to reduce training volume by 50–85 per cent dependant on sport/event. Bosquet et al<sup>[2]</sup> indicated that the performance improvement was more sensitive to reductions in training volume than manipulation of other variables. After controlling for all other variables, a reduction in training volume elicited moderate ( $0.72 \pm 0.36$ ) improvement in performance which was twice the size of modifying training intensity ( $0.33 \pm 0.17$ ) and training frequency ( $0.35 \pm 0.17$ ).

# Peaking for Performance

*Text: Hannah Oguz, Sport Scientist, hpc*



## **Intensity of training**

This is the one area in which pre-taper levels should be maintained during the taper itself. The athletes must still practise at competition intensity or higher. In several well-designed studies reviewed in Mujika <sup>[9]</sup>, researchers have shown that only a high-intensity, low-volume taper design was effective in maintaining or improving total blood volume, blood cell volumes, citrate synthase activity (an aerobic enzyme), muscle glycogen concentrations, muscle strength and running time to fatigue in groups of elite athletes. Thus, it is recommended that coaches maintain training intensity during taper to avoid de-training. It is through the reductions in the other variables (volume, frequency and duration) that recovery should be achieved.

## **Frequency of training**

Reducing the frequency of practice (the number of training sessions per week) has been shown to improve performance more than maintaining pre-taper frequencies <sup>[5]</sup>. This reduction in training frequency must be balanced with the need to practise optimal motor patterns and technique. Thus, coaches should reduce training frequency to no less than 80 per cent of pre-taper values, to avoid de-training and 'loss of feel', especially in technique-dependent sports.

## **Duration of training**

Studies that did involve performance assessment with tapering have reported improvements with tapers lasting from 7-21 days <sup>[3, 4, 5, 7]</sup>. However, Houmard et al. <sup>[6]</sup> suggests a taper lasting 21 days would only maintain, rather than improve, actual performance. In general, sprint and strength-based athletes should taper for longer than endurance athletes, but this should be highly individualised, based on how each athlete recovers and maintains their sport-specific physiological gains. Longer tapers are important for sprint and strength events, as the nervous system takes longer to recover and adapt. Males may require a longer taper than females due to differences in muscle mass. Also, older athletes require longer tapers than younger athletes.

## **Pattern of taper**

Different types of taper have been described in previous research to include the linear taper, an exponential taper involving a fast or slow constant of reduction in training load, and a step taper <sup>[9]</sup>. It has been quite well demonstrated in the research that fast decay exponential reductions in total training stress (intensity, frequency, volume and duration) are more effective than linear reductions or step reductions <sup>[1, 9, 10]</sup>. This may be especially true for shorter tapers, or for very short 'mini-tapers' that coaches sometimes use mid-season for events of moderate importance.

Finally, the issue now for the coach is how we relate the above information to athletes travelling for competition. Commonwealth athletes are frequently required to travel across continental boundaries to compete. Crossing multiple meridians causes desynchronization of human circadian rhythms and leads to the syndrome known as jet lag, which can persist for some days<sup>[15]</sup>. Concomitant with the experience of jet lag, there is impairment in a range of performance measures until the endogenous 'body clock', located in the hypothalamus, is returned to the new local time. Decrements have been reported in muscle strength, reaction times, and subjective states indicative of arousal<sup>[11]</sup>. The timescale for adjustment of the body clock can be incorporated into the taper when competition requires travel across multiple meridians. It is logical that sufficient time is allowed for the athlete to adjust completely to the new time zone before competing<sup>[15]</sup>. There is also little point in training hard at home prior to embarkation, since arriving tired at the airport of departure may slow up the adjustment later<sup>[14]</sup>. Therefore, readjustment of the body clock should be harmonized with the moderations of training during the tapering. Athletes, coaches, managers and support staff should implement strategies to minimize the effects of travel stress prior to departure, during long haul international travel, and upon arrival at the destination.

In conclusion, tapering can be incredibly effective when used correctly. It is very important to note that every discipline within the sport science support base will have their model for the taper and peaking. It is essential that the team of coaches and scientists sit down together to plan each aspect of the taper and the time allocation to each. Everything helps and everything is effective. A good coach monitors every aspect, listens to their athletes and tries many different interventions to improve the Peaking process.

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## Sport Science and Medical Unit

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### For more information contact:

Shona Hendricks:  
012 362 9800 x1070  
shona.hendricks@hpc.co.za





# The 5<sup>th</sup> Swimming Stroke

Text: Amy Bathgate, Biomechanical & Video Analyst, hpc

*"We are what we repeatedly do. Excellence, therefore, is not an act but a habit."*  
 – Aristotle.

These days, crowded pools and big swimming squads per coach are common place in South Africa and across the world at all levels of participation. As a result of this, more often than not, very little time is spent perfecting the techniques of starting, turning and finishing, and very little concentration is given when performing these skills. This is a serious oversight and negatively affects race times at all ages and levels.

When race times are divided up into technical skills (starts, turns and finishes) and free swimming, it becomes evident how important these technical skills are. Starts (starting gun to when then the swimmer's head breaks the 15m line) account for up to 30% of a race, while finishes can account for up to 10%. Turns (from 5m before the wall to 10m or 15m out from the wall – depending on race and level of participation) account for between 20% (100m) and 39% (1500m) during long course (LC) events, or between 40% (50m) and 70% (200m) during short course (SC) events.

**On average, technical skills account for up to 40% of LC race times, and up to a whopping 80% in SC.**

## SwimTime = [Start+ Turn/s +Finish] + Free swimming

### Long Course (50m)

50m = [15m (30%) + 0m + 5m (10%)] + 30m (60%)  
 100m = [15m (15%) + 20m (20%) + 5m (5%)] + 60m (60%)  
 200m = [15m (7.5%) + 60m (30%) + 5m (2.5%)] + 120m (60%)  
 400m\* = [15m (3.75%) + 105m (26.25%) + 5m (1.25%)] + 275m (68.75%)  
 1500m\* = [15m (1%) + 435m (29%) + 5m (0.3%)] + 1045m (70%)

\*Turn taken to 10m from wall - all others on 15m from wall

### Short Course (25m)

50m = [15m (30%) + 20m (40%) + 5m (10%)] + 10m (20%)  
 100m = [15m (15%) + 60m (60%) + 5m (5%)] + 20m (20%)  
 200m = [15m (7.5%) + 140m (70%) + 5m (2.5%)] + 40m (20%)  
 400m\* = [15m (3.75%) + 225m (56.25%) + 5m (1.25%)] + 155m (38.75%)  
 1500m\* = [15m (1%) + 885m (59%) + 5m (0.3%)] + 595m (39.7%)

### So how much concentration do you give your skills during training???

Starts are not only what happens on the blocks or above the water, but even more importantly, what happens during and after entry into the water. Streamlining the entry and transferring the explosive power off the blocks into speed underwater is crucial. Turns should have the motto of "fast in – fast out" with little to no loss of speed before the wall, tight tucks and explosive push offs. Streamlining and underwater kicking, as well as perfecting the amount of time to spend underwater and the timing of the breakout are also all key to good technical skills execution and should be focused on continuously in training. There are no excuses!

*"Don't treat your turns lightly, as I did as a swimmer. Treat them with respect and as an opportunity, rather than an inconvenience. Work all parts of the turn diligently and constantly, strive to make your kicks faster and stronger. If you work your turns hard in practice, you will soon find that you are leaving your competition behind, rather than the other way around. That alone is worth the effort."*

– Gary Hall Snr (3x Olympic medallist & 10x former World Record holder)



So how do South African swimmers perform these skills? How do South Africa's best compare to the World's best?

A recent study compared performances in the 50m and 100m finals for both men and women in all four strokes at the South African National Aquatic Championships held in Durban in April 2014 and the 15<sup>th</sup> FINA World Championships held in Barcelona, Spain in July/August 2013. Finalists in each relevant event were compared on average in terms of actual race times, free swimming times, start times, turn times and finishing times.

Looking at the data depicted in the tables, it is easy to see that although South African race times are much slower than the World's best, there is often excessive time "lost" performing the technical skills.

AVERAGE RACE TIMES - FINALISTS							
		SA	♀	FINA	SA	♂	FINA
	50m	30.33	2.84	27.79	26.21	1.48	24.76
	100m	64.34	4.82	59.52	56.55	3.06	53.49
	50m	28.15	2.36	25.79	24.61	1.42	23.19
	100m	62.60	4.08	57.57	54.82	3.32	51.50
	50m	33.09	2.46	30.43	28.91	1.78	27.13
	100m	71.52	4.40	66.12	63.20	3.19	59.61
	50m	26.78	1.30	24.48	23.39	1.77	21.62
	100m	57.55	4.02	53.54	50.55	2.48	48.06

In terms of starts in the 50m races, the SA female finalists are seen to be 1s behind the World Champs finalist (on average) before the "free swimming" even starts, while the men are seen to be approximately 0.6s behind. In the 100m races, the SA female finalists are 2.2s behind before reaching the 15m flags, while the males are 0.9s behind. That is a lot of time being lost and up to a body length in positional difference. Breakout distances also highlight the differences in underwater efficiency and speed.

AVERAGE START TIMES - FINALISTS								
		SA	♀	FINA	SA	♂	FINA	
	50m	Breakout (m)	10.72	13.76	11.11	14.09		
		Time to 15m	8.05	1.88	6.99	6.90	0.82	6.08
	100m	Breakout (m)	10.27	13.53	11.53	13.70		
	50m	Breakout (m)	9.82	13.46	10.82	13.67		
		Time to 15m	7.11	0.88	6.28	6.04	0.70	5.34
	100m	Breakout (m)	9.36	13.40	10.73	14.06		
	50m	Breakout (m)	10.21	12.69	11.87	12.69		
		Time to 15m	8.32	1.88	6.44	7.07	0.85	6.44
	100m	Breakout (m)	10.47	12.09	12.06	13.52		
	50m	Breakout (m)	7.83	11.12	9.09	11.14		
		Time to 15m	7.06	0.87	6.19	6.00	0.76	5.30
	100m	Breakout (m)	8.33	10.92	8.54	10.28		
	Time to 15m	7.36	0.68	6.46	6.93	0.48	5.53	

In the turns it is fascinating to see how much time is often lost in the approach to the wall (5m IN time). On average, certain SA finalists "lose" time throughout the entire turn, while others "lose" most of their time during specific phases of the turn. Overall our SA female finalists get left behind by approximately 1.3s on average in the 100m turns, while the males have a 1.1s deficit. Turning faster should not just be thought of as kicking harder off the wall, but rather increasing

efficiency in each and every phase of the turn from the approach to breakout.

AVERAGE TURN TIMES - FINALISTS								
		SA	♀	FINA	SA	♂	FINA	
	100m	5m IN Time	3.80	0.90	3.30	3.35	0.45	2.90
		Breakout (m)	6.80		9.96	8.44		12.23
		5m OUT Time	8.55	0.81	8.04	7.85	0.79	7.06
	100m	5m IN Time	3.60	0.78	2.81	3.05	0.58	2.52
		Breakout (m)	6.54		9.75	8.02		11.89
		5m OUT Time	9.32	0.81	8.71	8.47	0.86	7.61
	100m	5m IN Time	3.80	0.58	3.22	3.40	0.80	2.80
		Breakout (m)	7.03		8.04	9.11		9.72
		5m OUT Time	10.74	0.78	9.99	9.26	0.38	8.91
	100m	5m IN Time	3.44	0.44	3.00	3.02	0.39	2.63
		Breakout (m)	4.76		6.17	6.15		6.89
		5m OUT Time	8.32	0.78	7.54	7.18	0.88	6.65

Free swimming, which is where most of the coaching and training focus is often placed, accounts for up to 70% of the race. Yet when we look closely at the data in this study, the importance of the technical skills becomes evident, and the excessive amount of time being "lost" while performing these skills is inexcusable. Swimmers training in short course pools have double the opportunity to perfect their turns and underwater work. And although coaches should assist in improving these skills, it is the swimmers' responsibility to focus on these skills during training and perfect their execution. Every turn counts!

Of the SA females' 2.5s deficit (on average) in 50m race times and 4.8s deficit in 100m races, less than half of this time is lost during free swimming sections of the race (1.1s and 2.2s respectively). The SA males show an even more disproportionate balance with their race time deficits of 0.6s (on average) in 50m races and 3.1s in 100m races, being comprised of only approximately a third during free swimming (0.6s and 1s respectively).

AVERAGE SWIMMING TIMES - FINALISTS							
		SA	♀	FINA	SA	♂	FINA
	50m	19.13	1.88	17.94	16.59	0.43	16.16
	100m	39.88	1.96	37.92	35.24	0.83	34.41
	50m	18.10	1.38	16.84	15.92	0.84	15.36
	100m	38.83	2.48	36.50	34.09	0.80	33.14
	50m	21.09	1.15	19.94	18.73	0.73	17.98
	100m	44.70	1.74	41.96	39.75	1.18	38.56
	50m	16.77	0.97	15.80	14.84	0.73	14.09
	100m	35.61	1.76	33.87	31.61	0.83	30.68

Good execution of technical skills separates the average swimmers from the elite. This study proved that. South Africa's Olympic medallists had superior skill execution in comparison to the rest of the field and this skill execution, and not their free swimming speed, was the key to improvements in race times between local and international competitions. It also revealed that certain South African swimmers have free swimming speeds which are faster than the relevant world champions in their events, but their skill execution was poor and accounted for excessive deficits in race times – taking them from potential World Championship contenders to not being able to qualify for such events. Swimmers should take responsibility for the execution of their skills.



## BOOSTING YOUR IMMUNE SYSTEM

*Text: PVM Nutritional Sciences*

### **ATHLETES ARE AT RISK FOR LOWERED RESISTANCE AGAINST INFECTIONS:**

Athletes experience many stressors that increase their susceptibility to infections, such as physiological (high demands of training), psychological and environmental stress. Participation in ultra-endurance events, strenuous exercise and decreased energy intake can cause immune depression.

During endurance exercise, blood flow to the gut is dramatically reduced because it is mainly located to major organs such as the heart and muscles. This reduces the protective barrier function of the gut and some of the naturally occurring micro-organisms in the gut can gain access to the bloodstream and can cause illnesses. Endurance athletes are further exposed to increased oxidative stress, due to high oxygen consumption. The lung tissue needs extra protection in order to overcome damage done by this high oxygen consumption and also by the greater exposure to bacterial and/or viral infections. Other factors known to affect immunity include travelling from one place to another, eating culturally different food, and limited sleep.

A decreased resistance to infection is of great concern for athletes since it may prevent participation, prevent them from finishing races and/or negatively affect performance. There is nothing as disappointing as ending up with a cold two days prior to a major event. Therefore, the role of nutrition to protect/promote immunity can't be ignored in high performance preparation and competition.

## NUTRITION AND THE IMMUNE SYSTEM

It is well-established that nutrition can affect immune-competence. Zinc deficiency for example has been shown to cause decreased numbers of white blood cells which reduces defense capacity against many types of infections. Lack of adequate macronutrients and/or selected micronutrients (especially zinc, selenium, iron and the anti-oxidant vitamins) can lead to clinically significant immune deficiencies and infections. Undernutrition also severely impairs the immune system, suppressing immune functions that are fundamental to host protection.

The key to maintaining an effective/intact immune system is to avoid deficiencies of the nutrients that play an essential role. The best and easiest way to achieve this would be to ensure a balanced dietary intake which includes carbohydrates, protein, fat and micronutrients.

### Energy and protein intake:

Protein and energy are required for synthesis of antibodies involved in host protection. Protein is also required for effective recovery & wound healing of tissue injuries which could open the door for harmful invaders. Individuals commonly at risk of protein deficiencies include athletes undertaking a programme of food restriction to lose weight, vegetarians and individuals that consume unbalanced diets (e.g. with an excessive amount of carbohydrates at the expense of protein) or any other individual with limited protein intake. Short term dieting can also affect the immune system, for e.g. - it has been shown that a loss of 2kg body mass over 2 weeks adversely affected immune cell function.

**BCAA's:** Branch chain amino acids (BCAA's) play a role in immunology as it helps to restore the balance between the pro- and anti-inflammatory response, are essential for the white blood cells to synthesize protein and to respond to harmful substances, and play a role in maintaining an optimal glutamine level.

**L-Glutamine:** Glutamine is a 'conditionally essential' amino acid, which means it may become essential under stress conditions such as severe infections and prolonged strenuous exercise. Glutamine plays a role in immunity as it acts as fuel for rapidly dividing immune cells, partially prevents programmed cell death of white blood cells, helps to restore the balance between the pro- and anti-inflammatory response, supports protein that regulates normal stress responses, and keeps the gut protection barrier intact.

### Recommendations:

- Ensure an adequate daily protein intake. Athletes have higher protein requirements and should consume more or less 1.2-1.6g/kg/d.
- Protein recommendations for athletes is however sport specific with a recommended intake of up to 2.2g/kg/d for certain strength training sports.
- A daily dose of 5-7g L-glutamine supports immunity.
- Ensure sufficient carbohydrates are consumed daily - vitamins and minerals obtained from both your diet and supplements will not be utilized effectively if sufficient carbohydrates are not available, which may cause compromised immunity as well.
- Carbohydrates should also be taken during strenuous and endurance exercise as it has been shown to protect immunity (30-60g/h).

### FAT INTAKE

Fat intake is essential for the absorption of fat-soluble vitamins (vitamin A, D, E and K) all of which plays a role in immunity. Foods that contain certain essential fatty acids may foster a healthy immune system.

Omega 3 is known to have anti-inflammatory properties. The intake of omega 3 fatty acids may be warranted in athletes that follow a typical western dietary pattern which is poor in omega 3 fatty acids, such as oily fish, flax seeds, walnuts, etc. A diet that is however very rich or excessively supplemented with omega 3 can decrease the normal inflammatory response. Balance is therefore the key, not too much and not too little.



**Recommendations:**

- An optimal ratio of omega 6 to omega 3 fatty acids will support a healthy immune system. It is generally not recommended that people supplement their diets with omega 6 fatty acids because daily intake is mostly optimal.
- Omega 3 can be supplemented if the diet contains very little omega 3 from oily fish such as mackerel, sardines, salmon or other **oily** fish.
- Omega 3 should be supplemented during inflammation associated with auto-immunity, neoplastic conditions (such as cancer), or during long-term chronic inflammatory conditions.



**VITAMINS AND MINERALS**

Several vitamins are essential for normal immune function. Deficiencies of fat-soluble vitamin A & E, and water-soluble vitamins folic acid, B6, B12 and C, impair immune function and decrease the body's resistance to infections. Several minerals are known to exert modulatory effects on immune function and include zinc, iron, magnesium, manganese, selenium and copper.

**Recommendations:**

- Supplementation should be considered if you suspect that your diet is not adequate in vitamins – i.e. you do not eat at least 5 fruits and vegetables/day, lots of whole-grains, milk and dairy.
- Supplementation can further be considered during states of long-term immunity depression. The key is to **correct deficiencies** and/or ensure an optimal intake per day.
- When you do supplement, take care not to overdose since mega-dosages in turn impair immune function and can have other toxic effects (for e.g. iron, zinc, vitamin E). Due to the potential toxic effect of single antioxidants, it is recommended to rather take an antioxidant cocktail.
- Supplementation of isolated vitamins and minerals should be discussed with your health care provider and is mostly only recommended for the correction of a deficiency. Iron should not be supplemented during periods of infection.
- Vegetarians should supplement with a good multi-vitamin that contains vitamin B12, as vegetable sources of B12 is not as bioavailable as animal sources.
- Eat a lot of the following foods as they contain most of the immune enhancing nutrients:

*Liver, poultry, fish (especially oily fish such as sardines, herring, salmon and mackerel), egg yolk, whole milk, butter, olives/olive oil, sweet potato, beans, peas and other legumes, potatoes, whole grains, green leafy vegetables, spinach, broccoli, cabbage, paw-paw, oranges and other citrus fruit, kiwi's, strawberries, peppers, berries, nuts and oats.*



## PRE- AND PROBIOTICS

In chronic immuno-compromised situations, the use of antibiotics or diarrhea might lead to a disturbance in the ratio of harmful to healthy bacteria in the gut. The balance of micro flora in the gut is crucial to enhance the gut protective barrier.

**Probiotics** are healthy gut bacteria that restore imbalances in the gut. Probiotic use in athletes have shown to result in fewer days of respiratory illness.

**Prebiotics** are non-digestible food components which has a proven beneficial effect on the body by selectively stimulating the growth and metabolic activities of probiotics.

The benefits of probiotics have been marketed to range from lowering the risk of constipation, irritable bowel syndrome and diarrhea to fighting general intestinal viruses and supporting the immune system. Benefits of probiotics are however **strain specific**, in other words, certain strains need to be used under certain conditions. Probiotics might be useful to help athletes recover from diarrhea or constipation, especially if they used antibiotics.

### Recommendations:

- Pre-biotics can be consumed on a daily basis and can be used to keep general immunity intact. Foods containing pre-biotics include bananas, onions, garlic, artichokes, asparagus, soy beans, chicory root, unrefined cereals (oats, wheat, barley) and Jerusalem artichoke.
- Probiotics can be supplemented during periods of intense training and prior to ultra-endurance events.
- Consult the label of your pro-biotic supplement for its specific function and choose the correct one according to your present condition. Strains present in your supplement should occur in levels above  $10^9$  CFU. The strains recommended for general immune system support include: *L. reuteri* ATCC 55730; *L. casei* DN-114001; *B. lactis* HN019; *B. lactis* Bb12; *Lactobacillus casei* DN-114001; *L. rhamnosus* GG; *L. plantarum*; *L. acidophilus*; *B. lactis*; *L. johnsonii*; *Bifidobacterium animalis*.



## ADDITIONAL GUIDELINES

- Avoid foods you are allergic or intolerant to as this will stimulate the immune system in an exaggerated fashion (your own immune system acts against you).
- Reduce life stressors as far as possible. The mind is able to influence the body, thus laugh, play music, dance and do activities that make you happy to increase immunity.
- Maintain good hygiene. Wash your hand especially after using public bathroom facilities.
- Obtain adequate rest as it promotes rapid recovery. Don't sleep less than 6 hours or more than 10.
- Avoid overtraining and rapid weight loss.
- Ensure adequate recovery between exercise sessions.
- Avoid excessive consumption of alcohol as it inhibits the bone marrow's ability to regenerate blood cells, depletes B-vitamins and dehydrates the body – thereby suppressing the immune system.
- Avoid herbs and botanicals as proven effectivity is low and are associated with many undesirable effects.
- Ensure adequate hydration is maintained at all times as this flushes toxins from the body.
- Garlic can be used to relieve cough and colds. The active ingredient in garlic is allicin and it has been shown that cooking inhibits the formation of allicin. Tablets also do not contain this active ingredient. It is therefore recommended that 1 clove of **fresh**, crushed garlic be consumed per day when you have colds. Uncooked garlic does not cause the distinctive body odor as cooked garlic does. Palatable ways to ingest fresh garlic include adding it to home-made salad dressing or mixing it with honey. Addition of parsley also reduces the smell. Consume garlic as soon as possible after crushing since odor returns when garlic has stood for a while. Avoid over-consumption as it can cause stomach upset.

## PVM PRODUCTS AND IMMUNITY

PVM products contain certain nutrients that contribute to immunity enhancement/ protection against diseases:

- All PVM products contain proteins which support the immune system. As they all contain proteins of high biological value they also contain glutamine and BCAAs. In addition, some products (**FUSION MASS, OCTANE 4.0, OCTANE XTR, REIGNITE and REACTOR**) contain added glutamine.
- All PVM products (except Protein XTR) are fortified with additional vitamins and minerals, and especially the anti-oxidants vitamin A and C.
- **FUSION MASS** contains added pre-biotics in the form of inulin.
- **FUSION** can be used to replace missed meals and contains  $\frac{1}{3}$  of your daily vitamin and mineral requirements
- **ENERGY BARS** are a source of vitamins and minerals.

# ARE YOU READY TO UNLEASH THE CHAMPION INSIDE YOU?

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**PVM Quality Guarantee:** Since 1968 we adhere to our Code of Ethics to ensure that we research, develop, produce and market quality nutritional products in a responsible and ethical manner. PVM guarantees that we endeavour to carefully disclose nutritional information at all times and that our products will not make unsubstantiated, irresponsible health or performance claims.

As part of our Code of Ethics, PVM guarantees that all our products are of the highest quality and that all ingredients used are deemed legal substances by WADA (World Anti-Doping Agency).



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Important attributes to optimal performance not only include talent, but also an effective training programme and a range of psychological and cognitive characteristics and nutritional support. As training programmes become more demanding, the role of nutrition becomes ever more important to sustain a good training programme and optimize adaptations to training. The foods that an athlete chooses can make a difference between optimal training adaptation and performance and failure. Wise food choices will not make a champion out of the athlete who does not have the talent or will to success, but an inadequate diet can prevent the athlete of reaching his/her full potential.

**A varied diet eaten in an amount sufficient to meet the energy needs of the athlete in training should provide all the essential nutrients in adequate amounts.**



### Sports Foods

Sports foods are generally manufactured to provide a convenient source of nutrients that are easy to consume when everyday foods are unavailable or impractical to eat. This is most often the case just prior to, during or after an exercise session. Examples of sports food include:

- Sports drinks (providing fluid, electrolytes and carbohydrate during exercise)
- Sports gels (additional carbohydrate intake, especially during exercise)
- Liquid meals (carbohydrate, protein, vitamins and minerals for a pre-event meal, post-exercise recovery or a high-energy diet)
- Sports bars (carbohydrate, protein, vitamins and minerals)

Although sports foods can contribute to the convenient and timely intake of nutrients, the cost of these products can be high and athletes should still consider the composition of these products to individualise the use thereof to their specific circumstances.

# WHEN FOOD IS NOT ENOUGH



*Text: Nicki de Villiers,  
Registered Dietitian, hpc*

## Supplementation

Over the years a culture has developed that supplements can in some way compensate for poor food choices and the increases stresses of modern life. Supplements are often used for the following reasons:

- To compensate for an inadequate diet
- To meet abnormal demands of hard training or frequent competition
- To benefit performance
- To keep up with teammates or opponents
- Recommended by coach, parent or other influential individual

The aggressive marketing of supplements has led to large numbers of athletes willing to pay for and use supplements in the hope of increased energy levels and concentration, improved muscle mass and decreased fat mass with ultimate improvement in exercise capacity and sporting performance. The World Anti-Doping Agency (WADA) has although stated: *“Most supplement manufacturers make claims about their products that are not backed by valid scientific research, and they rarely advise the consumer about potential adverse effects. The supplement industry is a money-making venture and athletes should get proper help to distinguish marketing strategies from reality”*

### What athletes should know about supplements ...

SAIDS define ‘Sports Supplements’ as sources of nutrients and/or other substances, marketed and sold as such in the field of amateur and/or professional sport, with a nutritional or physiological effect whose purpose it is to supplement the normal diet, directly or indirectly alter / enhance body composition, enhance sporting performance, and/or assist with recovery following sporting activity.

#### 1 There is a lack of supplement manufacturing and marketing legislation, locally and globally.

This means that supplements can be marketed with very little control over the claims and messages they provide, and many companies take full advantage of this. There is therefore no way to ensure the safety or efficacy of sports supplements. Supplements can contain prohibited and harmful substances that are not disclosed on the label and what is written on the label cannot be seen as a guarantee for efficacy and safety.

#### 2 The use of supplements may have damaging health effects and lead to positive doping tests

Health risks may include allergic reactions, toxic effects from self-medicating, over-dosing or poisoning

due to contaminants found in the products. Even the ingestion of some nutrients above levels naturally occurring in foods can pose toxicity and therefore be harmful. Toxic levels is difficult to achieve from dietary sources alone, but can be easily achieved through supplementation.

Contaminants, particularly anabolic steroids and other prohibited stimulants, have been found in many different supplements, even apparently “harmless” or legitimate dietary supplements. This means that the use of a sports supplement by an athlete has the potential to result in a positive doping test that can ruin a sporting career and discredit their reputation and that of the sporting code and country they represent.

#### 3 Displacement of priorities

In reality, sports supplements make a very small contribution to sports performance. Many athletes put so much effort into finding a supplement in order to enhance their performance that they forget about the role of training, skills, equipment, adequate sleep and rest, good nutrition, and a positive mental attitude which have a much larger impact on improving sports performance.

### First things first

Before contemplating supplement use ...

- Athletes should ensure having a healthy, balanced and sport specific diet.
- Individual nutritional assessment by a qualified sports nutrition professional is advised for implementation of appropriate dietary patterns.
- The intake of micronutrients provided through sports foods (various drinks and bars) should not be underestimated and can lead to an intake higher than the upper intake level.
- Supplements can be contaminated with illegal substances and can lead to a positive doping case.

### Optimising Nutritional Intake

- Eat a variety of foods
- Eat 4-6 portions of (fresh) fruit and vegetables daily
- Choose whole-wheat products; limit refined carbohydrate intake
- Correct cooking methods
- Eat 5-6 smaller meals per day
- Plan ahead; have portable snacks available at all time to eat “on the run”



The usefulness of dietary supplements depends on individual circumstances and response to a supplement. Athletes that may benefit from supplementation:

- In situations where an unbalanced diet is followed
- With specific alimentary conditions, for example when following a vegan diet or in cases of lactose intolerance
- In periods of weight reduction or “making weight” where an energy restricted diet is advised
- In periods with strenuous exercise and limited recovery time for example during training camps
- While traveling in countries with limited food supply
- In some circumstances for some athletes, for example periodic use of creatine, caffeine and buffering agents



**Guidelines to lower the risk associated with using sport supplements:**

- An athlete should stay clear of supplement use as far as possible. In situations where a specific dietary deficiency is identified by a health profession expert, an individualised supplement protocol can be used in conjunction with dietary optimisation, for example a vitamin and mineral supplement or carbohydrate sports drink.
- Be aware that any supplement (including vitamin / mineral supplements) can be contaminated with banned substances. Vitamin and mineral supplements should therefore be case specific and should come from a reputable company.
- Caution should be taken with regards to supplements advertising “muscle building” and “fat burning” properties. These are likely to contain banned substances such as anabolic steroids or pro-hormones or stimulants.
- Investigate the manufacturing practices and history of the company and the range of products that it produces (e.g. company that does not produce other products containing banned substances). Request certification that verifies the ingredients within the product as well as the amounts, where these ingredients were sources as well as the manufacturing practice of the producer. Certification and testing should be done for each batch of the product that is produced.
- Always consider the risks and benefits of dietary supplements.

**Risks and benefits of dietary supplements / sports foods**

	<b>Benefit</b>	<b>Risk</b>
<b>In general</b>	<ul style="list-style-type: none"> <li>• Psychological aid / placebo effect</li> </ul>	<ul style="list-style-type: none"> <li>• Inadvertent doping cases and health risk</li> </ul>
<b>Sports drinks</b>	<ul style="list-style-type: none"> <li>• Delivers fluid and carbohydrates during exercise</li> <li>• Post exercise rehydration and refuelling</li> </ul>	<ul style="list-style-type: none"> <li>• High energy density</li> <li>• Nutrient density low</li> </ul>
<b>Carbohydrate-rich products</b>	<ul style="list-style-type: none"> <li>• Training periods with high carbohydrate needs</li> <li>• Carbo-loading before competition</li> <li>• During and after exercise for refuelling</li> </ul>	<ul style="list-style-type: none"> <li>• High energy density</li> <li>• Nutrient density low</li> </ul>
<b>Protein</b>	<ul style="list-style-type: none"> <li>• To meet protein needs in periods with low energy intake</li> </ul>	<ul style="list-style-type: none"> <li>• Contamination</li> </ul>
<b>Vitamins, minerals, trace elements</b>	<ul style="list-style-type: none"> <li>• During restricted energy intake</li> <li>• In periods of an unbalanced diet (e.g. travelling, busy schedule) to meet daily micronutrient recommendations</li> </ul>	<ul style="list-style-type: none"> <li>• Be aware of intakes higher than upper intake level (toxicity)</li> <li>• Possible contamination</li> </ul>
<b>Ergogenic aids</b>	<ul style="list-style-type: none"> <li>• For some athletes in some circumstances creatine, caffeine, buffering agents might be of benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects are possible – check individual response</li> <li>• Possible contamination</li> </ul>

# Café Enrlista



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# Wattbikes

*a new dimension to training*

*Text: Roger Barrow*

The recent acquisition of 10 Wattbikes by the High Performance Centre has allowed for further expansion of the training offered at the centre. The Wattbike was originally created in association with British Cycling to provide an indoor bike that was suitable both for training and accurate testing. The new hpc Wattbikes are housed on the 3<sup>rd</sup> floor above the hpc gym and will no doubt become a useful modality of training for elite athletes.

The South African rowing team, who is based at the hpc and uses its facilities, will benefit greatly from these bikes as they offer an excellent alternative and addition to their training. As coach of the SA Rowing Team, I am extremely happy with this move - I have wanted Wattbikes for some time but the price put them out of reach. The addition of the bikes to the hpc's training facilities will not only have a positive effect on the rowers' training, but will also be of great benefit to elite athletes undergoing rehabilitation.

Rowing training incorporates water training as well as land-based training which includes running, cycling, and gym training. The largest portion of land-based training takes place on a Concept 2 rowing ergometer, which provides a useful tool to monitor the athletes' progress. In addition to this, maximum intensity ergometer trials form a valuable and reliable part of the selection process, and allow for assessment of the athletes' in standard conditions without bias or weather related influences.

The rowing ergometer however, is known to place strain on the

back especially when used for long periods at high intensity. Athletes with back pain or injuries preventing them from rowing, but who still need to continue training to maintain fitness, have - until this point - posed a problem for us as stationary bicycles do not provide the work required by rowing training standards.

Apart from this, stationary bikes do not provide data, and as such valuable information is lost on the position of the athlete relative to the rest of the team should the athlete be unable to complete trials on the ergometer. Until now, athletes who were unable to complete ergometer trials did not have an alternative method of completing a trial.

The careful monitoring of our athletes' performances both on and off the water forms an integral part of the training as it creates a competitive environment vital to building top-level athletes. The Wattbike allows us to continue this process with those athletes who are unable to use the ergometer. The purchase of these Wattbikes by the hpc therefore not only adds a new dimension to our training programmes, but solves some of these problems.

The Wattbike gives us the opportunity to test the athletes under very similar circumstances to an ergometer. Over time we will be able to build up information regarding performance on a Wattbike, and this will aid our ongoing competitive assessment of the athletes.

There are a number of key features that gives the Wattbike its edge as a training modality, more specifically for injured

rowing athletes who are unable to row either on the water or an ergometer. Its robust construction permits it to take the sort of punishment from athletes who work at the intensity that elite rowing athletes do, and as the bike requires no electrical input, it is possible for training to take place anywhere and anytime.

A Wattbike has a fully adjustable bike setup which allows for variation in athlete body size, and this ensures that the athlete is perfectly accommodated and comfortable. In addition, calibrated and fundamental resistance principles mean output can be measured accurately using the Wattbike performance computer. Ongoing monitoring of rowing training therefore becomes possible.

Training on a Wattbike provides an opportunity to train with accurate data as key variables such as heart rate and power output can be measured fully and with precision and control, thus ensuring highly effective training.

The Wattbike is a useful alternative training modality that does not compromise on physical work, and ensures that training is done at the correct intensity. It allows the athlete to maintain a high level of fitness and conditioning and can be used for resistance training, interval training and as a recovery tool.

The addition of the Wattbikes not only enables us to continue to improve our training, but the use thereof will augment the rowing programme and assist us in the development our already highly trained athletes able to perform at international level.

# hpc Wattbike Studio

Are you looking at taking your cycling to the next level?

Looking for expert advice and structured training?

Look no further! The hpc has set up a facility using the state of the art Wattbikes to give you the winning edge. With the help of our cycling specialist, Devlin Eyden, the Wattbikes allow us to focus your training using power as well as identifying how you can improve your efficiency on the bike. We make use of the latest scientific evaluations to determine your strengths and weaknesses as well as prescribe personalized training programmes to allow you to train smarter.



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<b>FOUNDATION</b>	Functional Movement Screen + Gait Analysis	Functional Movement Screen + Bike Set-Up	Functional Movement Screen + Choice of 2: Gait Analysis / Bike Set-Up / Swim Technique
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<b>ELITE</b>	Functional Movement Screen + Gait Analysis + Run VO2 Assessment + Training Programme	Functional Movement Screen + Bike Set-Up + Bike VO2 Assessment + Training Programme	Functional Movement Screen + Choice of 2: Gait Analysis / Bike Set-Up / Swim Technique + Choice of 1: Run VO2 / Bike VO2 / Swim Performance Test + Training Programme

For pricing please contact [Devlin.eyden@hpc.co.za](mailto:Devlin.eyden@hpc.co.za) Tel: 012 362-9800

No one would ever doubt Pierre de Bruyn when he says “discipline is a non-negotiable in this environment”, but what might surprise people is that the Assupol Tuks head coach rates flexibility as the most important ingredient in the tremendous success he has enjoyed since coming to the University of Pretoria in 2010.

“There are plenty of theories thrown out about coaching, but my philosophy, what I really believe is the number one factor to being successful as a coach, is that you have to have flexibility. Discipline is non-negotiable in this environment, but every day you’re dealing with different personalities, attitudes, levels of skill and even different goals. So you really have to understand people,” De Bruyn told *The Medalist*.

“You need to get on the same boat as the individual, you need to work with them and help them get to the next level, like Theunis de Bruyn and Aiden Markram have embarked on their journey. But the player needs to trust you if you’re going to go on that journey with them, which is why you must understand the individual player.”

De Bruyn hides a steely interior behind this talk of flexibility, trust and understanding. During his 15-year career as a player for Easterns, Northerns, the Titans and the Dolphins, De Bruyn was acknowledged as one of the toughest competitors on the circuit, someone who made the absolute most of his talents.

“I wasn’t talented at all. But I managed to string together 15 years as a professional cricketer through complete hard work. I always tried to be one step ahead of the guy next to me through focus, discipline and enormous work ethic. I really wanted the tough situation,” he said.

“Talent is not enough and I always work on the mental aspect with my players. A good, solid mentality is key to succeeding in cricket and if you don’t have good discipline - at training, on the field and at home – how can you expect to play winning cricket? I want my players to understand that without discipline, they’ll be inconsistent and unreliable players.”

There is little doubt that players like Theunis de Bruyn, who has already made a strong start to the domestic franchise season, Graeme van Buuren, Markram, Corbin Bosch and Heinrich Klaasen will enjoy successful careers thanks to the foundation that has been laid at Tuks.

“Pierre has brought 15 years of experience in first-class cricket and he’s introduced a culture where young people can really learn their game and how to be successful at higher levels. It’s a very professional environment here and that’s why our players are able to excel when they go up to first-class level,” Theunis de Bruyn says.

While stressing the importance of the individual, coach De Bruyn will never allow that to become more important than the team ethos.

“One philosophy that is clear in our team, and every team member is in the same position, is that while we will work out how to meet a player’s personal needs, that can never overtake the team goals. We’ve created a culture of success here, we’ve built something special over the last five years,” he said.

And tradition will continue to play an important role in a club that has produced such stars as Mike Macaulay, Syd Burke, Alan Jordaan, Hein Raath, Tertius Bosch, Anton Ferreira, Martin van Jaarsveld, Jacques Rudolph, New Zealand Test cricketers Neil Wagner and Kruger van Wyk, AB de Villiers, Marchant de Lange, Morne and Albie Morkel, Paul Harris, Faf du Plessis, CJ de Villiers and Zimbabwe’s Kyle Jarvis.

“Guys have come through this system that have such character and tremendous attitudes and I really believe in that sort of tradition. We’re very fortunate to have this environment at Tuks, there are excellent services and support and we have the structures, I believe, to take on the best in the world,” De Bruyn said.

And the results bear that out.

2014 will be remembered as another phenomenal year for the Tuks cricket team. They are the world champions in the only global university cricket competition – the Red Bull Campus Cricket Finals, they completed a hat-trick of titles in the Momentum National Club Championships (unbeaten through 18 games) and they have won the Northerns Premier League for the last five years.

De Bruyn, though, will be focused on ensuring his team improve even more.

“It’s a fast-moving environment and it’s tough. The players are training and competing with first-class cricketers day in and day out and the club is basically like a full-time high-performance programme for the Titans.

“If I’m one percent unprepared as a coach then it can cost a young player his dreams. I have to be very sharp as the coach and stay one step ahead otherwise it will cost the player,” De Bruyn said.

A coach with such high standards for himself will undoubtedly be inspirational for his charges and the success of the Tuks team bears this out.



# Pierre de Bruyn *taking on the best*



*Text: Ken Borland | Images: Reg Caldecott*

# Coaching is key

*Text: Vata Ngobeni, Sports editor: Pretoria News*

There can be no truer words than those taken from the poem of John Donne's "No man is an island" when trying to describe an athlete or a team upon their arrival at their first major international event.

*"No Man is an island entire of itself. Every man is a piece of a continent, a part of the main,"* says Donne.

It is on this realization that nobody can succeed on the highest sporting stage without any coaching and guidance especially through major events.

This is a strongly held view by South African national rowing coach Roger Barrow whose work with the national crews over the past decade has yielded great reward at the London Olympics and this year's World Championships.

Even with a talented group of athletes, Barrow has been acknowledged as the cornerstone to their success in winning gold at the London Olympics and also winning gold at the World Championships.

Not a man to beat his own chest and give himself a pat on the back, Barrow is open and honest that without any coaching most athletes and in particular his rowers wouldn't have reached the pinnacle of their sporting code.

*"No they wouldn't. It is quite an integral part of support that they have from the coaching to the sports science and medical. We have a dynamic team that works with the guys. A lot of our guys wouldn't be able to match the international teams so I believe that our coaches play a massive role in getting them to be the best without a doubt,"* Barrow said.

Barrow makes a compelling argument of the smaller countries and mainly those in Africa who are struggling with resources and cannot afford to have a full-time coach and says they are nowhere near the top teams in the world who enjoy massive financial and technical support.

*"Some of the small countries mainly the African countries don't have full-time coaches and they are way off the pace. I think if you look at all the top countries now like Germany, USA, New Zealand and Great Britain they have full-time professionals and some crews have more than one coach, massive support staff and the sport has taken off. If you don't have that, you are not going to compete there is*

*no doubt about it. I think with rowing being such a technical sport so we watch the guys training every day, we never miss a training session because we are always watching and instructing."*

While Barrow is not dispelling the possibility of athletes conquering the world without their coaches present, he does though put a convincing point on the fact that it is the coach that takes responsibility for everything else and the athlete the responsibility to perform.

Coaching has gone beyond barking instructions for the athlete to follow but it demands that a lot more nurturing of the body, mind and soul in order to get the best out of the athlete at the time when they are required to perform.

*"I think we have a very good system where the athletes believe in the process. Just as much as the athlete needs to be at training so does the coach. We try to equip our athletes with the tools that when they have to go out and compete at a major international regatta then it is their job to perform. It is our job to equip them with all the knowledge, training and through the hard times supporting them and motivating them from the psychological point of view. When it comes to the Olympic Games or World Championships and they go off to their final race, it is up to them and their responsibility to perform. In training it is for us to create the system and the process and making sure that they trust in it. And when it comes to delivering, it is their job to deliver and obviously they get the accolades for that,"* said Barrow.

Olympic and world championship gold medalist James Thompson has attributed much of the rowing team's success at the London Olympic and the world championships to Barrow and his selfless sacrifice for the rowers.

*"I do think he is the best coach in the country of any sport because of the comparison between the amount of resources he has available to him and the number of successful results he is generating from them,"* Thompson said.

*"A lot of the results are coming off the support team he has around him, but he created that support team."*

"That is what has made him so good because he's been able to develop that team and a lot of them are volunteers and some of them have been his assistants over the last 10 years."

Such is the influence of a coach on individuals and teams in combating stage fright that it goes just beyond the preparation of the body but the presence of a coach is instrumental in getting the mind right.

Former Springbok World Cup winning wing and Bulls player Akona Ndungane has no doubt in his mind that the presence of coach Heyneke Meyer was key in them becoming the first team to win the Super 14 and going on to win two more Super Rugby titles.

"I remember in 2007 when we needed to beat the Queensland Reds by 87 clear points to get a home semi-final. Many people thought it was impossible and many of us in the team didn't believe that it could be done as well. But the coach told us before the game what we needed to do to get the points we needed. Honestly speaking I thought he had lost it for a bit but I could see in the changeroom that the guys were starting to believe that we could," Ndungane said.

"Once we got onto the field and the points started coming and by the half-time interval we were on our way in reaching our goal, we then knew that the impossible was possible. In the end we did it and we went on to do the next impossible which was becoming the first team to beat the Crusaders in a semi-final and then there was that epic final against the Sharks in Durban. Again in that final everyone thought we had lost when the Sharks scored a try in the dying minutes but we believed we could win and the rest is history. All of that came from the belief of Heyneke and him telling us all the time on how great we will be."



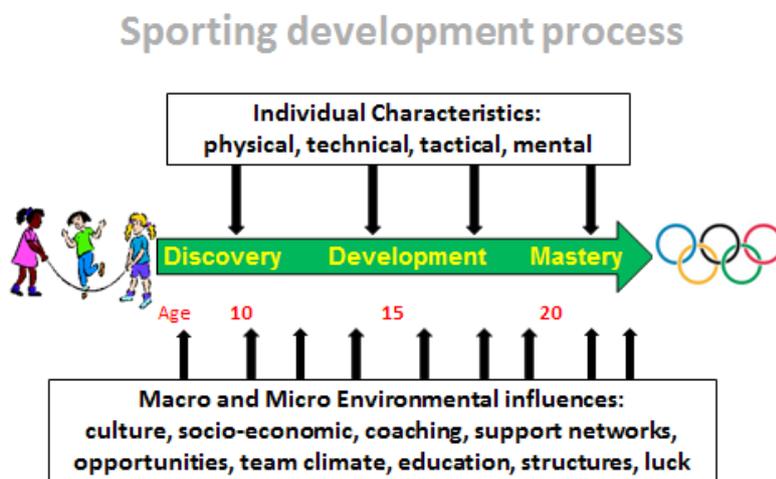


# Supporting Elite Athletes

## *What parents should do*

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

Achieving success at the highest level and on the international stage at events such as the Commonwealth Games doesn't just happen. Researchers, coaches, administrators, health professionals, nutritionists, trainers, psychologists and sports men and women themselves are constantly searching for the "magic bullet" that will get them to the top of the podium in their chosen sport. The fact, of course is that there is no single "magic bullet!" Elite sporting success is the interaction of individual characteristics with macro and micro environmental factors and many hours of hard work over a number of years as depicted in the diagram below.



*Source: Dove et al, Unpublished, In progress*

One of the most significant groups of influencers is the support networks that an athlete develops to assist him or her along the journey to the top. And within this group, parental support has been identified as being of paramount importance. The question then arises, what should be the appropriate parental support to facilitate optimal performance in a child's sporting career? Was Andre Agassi's father's approach the correct one – relentless hours of unhappiness hitting a tennis ball from a very young age? It is now well understood that parental role models and behaviours can have both positive and negative effects on the sporting experiences of young athletes.

A number of retrospective studies have been conducted in an attempt to better understand the role of parents in supporting the development of sporting expertise. The underlying message has not changed significantly and the different studies some of which are discussed below have

been consistent in their findings despite a variety of sports being investigated over a time period of some 30 years in which sport has become ever more professional and demanding.

Bloom and colleagues in the **early 80s** interviewed talented performers and their families in the fields of music, art, science, mathematics, and athletics and created a model of talent development with three stages: the early years, the middle years, and the later years.

**In 1986** David Hemery, the 1968 Olympic champion in the 400m hurdles, published a book entitled *The Pursuit of Sporting Excellence*, in which he interviewed a wide variety of sports' highest achievers to determine what had made them successful.

**In the late 90s**, Jean Côté worked with families of elite Canadian rowers and tennis players resulting in the development of a sport-specific model of talent development. Similar to Bloom, his model consisted of the sampling years (ages 6-12), specializing years (ages 13-15), and investment years (ages 16+).

**In 2001**, Gould et al produced a report for the US Olympic Committee entitled, *The Development of Psychological Talent in U.S. Olympic Champions* after interviewing 10 Olympic Champions, one of their coaches and a parent, guardian or significant other figure for each champion. A total of 30 participants and between them the athletes had 32 Olympic medals. Not surprisingly, parents and families were perceived to play a critical role in the psychological talent development of these athletes and the parental influences were similar to those previously found.

A more recent study by Mills et al **in 2012**, conducted semi-structured interviews with coaches to identify factors that influence development in elite

youth academy football players. All the coaches mentioned that parents have one of the most important roles in academy player development. Coaches even suggested that there is a positive correlation between parental support and the likelihood to progress to the professional level.

As athletes develop through the different stages, the parental role changes from one of leadership and providing opportunities to participate in a wide variety of sports in the early years, through to a facilitative role of providing financial and logistical support during the middle/specializing years and finally to a more supportive role during the investment years where emotional support becomes the most important to assist their child overcome setbacks such as injuries, pressure and fatigue.

The **positive** parental behaviours necessary for success at the highest levels which were found during these studies are summarized below. On the other hand, it should also be remembered that certain behaviours and characteristics displayed by some parents such as 'over-inflating player's ego', 'providing inappropriate coaching advice', 'living vicariously through their child', 'mollycoddling their child', and 'putting pressure on their child' could have a detrimental effect on the child's sporting and overall development.

#### Parental Role Model and Influence:

- Emphasised fair play and rules of the game
- Strong moral code
- Verbal discipline
- Parent did not live through their children
- Self discipline and self improvement
- Very committed to their child
- Modelled an active life style
- Transported their child
- Attended games and practices
- Provided considerable encouragement, support and friendship
- Limited pressure to win
- "Can do" attitude
- Hard work and discipline
- Dedicated, honest, caring and humorous
- Persistence and follow through
- High but reasonable expectations
- Consistent non-pushing behaviour
- Set short term goals
- Winning or Olympic medal was not an objective in early stages
- Allowed child to mature at own pace
- Focussed on happiness and a balance of fun and development
- Assisted to keep winning and success in perspective as athlete progressed

For references contact Mary Ann Dove:  
[adove@mweb.co.za](mailto:adove@mweb.co.za)



# Nike Academy

## *the first year*

Text: Wilhelm de Swardt | Images: Reg Caldecott

A quick glance at the international results, as well as the international rankings, shows that South Africa's sprinters have been under performing during the past decades. However, due to the work that is being done by the coaches of the Nike Athletics Academy at the hpc, chances are good that this will soon change.



Since 1992 South Africa's 800m athletes have been the most successful. They won two gold medals, four silver medals and a bronze at the Olympic Games and World

Championships. Mostly thanks to the heroics of Hestrie Cloete, South Africa won three gold and two silver medals in the high jump.

The 400m hurdles event was the third most successful with one silver and two bronze medals.

During the same time span no South African sprinter was able to win an individual medal, but as a team they won three medals in the relays (4x100 and 4x400).

According to Lindsey Parry, head coach at the Nike Academy, it has at long last been established why

South Africa's top sprinters constantly fail to run times that are internationally competitive at the World Championships (youth, junior and senior) and the Olympic Games.

"In a study that was done by the hpc we noticed that our sprinters make their biggest mistakes right at the start. We always thought the problem was their reaction time, but we now know that their first few steps out of the blocks were inadequate," Parry said.

"If we can rectify these small things, we will soon see regular top-ten times."

It is one year since the Nike Athletics Academy has begun to operate and Parry is satisfied with the progress made by the young athletes.

"We have had a good year from a results point of view. I am confident that our sprinters will begin to run faster during the last quarter of the year.

"I am over the moon as far as the results of our middle-distance athletes are concerned. Although most of the athletes are still very young, you will soon be hearing from some of them.

"During our first year it was mainly about developing and laying the groundwork to enable our athletes to handle the workload and go forward. The key difference between our sprinters, particularly when they are compared to



international sprinters, is the amount of hard work they are capable of doing.

“Next year we will probably have about 70 young athletes in the Nike Academy of who 40 to 45 will be middle-distance athletes and the rest sprinters.

“If some of the athletes we are working with now should not make it as sprinters they might be able to transfer to jumping.

“Our main purpose is to develop athletics in South Africa. Realistically South Africa will not become a dominant force in athletics mainly because we are just not a big enough country. Therefore our aim should be to become a dominant force in a handful of events.”

A major disappointment for Parry is that they were not able to identify more talented young athletes from rural areas.

“In future we actually want to steer away from taking kids who are in established schools. Therefore, if a kid is in a good school with good coaches we will probably not help him unless the school itself brings the kid to us.

“We will attempt to get more raw, rural talent, even if it takes us two to three years to develop them. At the Nike Academy we have the time to do so.”



# UP celebrates the beginning of a new era for TuksSport High School

*Text: Sanku Tsunke: Department of University Relations (DUR)*

On 6 October 2014, Prof Cheryl de la Rey, Vice-Chancellor and Principal of the University of Pretoria (UP) and Mr. Bruce Fordyce of the Athletics Foundation Trust, turned the sod at the start of construction of a new building for TuksSport High School at the University of Pretoria's LC de Villiers Sports Grounds. This milestone, made possible by a donation from the Athletics Foundation Trust, was celebrated by the staff from UP's High Performance Centre and TuksSport.

TuksSport High School comes from lowly beginnings. Founded 13 years ago, it has finally realised its dream of having its own building and its own ethos. The school is currently being housed at Groenkloof Campus and will become a proper school next year with accommodation facilities with 96 beds, 12 classrooms, four laboratories, a dining hall and an amphitheatre.

During 13 years of its existence, the school has achieved a 100% matric pass rate for all but one year. Hettie de Villiers, the principal of TuksSport High School, said achieving good academic results is as important for the learners as it is to excel on the different sports fields. 'It is even more important to achieve good academic results because there are never any guarantees in sports as the career of a sports star could be ended abruptly due to an injury. That is when it is important to have a good academic



From left to right: Toby Sutcliffe (CEO: High Performance Centre), Rose Juby (Athletics Foundation Trust), Prof Cheryl de la Rey (Vice-Chancellor and Principal: UP), Dana Lazarus (Athletic Foundation Trust), Bruce Fordyce (Athletics Foundation Trust), and Hettie de Villiers (Principal: TuksSport High School)

qualification to fall back on,' she said.

The school has produced athletes who have made contributions in different South African sports arenas. Banyana Banyana star, Portia Modise, and former Orlando Pirates midfielder, Andile Jali, are among the soccer stars groomed at TuksSport High School. Another former learner making it into the international scene is Wian Sullwald, who became the junior world triathlon champion the year after he matriculated from the school.

Rose Juby from the Athletics Foundation Trust said they are inspired by a vision and a strong desire to give young people who would not otherwise have had such an opportunity, a real chance in life. 'The programme focuses on giving youngsters access to a solid education, with an athletics "twist". There is also a strong desire to see South Africa represented on the world stage in different athletic events,' she said. She further said that, in order for the Athletics Foundation Trust to realise its vision, it had to find an ideal institution with the requisite skills and facilities already in place. After careful consideration of numerous options, the TuksSport High School and the University's high performance centre were selected. 'Our partnership with the University of Pretoria has brought our vision into reality relatively quickly. There

has been a commitment from the University to bring this vision into reality and we have no doubt that we have made the right call in placing the programme here,' she said.

The Athletics Foundation Trust is in its first year with its pilot group of athletes and there an incredible difference has already been made in the lives of young athletes.

Prof Cheryl de la Rey expressed her gratitude to the Athletics Foundation Trust and described the partnership as the realisation of a bright future for many young talented athletes across the country. She said that the University of Pretoria shares the same vision as the Athletics Foundation Trust because of its commitment in offering holistic educational development that is inclusive of sport. 'Education in its holistic sense is really about the education of the total person, not only the cognitive and the intellectual part, but it goes beyond the classroom and [also] focuses on the physical. Therefore, the development of education in a holistic way is a shared value for both the University of Pretoria and the Trust. That is the philosophy behind the partnership we have forged,' she said.



# TuksSport News



## Bok Women's 7's through to World Series

The Bok Women's 7's have booked a spot in the World Series and we caught up with Tuks' Shona-Leah Weston and chatted about her experience.

Did you enjoy the tournament?

The Women's Rugby World Cup 15's was an experience on its own, competing against top athletes that have invested as much time and energy as myself and going into the tournament with the same drive. Although we did not meet the goals set for us, we managed to maintain our ranking.

With the 7's we had a tough task set to qualify for the World Series which we accomplished. The tournament was super and all my sacrifices were nothing compared to the thrill of our achievement

What did the international exposure teach you?

I gained an immense amount of experience and grew within myself and in my rugby. I learnt that there are many out there with the same dreams as mine, and that there's no time to sit back and relax. This dream and level requires all of me and I have so much to still learn and plenty more room to grow. It's exciting to know that things are getting bigger and better for us women on the rugby field.

Are you happy with your individual performances?

I was happy with my performance. Even though I tend to put a lot of pressure on myself and there may have been some errors, I'm proud to say that they were not effort errors.

Shona-Leah and the rest of her Tuks team mates are back in training at home now.



## TuksFootball shines for the University of Pretoria



*Text: Morris Gilbert*

TuksFootball has made the University extremely proud by retaining the Varsity Sports title, said the Vice-Chancellor and Principal, Prof Cheryl de la Rey on Thursday at a function where the 2014 champions were duly honoured.

"We are here to thank you. Through your team success and individual success you built a good name for the University."

She described football as an exceptional sport as it is dependent on individuals who strive towards excellence with the same commitment and passion.

"There were disappointments along the way like when we lost against UJ but that's part of the journey. What struck me throughout the tournament was the way our players conducted themselves during media interviews - especially in moments of defeat," added Prof de la Rey.

Tuks captain Robin Swartz compared his team's Varsity Football journey to that of being a student.

"As students we write tests, do assignments and presentations in hoping that the journey will result in a degree. Our Varsity Football experience had ups and downs, some tests we passed, others we failed while in others we got 50% like our game against NWU. On Monday we graduated."

Tuks coach Evangelos Vellios said: "When you watch the World Cup and you see how the president and nation show their gratitude to the winning team, it moves you. This is something just as special. Thank you, Prof de La Rey for organising this event. I remember at one of the meetings our Director, Mr (Kobus) van der Walt, said something that stuck with me. He said that the winning culture of this University and TuksSport allowed the likes of Piere de Bruyn, (TuksCricket's head coach) and his charges to win the World Cup as it allowed them to thrive and apply their philosophy."

In his reaction TuksFootball Manager Kenneth Neluvhalani described the back to back wins in the 2013 and 2014 finals as overwhelming.

The TuksRowing Club attended the annual Universities Boat Race over the weekend of the 18th-20th of September. We took 4 crews down with us; a women's A and B crew and a men's A and B crew. It was an exciting regatta for us as our A men were racing to retain their title for the 6th year running.



We started with the heats in heads race format on the Thursday and had good performances across the board. The A men and B men both won their head's races with the fastest qualifying times which meant they made it into the A final with both crews racing against UCT.



On the women's side the A women won their head race with the fastest qualifying time while the B women got the second fastest qualifying time, both making the A final of their respective events. The A women would be racing UJ and the B women UCT.



Friday was a day of rest and recuperation and also time to get ready for their all-important A finals on Saturday. Most of the week's weather proved to cause tough racing and training conditions, but the rowing gods praised us with fairly good conditions for one on one racing on Saturday.

First up were the B women. With a fairly inexperienced crew they went out with a lot of determination but unfortunately lost to UCT in the final. This crew showed true determination and grit and can be extremely proud of their second place, showing a 1 place improvement from last year.



The B women were followed by the B men who went into the final with an extremely big time gap between themselves and UCT. The men dominated the race from beginning to end and showed their excellence throughout the regatta.

The A women had a tough race ahead of them with only a 10sec gap from the heads race. The wind proved quite gusty at the start but the women showed real determination from the start and had as much as a boat length of lead by the first corner. They continued to push away from the UJ crew and became the 2014 USSA Boat Race Champions. This will be the second time the women have won in the history of the regatta and hope that they can continue this winning streak in the future.

The last race of the day was the men's A final. There was a lot of pressure on this race with UCT hoping to break Tuks' winning streak. Our men went into the race with a lot of experience and determination and for the 6th year running were crowned USSA Boat Race Champions.

This was by far the best result at Boat Race for Tuks. It was great to have so many supporters at the regatta including Mr van der Walt and Prof de Klerk who joined us down in Port Alfred.

**TuksSport**



# 2014 TuksSport Colours and Awards Function

James Thompson & John Smith (Rowing) and Lee-Ann Persse & Naydene Smith (Rowing) took top honours at the TuksSport Colours and Awards Function held in Pretoria on Friday, 17 October 2014 where a total of 478 Tuks athletes and officials were honoured.

At the Rowing World Championships in Amsterdam, James and Johan pulled out all the stops. They raced to a gold medal finish in the men's lightweight double sculls and set a new world best time. What was even more significant was that this achievement means that James has won a medal in every major international regatta.

After an injury set-back, where Lee-Ann had to undergo a hip Labrum repair, Lee-Ann and Naydene competed at their first International Regatta in June, the 3<sup>rd</sup> World Cup in Lucerne where they finished 4<sup>th</sup>. At the World Championships in Amsterdam they placed 6<sup>th</sup> in the A final.

At the Commonwealth Games in Glasgow, Scotland Tuks athletes won a total of eleven medals; Zack Piontek won gold in judo, Cornel Fredericks won gold in the 400m men's hurdles, Cameron van der Burgh won gold in the 50m breaststroke, silver in the 100m breaststroke and bronze in the 4 x 100m medley relay, Ruan-Tobie Snyman won silver in judo, Roland Schoeman won silver in the men's 50m butterfly and men's 4 x 100m freestyle relay, Caydon Müller also won silver in the men's 4 x 100m freestyle relay, Kate Roberts won silver in the mixed team triathlon relay and Jacques van Zyl won bronze in judo.

Mr Kobus van der Walt, Director of TuksSport said the University of Pretoria has experienced another

remarkable year. Highlights of a year in which TuksSport achieved consistently in no less than 33 sporting codes, were:

- 142 National representatives of whom 6 represented Botswana, Kenya, Malawi, Namibia, Uganda and Zimbabwe.
- 16 Coaches and team managers officially accompanying senior national teams to international competitions,
- 35 National Federation team members.
- 35 National age group team members.
- 14 Students were members of National University Sport South Africa (USSA) teams along with 1 coach.
- 5 students were members of other National Student teams including 3 officials.
- Most of the above as well as a further 227 Tukkies (including 13 officials) obtained senior provincial colours.
- TuksAthletics won USSA as well as Varsity Athletics for the second year in a row.
- TuksFootball won Varsity Football for the second year in a row.
- TuksRowing (men's VIII) won the USSA Boat Race for the 6<sup>th</sup> year running.
- TuksRugby won the Carlton Cup and USSA.
- TuksGolf won USSA.
- TuksCricket won Cricket South Africa's (CSA) National Club Champions, the Northerns Cricket Union (NCU) Premier League Championship, the NCU Knock-Out Competition, the NCU T20 Club Competition, the Red Bull Campus Cricket South African Final and the Red Bull Campus Cricket World Final.

## Awards:

Student Sports Administrator of the Year:

**Xabiso Sicwebu (SSC)**

Administrator's Award:

**Martie Savrda (Wrestling)**

Principal's Award for Exceptional Performance in both Academics and Sport:

**Melissa Myburgh (Netball)**

Coach of the Year – Individual sport:

**Nikola Filipov (Judo)**

Coach of the Year – Team sport:

**Pierre de Bruyn (Cricket)**

Student Sport Club of the Year:

**Rowing**

Sports Team of the Year:

**Assupol Tuks 1 (Cricket)**

Sport Club of the Year:

**Cricket**

Student Sportswoman of the Year:

**Lenize Potgieter (Netball)**

Student Sportsman of the Year:

**Akani Simbine (Athletics)**

Sportswoman of the Year:

**Lee-Ann Persse & Naydene Smith (Rowing)**

Sportsman of the Year:

**James Thompson & John Smith (Rowing).**



Administrator's Award: **Martie Savrda (Wrestling)**



Principal's Award for Exceptional Performance in both Academics and Sport: **Melissa Myburgh (Netball)**



Sportswoman of the Year: **Lee-Ann Perse & Naydene Smith (Rowing)**



Coach of the Year – Individual sport: **Nikola Filipov (Judo)**



Sports Team of the Year: **Assupol Tuks 1 (Cricket)**



Student Sport Club of the Year: **Rowing**



Coach of the Year – Team sport: **Pierre de Bruyn (Cricket)**



Sportsman of the Year: **James Thompson & John Smith (Rowing)**



Student Sportsman of the Year: **Akani Simbine (Athletics)**



Student Sports Administrator of the Year: **Xabiso Sicwebu (SSC)**



Sport Club of the Year: **Cricket**



Student Sportswoman of the Year: **Lenize Potgieter (Netball)**

# INSIDE NEWS

## GOLF

**Zander Lombard** claimed his fifth IGT Tour title at Irene Country Club on 29 October.



## JUDO

Both DJ le Grange and Zack Piontek, claimed bronze in their respective weight categories at the 2014 Mauritius African Open Champs held from 8 – 9 November in Port Louis.

## TRIATHLON

Wian Sullwald, Wikus Weber and Kate Roberts, hpc sponsored tri-athletes podiomed on 2 November at the 5150 African Champs held in Germiston, Erkurhuleni.



## MOUNTAIN BIKING

Philip Buys, hpc sponsored athlete and his team mate Matthys Beukes finished 2<sup>nd</sup> overall in the Bridge Cape Pioneer Trek race in the Western Cape.

## CANOEING

Bridgitte Hartley won the bronze medal in the women's 500m K1 final at the ICF Sprint Canoeing World Championships in Moscow.



## ROWERS

Johan Smith and James Thompson (part of men's lightweight four – 2012 Olympic gold) won gold in the men's lightweight double sculls in a world-best time while Shaun Keeling and Vincent Breet took bronze in the men's pair.



## BANYANA BANYANA (LADIES SOCCER)

Thembi Kgatlana (currently in Matric & captain of the Basetsana Academy) & 7 ex-TuksSport High School girls were chosen to

represent Banyana Banyana and for the African World Champs.



## MARATHON

**Charne Bosman**, hpc sponsored athlete finished 3<sup>rd</sup> in the ladies Half- on Sunday 12 October.

**Irvette van Zyl**, after winning the 10km Spar Race in course record time on Saturday, 30 August continued to win the overall 42km Mandela Day Marathon the next day clocking 2 hours 47 minutes and 13 seconds and smashing the course record by 19 minutes. On 2 November she claimed a bronze at the Nike Soweto Marathon in the 10km in 0:34:26



## ISR Research

Institute for Sports research, University of Pretoria recently carried out research on the new Kwaitone dance DVD which will be launched later this year.

At the High Performance centre, participants were taken through their paces during various physical tests. Many health and fitness measures were taken by

qualified Sport scientists from the ISR/HPC to determine participant's body fat, muscle mass, waist to hip ratio, blood pressure, anxiety levels, as well as their

current level of fitness. The lucky few whom were randomly selected into the supervised classes ran by Mr Somizi Mhlongo (Actor known for the movie 'Sarafina',

choreographer and TV presenter) participated in 3 supervised classes per week at the University of Pretoria, LC de Villiers, as well as 2 at home using the DVD, for 6 weeks.

Post intervention tests have been completed and now we await the results.

If you are interested in taking part as a participant in another upcoming Dance Project we

have at the ISR, please contact Hannah on email [Hannah.oguz@hpc.co.za](mailto:Hannah.oguz@hpc.co.za) for more information.



## 9<sup>th</sup> ITF Regional Coaches Conference hosted at the hpc 24-27 September

Text: Kirsty Querl, Tennis Academy Strength and Conditioning

The hpc hosted the 9<sup>th</sup> ITF tennis coaches' conference at the end of September. The conference included 90 coaches from the Southern and East African regions over four days. The prestigious international speakers included Max De Vylder from the Lawn Tennis Association in London, Geoff Quinlan from Tennis Australia and Miguel Crespo who is the research officer and head of coaches education for the International Tennis Federation based in Spain.

Prince Madema, Andre De Beer, Kirsty Querl and Nicki de Villiers represented the hpc and Tuks Sport well, as they made up four of the ten speakers. Great feedback was received toward all our "experts". The Tennis academy players did themselves and the TuksSport High school proud when they were used as the players to assist the speakers through most of the presentations in the conference. This event was beneficial in creating a greater awareness of our tennis programme and the services offered by our organisation.

The quote of the conference for me was, "Train athletes to make improvements, not to make them tiered." Geoff Quinlan. With this in mind training sessions have more purpose and will be more effective.



## CELEBRATORY BREAKFAST

Triumphant sponsored athletes of the hpc treated on a celebratory breakfast on 17 September. Here the athletes pose in front of newly unveiled mural



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 Naum Sathekge: naum.sathekge@hpc.co.za  
 Tel: 012 362 9889

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## Commonwealth Games - Getting ready for the big day.

*Text: Kate Roberts*

After all the waiting, training camps, dedication and sacrifice the day of our mixed team relay was finally upon us. It was 26th July 2014 and if I had to honestly put this particular race into perspective, one could probably say that I had trained close on twenty years for this day. I started my athletic career at Eunice at the humble age of eleven and here twenty years later, I was hoping to help earn myself and my South African teammates a medal at the Commonwealth Games in Glasgow, Scotland.

On race day, I had this horrible, uneasy feeling in my stomach. I wanted to run away and be anywhere but in Glasgow at the Commonwealth Games. For a bizarre moment, I found myself envying those who had not qualified for the South African triathlon team. At that point I wouldn't have minded being at home and watching the race on television. I would be free from any kind of pressure and wouldn't be judged by the rest of South Africa, or have to endure any sort of physical pain. Next my focus turned to my Christian faith and it did put me at ease and provided me with comfort. I soon realised that a great opportunity lay ahead of us as a team and that I could only ask my body and mind to give of my utmost best!

On a sunny day in Glasgow we were taking on the best in the world - England, Australia, New Zealand, Canada are the traditional world powerhouses of triathlon. Many had been training for many long hours in their foreign structures, with huge amounts funding thrown into their Triathlon High Performance systems, in order for them to secure medals at major Games. Some were world and Olympic champions (these included the Brownlee brothers Alistair and Jonathan) but what was most disconcerting, while I was watching the other teams warm up, was that none of the competition looked nervous in the very least. They radiated confidence, and I hoped that they

did not realise just how nervous I actually was! Very few people even gave team South Africa a consideration as medal hopefuls, however despite our nerves, we knew that we could create a big upset that day.

My boyfriend, a close friend from school days and her husband were there waving our famous rainbow nation flag and cheering for our team from the grand stand. My phone, twitter and Facebook pages were absolutely inundated with messages, mostly from close friends but also from people I had lost touch with many years ago. It seemed as if everyone I knew was watching this particular race. There was a brief moment where I started thinking about what all these people would say after the race. Would that Grey College boyfriend I fell so badly for when I was sixteen be watching and would he finally regret dumping me.. Or my teachers who gave me grief for never completing my homework. Would they finally understand why..

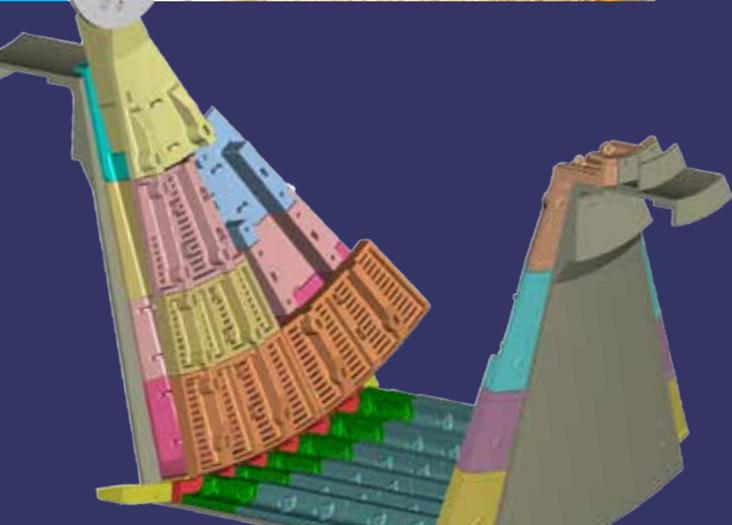
But it was time to go through my mental preparations. "You are in the best shape you can be. You cannot control anyone else's race but your own. Who cares what other people think of you, they are not here at the Commonwealth Games so who are they to judge you? All you have to do is give of your best - and you can control that. Yes it is going to hurt and yes it is going to be absolute agony, but it will only be a few minutes of brutal pain." I kept saying to myself "Do your best Kate, what more can you ask for? Ignore your body when it says no more. When your muscles are screaming and your lungs are begging for air, all you have to do is ignore them. Don't be afraid, you may collapse after the race but you certainly won't die. Your training will get you through this. Everything is going to go so well". And finally after a series of deep breaths, I eventually felt calm and ready to go into battle.

I was the first athlete to start for team South Africa and found myself under a lot of pressure

to make sure that I performed to my full potential - a slip up in my swim or transition would mean me missing the crucial cycling pack and this could cause the entire team to be out of the race completely. To be honest this would have been completely devastating for me to let the entire team down and I didn't even want to consider the possible sporting headlines the following day. I did the best possible job that I could and stayed with the leading girls for the swim and bike disciplines, which was exactly what I needed to do according to our race plan. The rest of my teammates executed their races to perfection but it was nerve wracking to watch our final team member sprint for the medal placings behind team England, with the Australian and Canadian athletes closing in on him from behind. But when I saw him bolt towards the finish line over the final 50m, I could tell he wanted it so much for all of us. Earning that silver medal meant the world to all of us. We wanted it not only for ourselves but for our country, our family and our friends and for all the many sacrifices they have put in over the years.

The hours after the race were quite surreal. I was physically exhausted, mentally fatigued and not able to absorb everything going on. I can remember interview after interview and everyone wanting to see our medal. But it wasn't until I got home and back to a normal lifestyle, a few weeks later after a holiday in Edinburgh, that things sort of sunk in. Now that I have had time to properly think about it, it certainly was a remarkable day and the highlight of my twenty year sporting career. Not being able to race to my capability in the individual event due to a bike crash was heartbreaking. But I am proud that I picked myself up the way that I did by putting the disappointment of that race behind me and just focussing on doing the best possible job that I could to help earn Team South Africa a medal.





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