your complimentary issue

the MEDALLIST

sport, science, knowledge

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TuksSport

#EarnYourStripe

TuksSport, at the University of Pretoria, has established a winning culture spanning more than 100 years. Our athletes get the best available training and have access to world class facilities, scientific and medical support.

Built on the foundation of strong academic programmes, we make today matter.

Our latest achievements:

2016 Rio Olympic Games: *Forty-six* athletes, coaches and managers from TuksSport represented South Africa and our neighbouring countries at the Rio Olympic and Paralympic Games. TuksSport athletes managed to bring back home three medals for team South Africa.

2016 USSA Championships: TuksRugby, TuksNetball, TuksRugbyWomen's 7's and TuksRowing-men's A VIII.

2016 Varsity Sport Champions: Cricket

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from the CEO's

In my article of March this year and in the build up to the Rio Olympic Games I gave a number of facts about the "upcoming" Rio Games and in this article I will allude to some interesting information that came out of the Games of the XXXI Olympiad, as it was officially called.

However before getting to this I would like to congratulate all our Olympians who did the University so proud in Rio in bringing home three Silver medals, two fourth places and three fifth places. Furthermore another three athletes reached the semi-finals in their respective events and the TuksSport High School had three of its learners selected to represent South Africa in Rio.

Cameron van der Burgh won Silver in the 100 meter breaststroke, while Luvo Manyonga won Silver in the men's long jump and Shaun Keeling and Lawrence Brittain won rowing Silver in the men's pair. Another great performance to be singled out was that of Akani Simbine who became the 5th fastest man in the world in the 100 meter final.
In my March Editorial I said that during the Games there should be around 10 500 athletes from 206 Countries taking part and in fact the final number was 11 303 athletes (45% women) from the 206 Countries in addition to the Team of Refugee Olympic Athletes (IOA). Kosovo and South Sudan participated in their first Olympic Games and 87 Countries won medals and 59 of these celebrated Gold Medals.

Michael Phelps of the USA won more medals than any other athlete with five Gold and one Silver medal which puts him top of the all-time table of medal winners in the history of the Olympics. His total is now 23 Gold, three Silver and two Bronze medals and the second best performance of all-time is from Larisa Latynina, Russia gymnast with nine Gold, five Silver and four Bronze medals and then third Paavo Nurmi, Finnish athlete with nine Gold and three Silver medals.

The youngest medal winner was Ren Qian from China (15 yrs and 180 days) who won a Gold medal in the Women's 10m Platform Diving and the oldest medal winner was Nick Skelton of Great Britain (58 yrs and 233 days) who won a Gold medal in the Equestrian Individual Jumping.
More than 6 million tickets were sold i.e. 92% of the total available tickets sold, and of the viewership side half of the World's TV population and more than 90% of the Brazilian TV audience watched at least some coverage of the Games. 26 Million visits/hits were received on the Olympic.org website which is more than double that of London in 2012 and more than 4 billion impressions were registered on the IOC's social media posts.

The medal table finished with the USA in first place with a total of 121 Medals i.e. 46 Gold medals, 37 Silver medals and 38 Bronze medals with Great Britain in second place with 67 Medals, 27 Gold Medals, 23 Silver Medals and 17 Bronze Medals and China was third with a total of 70 Medals, 26 Gold medals, 18 Silver medals and 26 Bronze medals. Kenya was the top performing African Country finishing 15th on the overall medal table with 13 medals, 6 Gold medals, 6 Silver medals and 1 Bronze medal with South Africa the 2nd best African Country and 30th overall with ten medals in total, i.e. 2 Gold medals, 3 Silver medals and 3 Bronze medals. What is also interesting to note is that the IOA (Refugee Olympic Athletes) ended tied 51st on the overall medal list with one Gold medal and one Bronze medal.

A few other interesting facts include:

- The Olympic Village dining hall runs the length of four Olympic swimming pools and can accommodate around 250,000kg of food each day.
- The youngest competitor at the games was Nepal's Gaurika Singh (13 years – DOB 26/11/02), who competed in the 100m backstroke.
- The oldest competitor was New Zealand's Julie Brougham (62 years – DOB 20/5/54), who competed in the dressage.
- The biggest team at the Rio Games was the USA (556), followed by host nation Brazil (469), Germany (424), Australia (421) and China (404).
- The smallest team at the Games was the South Pacific island nation of Tuvalu. Their sole competitor was Etimoni Timuani in the men's 100m (athletics).
- Athletes ordered so much McDonald's at the free restaurant inside the Olympic Village that officials had to put a cap at 20 items because the lines were out the door all day and night.

It is amazing to think that in less than four years' time we will do it all again and I am excited about the talent that is currently within the Tuks system and look forward to an even better Olympics.
ONWARDS AND UPWARDS! *Toby Sutcliffe*

The quest for success never stops

"Training is undoubtedly where the race is won. We therefore made sure that we arrived at every session with the same hunger that we would need on that magic day, the 'Day of the Olympic final'.

"Because we know that the easiest way to rise to the occasion is doing what you do every day, you better make sure that what you do is gold medal standard. To continue doing this every day takes an incredible commitment to pain. You have to go on even when your body begs you to stop. However, if you want it badly enough your body is capable of performing feats of unreal excellence even under the most inhumane conditions."

This is how the Olympic rower, Matthew Brittain, remembers his preparation in the build-up to the 2012 Olympic golden success in London.

Four years later his brother, Lawrence, emulated his big brother's success by teaming up with Shaun Keeling to win a silver medal in the men's pairs at the Games in Rio.

Brittain does not mince words about what it took to prepare for the Games.

"It was brutal! There were some days when you could not believe when you woke up in the morning that you had to go training. All you wanted to do was sleep nonstop for three days, but you got up and went training because you had that dream of winning an Olympic medal."

Discipline was everything. Keeling remembers training on Christmas morning, had lunch with the family, followed by a 20 kilometre run in the afternoon.

These stories of dedication and commitment are not unique to the rowers. In fact it is the norm for everybody involved at the TuksSport and High Performance Centre (HPC) and it applies to the whole 'Team' which includes athletes, coaches, sport scientists, dieticians and psychologists. The 'Team' is in a never ending quest to keep on pushing the boundaries of success to the limit. There is never time for anyone to rest on their laurels. The moment success is achieved plans are being made to take it to the next level. Everybody realizes that today's gold medal success won't necessarily be good enough tomorrow.

The unique way in which the University of Pretoria's High Performance Centre supports and helps athletes led to them winning three medals at the Olympic Games in Rio. At the 2012 Games in London the HPC sponsored athletes also won three medals. This means the Tuks/HPC coaching staff have been responsible for 40% of the medals won at the last two Games.

Akani Simbine is one of the HPC's real success stories. In Rio he became the first South African athlete in 84 years to compete in the 100m-final at the Olympic Games. The fact that he finished 5th, missing out by only 0.03s to win a medal, was a better performance than many sports fans realized. The result means that Simbine is currently the fifth fastest man in the world.

Luvo Manyonga's performance in the long jump final was equally impressive. His best attempt was 8.37 metres which was just one centimetre less than Jeff Henderson (USA)'s winning jump of 8.38 metres.

As mentioned Shaun Keeling and Lawrence Brittain won a silver medal in the men's pairs rowing competition and Cameron van der Burgh won silver in the men's 100m breaststroke.

The HPC medal winners at the 2012 Olympic Games in London were James

at the hpc

Text: Wilhelm de Swardt

Thompson, John Smith, Matthew Brittain and Sizwe Ndlovu (gold in rowing), Caster Semenya (silver in the 800 m), Bridgitte Hartley (bronze in canoeing).

Another interesting statistic is that of the 34 athletes that were sponsored by the HPC in 2016, 29 went on to compete in Rio.

Toby Sutcliffe, Chief Executive Officer at the HPC, ascribes the success of the HPC athletes to 10 000 hours of hard training, in other words seven years of being totally committed to reaching their goals.

"The Tuks/HPC team believes that winning is all about marginal gains. The whole team works together on the challenge of finding out what can be done to make an athlete that little bit stronger or faster. We are always striving towards perfection and hundredths of a second or a few millimetres are important.

"Long term development is also important. We begin by training the athletes to train. The next step is to train them to compete and only then we start training them to win.

"As far as we are concerned the Olympic Games is the ultimate. That is why we are doing our planning backwards. We see the 2020 Games in Tokyo as the end goal. That is where we want our athletes to perform at their best and the challenge is to make sure that they will be able to do so. In this Olympic cycle we might start out with 60 sponsored athletes but by 2020 there may be only 30 left."

Sutcliffe said what distinguishes the HPC from similar high performance centres is the TuksSport High School.

"Having a school means we can start working with athletes as young as 13. There might be a perception that because it is a sport school the pupils will be allowed to neglect their studies. Nothing can be further from the truth. With the exception of one year the TuksSport High School has had a 100% matric pass rate.

"One of the most important things our learners are taught is that we want them not only to excel in sport but also as students. The cruel reality is that any sports career can end abruptly due to some unforeseen accident. When it happens a young athlete should have a "Plan B" in place, meaning their academic career.

"One of the benefits of having a sports school is that it enables us to identify young talent across South Africa.

"The two 18-year-olds, Gift Leotlela and Clarence Munayi, are perfect examples of how young athletes can benefit from the HPC coaching support structures. Leotlela, who is from Bloemfontein, and Munyai, who originally came from Midrand, were both talented sprinters but they only really started to fulfil their goals when they enrolled at the TuksSport High School," said Sutcliffe.

"Gift won a silver medal at the recent IAAF Junior World Championships in Poland, while Munayi is the South African senior as well as junior champion over 200 metres. The amazing thing is that both of them went on to represent South Africa at the Olympic Games in Rio, making them the youngest local track and field athletes to do so.

"After matric there is an opportunity for most learners to study at the University of Pretoria. This means that there is no disruption in their training regime because they continue to be supported by the same coaching team, which certainly makes a difference. In fact we fully believe in a holistic approach when it comes to helping our athletes. That is why we encourage all our athletes to keep on studying after finishing school. From next year we are going to help some of our athletes to qualify as coaches so that they will have something on which to fall back the day they stop competing."

According to Sutcliffe the HPC realizes that working with athletes from Africa has its own unique challenges.

"They don't really benefit when 'quick fixes' by the USA or Europe are applied.

"One of the problems we identified when we started working with young rural athletes is that their diet was often insufficient. A direct result of this was that their muscle and bone development was not what it should have been. In many instances we have to work towards rectifying this problem before we allow the athletes to start training in earnest. This process can take up to two years. This is why it helps to start working with athletes from 13 years onwards.

One of Sutcliffe's biggest frustrations is to find funding.

"Although we are often limited by insufficient funding at the Tuks/HPC we will never allow it to prevent us from coming up with new innovative ways to help our athletes to improve their performances."

Keeling and Brittain's

Olympic success has the makings of a Hollywood movie

Text: Wilhelm de Swardt

In 2008 an unknown young rowing fan sneaked out of his classroom to watch his hero, Shaun Keeling, compete at the 2008 Olympic Games in Beijing.

Eight years later the erstwhile fan (Lawrence Brittain) and hero (Keeling) teamed up to win a silver medal at the 2016 Games in Rio. It was only the third time that South African rowers were able to win a medal at the Games.

Their success has the makings of a Hollywood movie. The storyline will include a family of rowers who became the face of South African rowing. The story of their triumphs will be told, and it will also tell of their disappointments, frustrations and moments of self-doubt. But most importantly, it will be a story of perseverance, guts, friendship and proving that anything is possible if you believe in it.

For Keeling his journey to becoming an Olympic medallist started the day his dad sent him on a rowing camp to make friends. He immediately fell in love with the sport.

If your surname is Brittain it seems to be a forgone conclusion that you will take up rowing. It has become a family tradition. Dad, David just missed out on qualifying for the 1996 Olympic Games in Atlanta. Matthew the eldest was part of the 'awesome foursome' that won gold in 2012. Lawrence kept up the family tradition by winning a silver medal.

The two younger brothers, James and Charles, are showing signs that they will be able to keep up the proud Brittain legacy. Both of them have already represented South Africa at international regattas.

With apology to Toyota's logo, 'Everything keeps going right'.

There is also mom, Danielle, who is the team doctor for the national rowing squad. It is her task to make sure that the 'vital engine parts' that help the boats to glide quicker through the water don't conk in at a crucial time.

The Brittain and Keeling partnership was initiated by Matthew.

"I met Shaun when he and Matthew trained together. When I went to the university and started rowing with the national squad it did not take long for me and Shaun to become friends. At the end of 2011 Shaun, Matthew and myself moved in together," said Lawrence.

Needless to say that it did not take long for them to become rowing partners. It was a disappointment for them to miss out on the 2012 Olympic Games.

Their partnership came to an abrupt halt in 2014 when, unbeknownst to them at first, Brittain started suffering from Hodgkin's disease, a form of lymph-node cancer.

In spite of his illness Brittain still managed to finish fifth with David Hunt and Willie Morgan in the Coxed Pair final at the World Championships in Amsterdam.

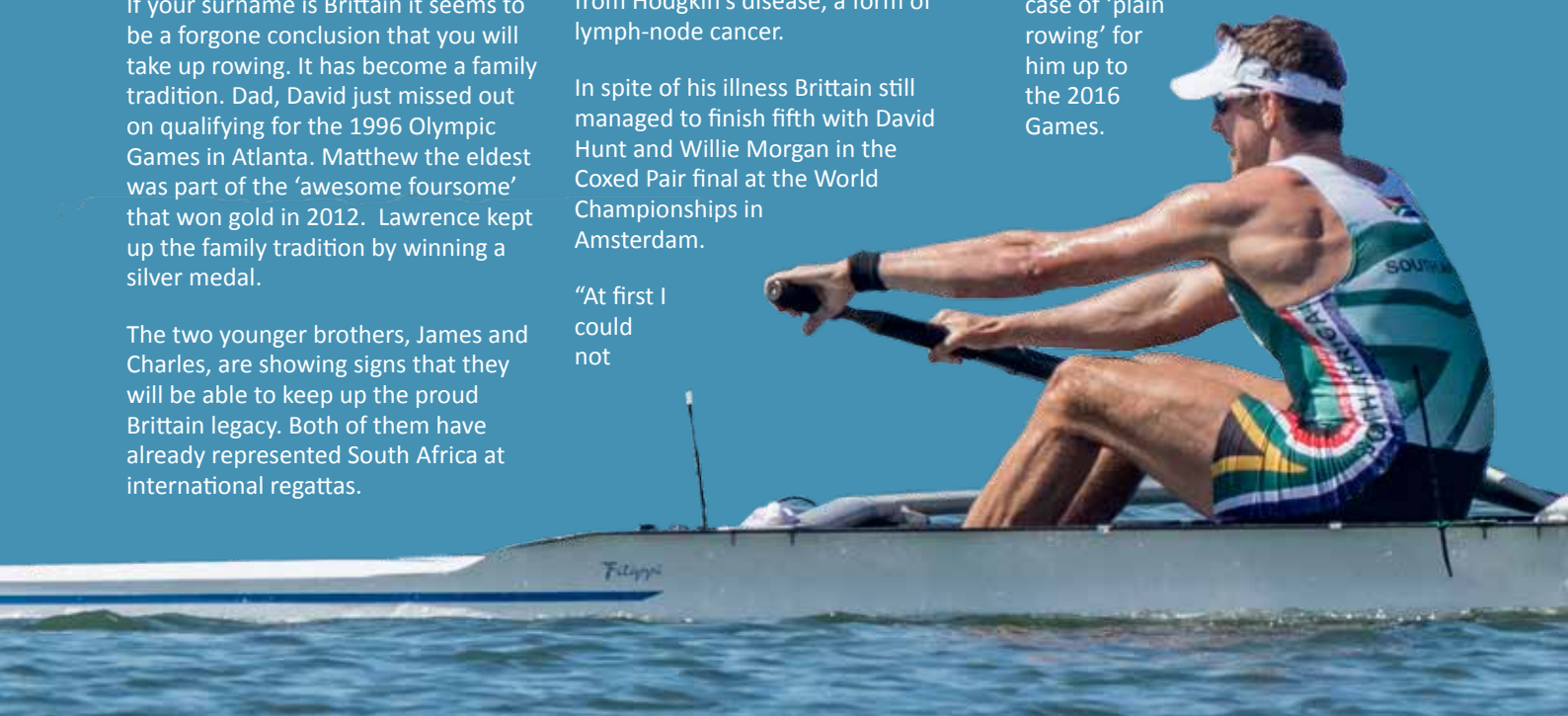
"At first I could not understand why my performance continued to get worse, no matter how hard I trained. I started doubting my own abilities. Being dropped from our squad's A-crew in 2014 was a major disappointment. At the time it felt like the worst thing that could happen to me. But I was mistaken. A few months later when I was diagnosed with cancer it was ten times worse.

"To have to go through the chemo-therapy, beating cancer and start rowing again was truly a dream come true. The first time back in the boat was amazing."

Brittain ascribes his successful 'comeback' to the fact that he did not succumb to the temptation of doing too much too soon.

"Obviously I could not wait to start participating in competitive rowing again, but I had to be realistic. It was important that I took it one day at a time. At first my only goal was to regain my strength and fitness. "

Because Keeling is quite injury prone, it was not a case of 'plain rowing' for him up to the 2016 Games.



"I will admit that there were times when I wondered whether it was worthwhile to continue rowing."

The two of them only knew by the end of February that they would be the Olympic men's pair crew.

Brittain does not mince words when he describes what it took to prepare for the Games.

"Our training was savage and brutal. We rowed about 25 kilometres in the mornings which adds up to about 200 – 240 kilometres a week. Then there was all that other training we had to do.

"There were some days when you woke up and could not believe that you were about to go training. All you really wanted to do was sleep nonstop for three days, but then you decide to go train because you had that dream of winning an Olympic medal."

Discipline was everything. Keeling remembers training on Christmas morning. After he had lunch with the family he went for a 20 kilometre run in the afternoon.

According to him the mental side of their training was as important and tough as the physical side.

"You have to be mentally astute with each stroke you are doing, otherwise you are bound to fall short when it really matters.

"Roger Barrow, our coach, certainly knew how to keep us motivated.

He had these information sheets where our daily performances were compared to what was happening internationally and to the world record as well. Lawrence and I never managed to hit the top numbers which was, in hindsight, almost a blessing in disguise because it meant we kept on fighting to get the boat to glide faster and faster through the water. I know it is a cliché but I still think part of our success can be ascribed to a version of the old saying 'when the going got tough we got tougher'.

"And don't forget, while you're training you cannot help wondering what it would feel like to stand on an Olympic podium," Keeling said.

Brittain was on record saying before the Games that the ultimate for him would be to win a medal for South Africa at a major event.

Was winning the medal as special as they had dreamt?

"Winning an Olympic medal means everything to me. There were times when I questioned whether I made the right decision, but the moment our race finished and it was official that we had won a silver medal, all the sacrifices became worthwhile," said Keeling.

"The only regret I had was that we were rushed to the medal podium so quickly and that the ceremony was concluded in such a hurry."

Brittain said as far as he is concerned they are still on the podium.

"Hardly a day goes by that I don't think back to the Olympic Games and that moment on the podium. It is so special. Ever since I can remember there was this goal of winning an Olympic medal. During the last few years we wondered with every stroke we took what it would be like to medal at the Olympics.

I can honestly say that when we actually achieved our goal it was bigger than I ever thought it would be. I think Shaun will agree with me.

What we had achieved would not have been possible if it was not for the support we received from our coach, Roger Barrow, and the rest of his coaching team. They did a sterling job in making us believe that nothing is impossible."

Brittain is definitely committed to sacrifice another four years to try and qualify for the 2020 Olympic Games in Tokyo. Keeling, however, needs time to think about what he wants to do. His problem is that he is not getting any younger and he fully realizes that at some stage he needs to start earning a salary.

Rowing is one of the last sports in which it is not possible for an athlete to earn anything but a medal and the respect of his peers.

Brittain hopes that, at some stage in the foreseeable future, this will change.

"I think if the rowers were able to earn money for their accomplishments in the sport it would make it easier for more rowers to commit to it for longer."

Van Wyk overcomes disappointment to win silver medal at World Championships

Text: Wilhelm de Swardt | Image: Reg Caldecott

Sometimes bad results can be good for an athlete.

Disappointing results can bring athletes to a crossroad where they have to decide whether it is worthwhile to carry on as before or whether it was necessary to make drastic changes.

Last year, when Nicole van Wyk finished 10th in the lightweight single sculls race at the World Student Games in Korea, she realized that this was one failure too many for her. The moment to do something about it has arrived.

"As far as I was concerned I had two choices. I could either allow the failure to get to me or I could do something about. I chose the latter.

"My failure motivated me to work harder towards getting stronger physically and also to improve my rowing technique. During the past year I was in a daily quest to win seconds every time I rowed."

Van Wyk's positive mind-set certainly paid off at the Under-23 World Rowing Championships in Rotterdam. She won a silver medal in the lightweight single sculls race.

"There are no words to describe that feeling when, at long last, you are able to win a medal at a major championship. Needless to say I was quite emotional while I was standing on the winner's podium."

There seems to be truth in the saying that success begets success. Van Wyk says she has already been wondering what she can do to become even stronger and faster. To win one medal at a major championship is certainly not where her dreams end. Next year she wants to win the gold medal at the same championship and if everything goes according to plan she hopes to represent South Africa at the senior world championships as well.

"I need to gain as much international experience as possible. So far I have only competed at two world championships."

The ultimate goal for Van Wyk will be to 'book a seat' in the lightweight double sculls boat that will compete at the 2020 Olympic Games in Tokyo. This will not be easy because at the moment Kirsten McCann and Ursula Grobler are the incumbent crew, having represented South Africa at the Rio Games. Last year they won a bronze medal at the World Championships.

There are rumours that the lightweight single sculls could become an Olympic event, but Van Wyk is not bargaining on that.

"My goal is to get a seat in the lightweight double sculls boat, but it will be a tough challenge. Our training squad's philosophy is that no position in any boat is final until you get to the start line. It is a way to keep complacency at bay. Anyone who dares to rest on her laurels will be in trouble. There is always someone who wants it as much as you do and is prepared to put in that little bit extra to get a seat in the boat."

To an outsider this might sound like a 'dog eat dog' scenario but it is in fact far from being so.

"We really expect and admire each other. Off the water we are friends but everything changes once we start rowing. For those two hours or so there is no talk about friendship. We know how to establish the boundaries and we also know our friends."

Being totally dedicated to perfecting some small technique in sport can seem tedious to an outsider. Imagine doing the same thing over and over, day after day. Sometimes this repetitiveness goes hand in hand with intense physical suffering. Waking up knowing that you are going to endure pain cannot be easy. Although an outsider may wonder how they manage to stay motivated, the pain does not deter Van Wyk and her training partners.

"The good thing about our training dynamics is that we all motivate each other. If you have a rough day or lack motivation, you just have to look to your left to see an Olympic medallist doing exactly what you are doing, while to your right there might be a world championships medallist. This will make you think 'OK, I am tired but I will keep going. If they are able to stick it out, so can I.'

"It is really cool to be surrounded by such dedicated athletes. For me motivation is everywhere. All I have to do is look who is rowing next to me.

"I like rowing so much because I can always test myself on an individual level. The challenge is always to see how much faster I can get or how much further I can push myself. If I can push myself to the point where I manage to break through the threshold, it is proof that I must be doing something right."

When she gets a chance to do what 'normal' people do Van Wyk likes to cook up a storm in the kitchen. Her speciality is lamb shank. When asked what the secret is of serving the perfect lamb shank dish, she did not hesitate to say "Patience…lots of patience. It has to cook for hours."

Roberts is truly one of the legends of South African triathlon

LEGEND

Text: Wilhelm de Swardt | Image: Reg Caldecott

When Henri Schoeman surprised everybody by winning the bronze medal at the Olympic Games in Rio, it was fitting that Kate Roberts was there, in her capacity as team manager, to share the moment with him.

Roberts has been one of the true ambassadors for triathlon in South Africa. She has also been one of the first true triathlon heroes in South Africa. Triathlon, along with rowing, athletics and swimming, is at the moment one of South Africa's alpha sports when it comes to the Olympic Games. Roberts certainly played no small part in the local triathlon success story, first as an athlete and now as a coach and manager.

Since she was nine years old, Roberts dreamed of representing South Africa at an Olympic Games. This dream was conceived when South Africa was allowed back into international sporting competitions after being in isolation for 32 years because of the country's policy of apartheid. After watching the South African athlete, Elana Meyer, on television taking the silver medal in the 10 000m at the Barcelona Olympics, behind Ethiopia's Derartu Tulu, Roberts realized that this was what she wished, more than anything else, to accomplish in her life.

At first she considered trying to compete at an Olympic Games as a track athlete, but when the sport of triathlon made its debut at the Sydney Olympic Games, she realized that if she could add cycling training to her swimming and running combination she could perhaps fulfil her dream of being an Olympian as a triathlete.

After matriculating at Eunice Girls' School in 2001, she studied for a BCom degree in Human Resources Management at the University of the Free State in Bloemfontein. While she was studying she continued to compete in national races as a triathlete, but only after successfully obtaining her BCom degree in 2005, she became a professional triathlete. Throughout her career Roberts had only one quest. She wanted to complete that 'one perfect race'.

"My breakthrough came when I asked Darren Smith, an Australian coach, whether he was prepared to help me.

At the time I realized that if I ever really wanted to be truly competitive internationally I had to make some drastic chances. Going to Canberra to train with some of the best athletes made a big difference. Darren made me realize that, in the end, it is how you train that makes the big difference. In other words, doing the small little things right can make a big difference when you race."

Roberts got her first Olympic experience in 2008 when she was selected to compete in Beijing. By 2012 she had established herself as a true international campaigner who regularly achieved top-ten finishes in World Series events. A definite highlight was finishing 5th in Hamburg just two weeks before the Olympic Games. It made Roberts believe that she would be able to contest for a medal in London, especially considering that most of the favourites also raced.

The 2012 Olympic Games was meant to be Roberts's swan song. Unfortunately, her perfect race went horrible wrong when she crashed during the cycle leg. To worsen matters it was not even because of a mistake she herself made. When they raced into a corner at Buckingham Palace, the wheels of the rider in front of Roberts slid out from underneath her and she crashed. The unfortunate South African could not avoid also going down.

"It was a heart breaking experience for me. I was in the shape of my life and if I had not crashed that day I know I would have had a top-ten finish. I was in the lead pack on the bike and my running time was the 7th fastest. But I guess it was just not meant to be. After what happened there was no way I could quit because I would risk being haunted later on by phrases such as 'could have' or 'should have'. That is why I decided to carry on at least until the 2014 Commonwealth Games in Glasgow.

It turned out to be one of the best decisions Roberts ever made. Together with Gillian Sanders, Richard Murray and Henri Schoeman she won a silver medal in the triathlon team relay.

"It meant the world to all of us. We wanted it not only for ourselves but for our family and friends and for all the many sacrifices they had put in over the years. We also wanted to prove a few people wrong. People who said that we had no hope of winning that medal and that SASCOC had made a mistake with our selection as a team. It was a day that I will certainly remember and cherish for the rest of my life.

"Sir Roger Bannister, the athlete immortalized for being the first to run a mile in less than four minutes, was asked once where he got the belief to break that barrier that was thought impossible. He replied that it was because his coach, Franz Stampfl, told him he could do it. I believe you get the best out of people if you believe in them and expect the best from them. Lindsey Parry, our coach and manager, made sure we believed in our abilities before the race.

"I was asked to carry on competing until 2016 but I felt I had reached a position where I had accomplished the best I was able to. I also had to ask myself how much more debt I was prepared to make to be able to compete at the highest level. Then there was also a reality check. After the 2014 Commonwealth Games I knew deep down that my motivation to keep on going was not there anymore. I did not want to go to another Olympic Games merely to be able to say that I was there.

So I quitted and started the Triathlon Academy at the TuksSport High School and High Performance Centre. I never regretted my decision. I have been blessed with a career that was greater than I could ever have imagined."

As to her role as coach Roberts said: "My initial goal was to recruit eager, motivated and willing juniors and expose these young athletes to the many opportunities that sport can offer them. Later on I would expose them to international competitions. Like anything in life, I am conscious that as a coach I won't be an overnight success. I will first need to gain experience, become a leader of a team, and be patient and willing to put in the required time and effort.

"I am also aware that I cannot train my athletes in exactly the same way that I was trained. I will have to adapt to other coaching styles as well, because there are many coaching methods that can lead to an athlete's success. However, the basis is a hard work ethic combined with dedication, persistence and a good attitude for coping with the demands of the sport."

In Rio she, along with Lindsey Parry, played a major role behind the scenes as managers to ensure that Schoeman and the other South African triathletes could focus only on what they were meant to do, namely to race to the best of their abilities. She admits that she enjoyed the reversal of roles.

"The key to being successful at the Games is that the athletes should be totally committed to their daily training. They should avoid distractions and should pass on any admin issues to their code managers to handle. And the key for a successful manager is to be able to handle all the admin regarding the needs of the athletes and to keep them happy and in high spirits."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Manyonga made most of second chance in life

Text: Wilhelm de Swardt | Images: Reg Caldecott

"It's not how many times you get knocked down that count; it's how many times you get back up."

These famous words by America's George Custer best describe the rise of the long jumper, Luvo Manyonga, from zero to Olympic silver medallist hero.

Since 2012, when he had tested positive for 'TIK' (methamphetamine), Manyonga certainly 'fell' more than a 100 times but because he ended 'getting back up' one more time than 'being knocked down', he proved himself to be a hero in the true sense of the word.

Manyonga considers his remarkable comeback simply as making the most of a second chance in life. He seems, in fact, to be a spontaneous optimist.

"When I was suspended I thought: "Fine, it happened". I never saw it as the end of my athletics career. It was more like a big wakeup call. One of the best things that happened to me last year was when my dad decided that I should go to initiation school in the Eastern Cape.

"While I was there I was told to go out and make my own future. It made me realize that I am a man now and that it was high time for me to start taking responsibility for my actions and for my family. I took this to heart."

Manyonga is full of praise for the way Mario Smit (his late coach), Gideon Sam (Sascoc president), John McGrath (strengthening coach) and the High Performance Centre supported him.

"I really owed a lot to Mario. He was like a second dad who refused to give up on me. My problems began when I started earning money from my athletics career. When you have money you think you can do anything. I started befriending the wrong people and from then on the slide to reaching rock bottom in life was on. It was not long before I started experimenting with drugs, which led to my life spiralling totally out of control.

"In spite of this Mario kept coming to fetch me, trying to keep me on the straight and narrow by getting me to train. To my shame I must admit that I kept on disappointing him. One of the definite lows of my life was not attending Mario's funeral because I was 'stoned'.

According to Manyonga the fact that, although he did not do any official training for more than two years, he never stopped jumping could have played a part in his Olympic success. He describes himself as a compulsive jumper who cannot resist a jumping challenge. He regularly tested himself by jumping across various obstacles.

"Qualifying for the Olympic Games was amazing because it had always been my dream. I honestly never doubted that I had the ability to win a medal, I just was not sure what the colour of the medal would be.

"The reason for my confidence is that I never just assume that another athlete is better than I am. Nobody can claim to have won a medal until the last jump of the competition.

"I was so chilled during the Olympic final and I was just there to do my business."

Having jumped 8.37 metres, Manyonga was leading the competition after five jumps. It looked as if the gold medal was going to be his, but then Jeff Henderson jumped 8.38 metres with his last jump to win the competition.

"There was a second or two that I was disappointed about not winning the gold medal, but seeing that I had managed to achieve what I set out to do, which was to win a medal, I reasoned there was no need for me not to be happy.

My philosophy as an athlete is that sometimes you win and sometimes you lose. You have to deal with both.

"Afterwards, when I heard that Jeff Henderson dedicated his gold medal victory to his mother, Debra, who suffers from Alzheimers, I felt more in peace with the outcome of the competition. I think what Jeff did for his mom is really special."

Another definite highlight for Luvo was when he won the long jump at the Diamond League Meeting in Brussels by jumping 8.48 metres. This was two centimetres short of Khotso Mokoena's South African record.

Although Manyonga is confident that he is capable of bigger jumps, he makes it clear that when he competes it is never only about distance.

"I focus only on what I am able to control. This basically means I am focussed on trying to execute my technique as faultless as I possibly can with every jump. That way the really big distance will come from itself."

Manyonga confidently predicts that he will again medal for South Africa at next year's World Championships in London.

Neil Cornelius, his coach, thinks Manyonga has the ability to become the first long jumper to reach the magical marker of nine metres.

"Coaching Luvo is a real privilege. I once said to someone that to work with Luvo is like riding a 'red Ferrari' because he is such a class athlete.

"What I most appreciate about him is his spontaneous personality. It is really addictive."

Cornelius and Manyonga's quest for perfection definitely paid off. Apart from him winning a silver medal at the Games and winning at a Diamond League Meeting, it is interesting to note that he improved his best distance by 22 centimetres. Shortly after his comeback in January his best distance was 8.26m and now it is 8.48.

Cornelius credits Manyonga's success to his technique.

"What distinguishes Luvo from other athletes is his approach. He is so accurate. I often tell my younger athletes to watch him when he jumps and then try to emulate what he does.

"I still want to work a bit on the way he lands because I am of the opinion he gives away a few centimetres. Then I also want him to work on getting faster and quicker."

Nothing has yet been finalized but there is a good chance that Manyonga might compete in some 200 metre races next year.

When asked if his sudden rise to becoming one of South Africa's foremost athletes has changed his life, Manyonga said that people tend to recognize him more often when he is out and about.

"It is nice but I actually just want to live the life of an ordinary person, doing the things I love doing."

Being a dad is really important to him: "My son, Lindokuhle, is my biggest motivation. I will not be able to live with myself knowing that I have let him down. Athletics for me is a way to ensure that he will never be in need of anything and that he will get a good education."

His advice to youngsters who might be tempted to experiment with drugs is: "Don't do it! It's not worth it."

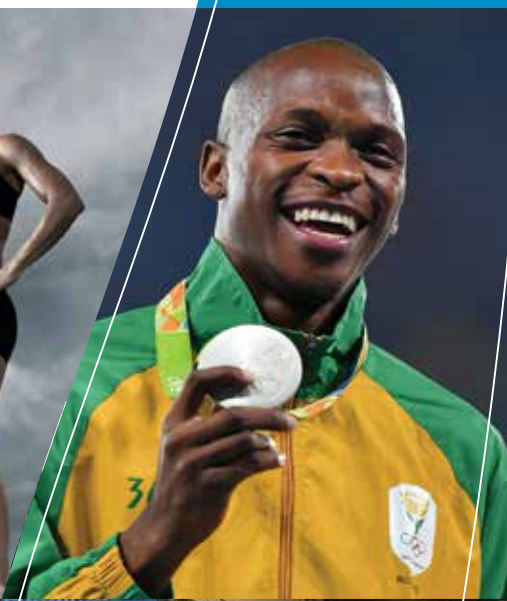
NEWTON
SPORTS AGENCY

Newton Agency is a global full service sports agency, representing and managing some of the world's best athletes, federations, brands and events. Clients rely on the fact that we continually break the mould and push boundaries to develop creative, innovative and unique strategies and programmes that help them reach their goals. Our team is made up of specialists in their fields offering expertise in sports marketing, commercialization & sponsorship, public relations, research, performance psychology and athlete representation.

The Agency was built on athlete representation and so will always be at the core of what we do. We manage athletes from Olympic codes as well as the major sports of cricket, rugby and football. By taking a holistic approach to athlete management, we are able to support our athletes in the pursuit of both sporting and life goals and help them navigate their way through the exciting and challenging world of a professional athlete and into life beyond sport.







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TYR

Nathania strives to excel in more than just the backstroke

Text: Wilhelm de Swardt | Images: Reg Caldecott

Over the past two years the Grade 11-learner, Nathania van Niekerk from (TuksSport High School) established herself as one of South Africa's foremost backstroke swimmers, winning the senior 200m title twice.

She came close to representing South Africa at the Olympic Games in Rio but sadly missed out by merely 0.60 seconds in qualifying for the 200m backstroke. But Nathania loves a good challenge and it is not surprising that she is prepared to broaden her horizons in the build-up to the 2020 Olympic Games in Tokyo.

With the next Olympic Games four years away Van Niekerk decided that she was not going to specialize in the backstroke. She set herself a challenge to work on becoming competitive in the butterfly, freestyle and the individual medley as well.

"Because I am still young I have the luxury to experiment a bit to see what works and what does not work for me. It is not as if I am going to neglect the backstroke. It will always be my number one stroke."

When she puts her mind to it, Van Niekerk certainly seems to be quite versatile in the pool. At the South African Short Course Championships (25 metres) in Pietermaritzburg she won a handful of medals and it was not only in the backstroke events.

At the time of writing this article Van Niekerk was preparing for the African Championships in Bloemfontein where she hopes to add one or two medals to her ever growing collection.

Seeing that the Olympic Games is perceived by almost every athlete to be the ultimate goal, one cannot help wondering how Van Niekerk felt about coming 'oh so close' to qualifying in the 200m-backstroke. Her reaction is surprisingly mature.

"To be honest, I am glad I did not qualify for the Games in Rio. I am not sure that I was ready to compete at such a high level. The times I am swimming at the moment are not good enough to be a force in international swimming. So, to be realistic, I think I would only have competed in the heats and then it would have been all over. It was better for me to be at school and focus on my studies," said Van Niekerk.

She won two bronze medals and a silver medal at last year's Fiji Youth Commonwealth Games. Another definite highlight was winning a gold medal in the 200m-backstroke at her first African Championships in 2012.

Van Niekerk will not qualify to compete at junior level again next year and she has set her sights on qualifying for the senior world championships in Hungary.

"The qualifying standard in the 200m-backstroke is quite close to the Olympic standard but I won't take anything for granted. The challenge for me is to swim to the best of my ability at the South African Championships. Hopefully my performance will be good enough to qualify, but I am not going to allow myself to become obsessed about specific goals. I try to live by the motto that everything happens for a good reason."

Van Niekerk considers the former Olympian, Karin Prinsloo, as her role model.

"Karin and I have had some duals in the 200m-backstroke over the past two years and I can honestly say that it helped me to become a stronger swimmer. I admire Karin for her sportsmanship. She is always prepared to share her experience with younger swimmers and won't hesitate to help if she can because she wants us younger swimmers to excel at the highest level.

"The most important thing she taught me is to believe in my own abilities and also trust in my coach's training programme. No swimmer can afford to have any doubts when they are on the starting blocks getting ready to race."

It is predicted that Zazini could be the next real deal on the track

Text: Wilhelm de Swardt | Images: Reg Caldecott

The 16-year-old Sokwakhana Zazini (TuksSport High School) is one for the big moment. Even at this young age seems to be a future Olympian in the making.

Some people may argue that it is presumptuous to make such a bold statement, especially when an athlete's career is still in the infancy stage. Considering the countless young athletes in South Africa who were never able to fulfil their true potential, this scepticism is certainly not unfounded.

But judging by Zazini's performances up to the South African under-23, junior and youth championships in Germiston, there is just reason to be excited.

His coach, Hennie Kriel, who helped the TuksSport High School athletes, Gift Leotlela and Clarence Munyai, to qualify in the 200 metres for the Olympic Games in Rio, certainly becomes excited when he talks about Zazini's athletic abilities. Kriel does not hesitate to refer to him as the next real deal in South African athletics.

After the national championships Zazini's performance record was, to say the least, outstanding. He either won or finished second in 17 of the 21 races (400 metres and 400m-hurdles) in which he competed. He only missed out on a podium finish in four of these races.

His performance at the national championships in Germiston was truly remarkable. Within in an hour he won the 400 metres in 47.23 s and finished second in the 400-hurdles final, running 50.85 s.

Kriel admits that he was slightly hesitant to allow Zazini to race in both finals but the youngster pleaded with him to do so.

"Coach it's me Sokwakhana… I have been dreaming about racing the 400m and the 400-hurdles. I believe I can recover within an hour. So coach can I please do both events. Please coach," is how he pleaded with Kriel in a text message.

Because Kriel always encourages his athletes to dream big he relented, saying to Zazini: "It is an ambitious 'call' but it's yours to make. I will back you whatever you decide to do."

Afterwards Kriel said: "What 'Socks' (his nickname for Zazini) has achieved is amazing, especially when considering that it is only his first year in the under-18 age category.

"What makes Zazini such an exciting prospect is his hunger for success. He really believes that he can be the best and he is a quick learner as well.

"At the moment his hurdling technique is not quite the best it can be. However, there is one thing that really counts in his favour and that is his sense of anticipation," said Kriel.

If Kriel should have it his way, Zazini would continue doing the 400-hurdles/400m combination for quite a few more years.

"It is still too early to decide which is going to be his best event. If I should pre-empt a guess I would say that the hurdles might be the event in which he will specialize in the long run. But there are countless examples of hurdlers benefitting from racing the 400 metres also."

According to Zazini, who was still a learner at Hoërskool Burgersdorp up to last year, he was a keen rugby and soccer player at first.

He only truly became a converted athlete after he had won the 300-hurdles at the South African School Championships in Rustenburg last year.

"It was the first medal I ever won, so it was a very special moment. One of the reasons why I chose athletics is because I love an individual challenge. You are the only one to blame for whatever happens during a race and I know from experience that anything is possible when you are prepared to put in the long hard hours. Gift and Clarence proved that.

According to Zazini his training partners played a big part in his success.

"We are not only training together, we are friends who share and live each other's dreams and that is special."

It should be no surprise that Wayde van Niekerk (Olympic and World Champion as well as the 400m world record holder) is his hero.

"I can only hope that if I win an Olympic or World title one day I will remain as humble as Wayde. For me that is a sign of a true champion."

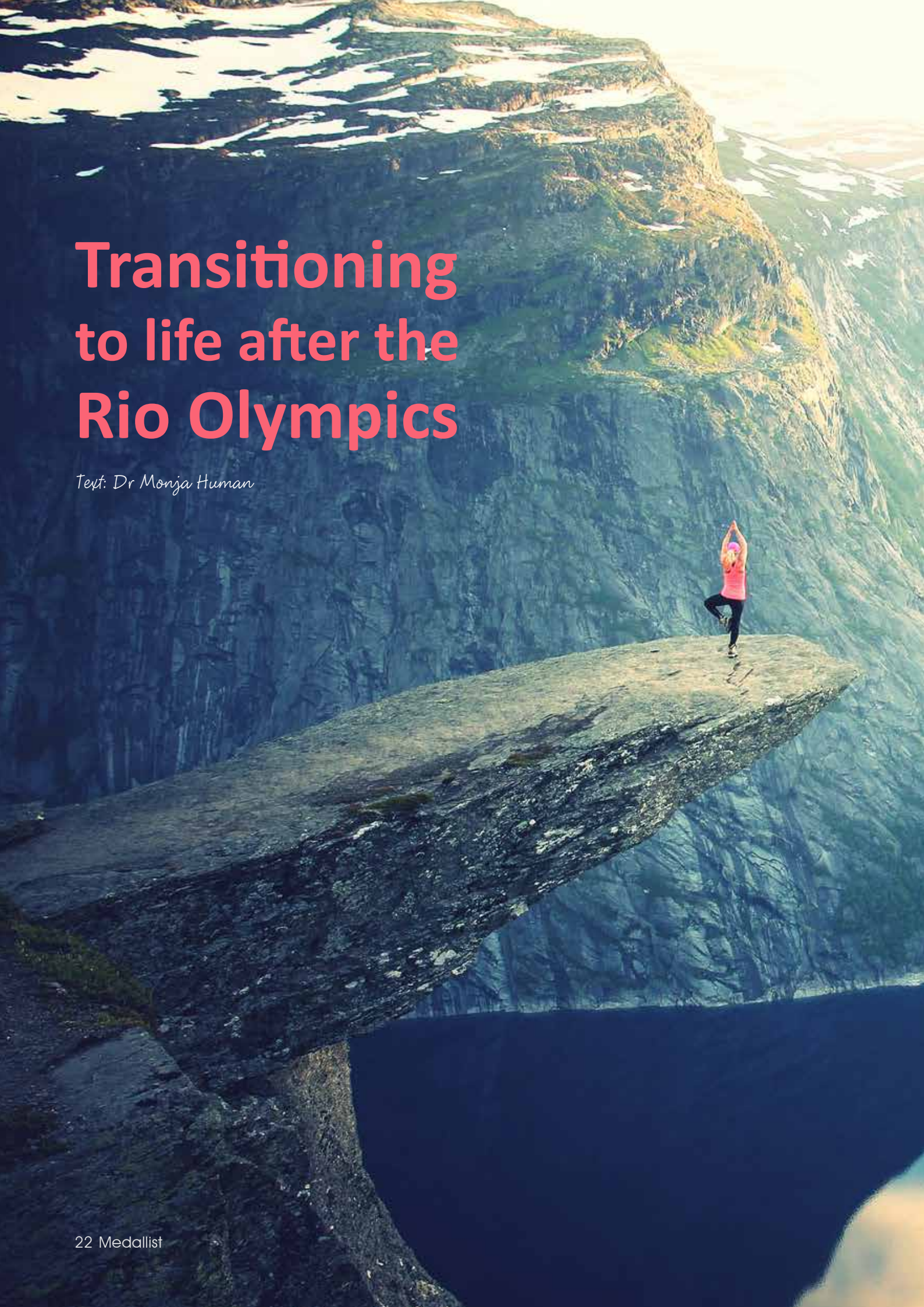
As to what his immediate goals are Zazini said he hopes to represent South Africa at the World Youth Championships next year.

Just for the record. Zazini is still an avid rugby fan. When he has time he loves watching the Bulls play.


bestMed
Tuks

Transitioning to life after the Rio Olympics

Text: Dr Monja Human



The Olympics are the pinnacle of an athlete's career. The sacrifices, dedication, commitment, time, energy and effort are necessities that all athletes know so well. The build-up is long, stressful and intense and the Olympics itself can be life changing whether athletes are successful or unsuccessful.

But what happens when the music stops, the caldron is extinguished and everyone returns home? Then all athletes, successful or not are confronted with the cruel reality of being back at home. Athletes now have more time on their hands without all the countless hours of preparation and training. The continuous feedback over time from others such as coaches, managers and support services also disappears and it seems as if there is nothing and athletes are likely to feel that they only have themselves to rely on.

The silence often brings an emptiness and then the gruelling questions start:

- Should I do this for another four years?
- Will I be able to survive financially if I do this again?
- When should/could I retire?
- Why do I feel so hollow and numb inside after the Games?
- What am I going to do when all the hype and publicity stops?
- When will my emotions and mood stabilize?
- Will I ever feel like "myself" again?
- What am I going to do with my life now?
- Should I be getting a "real" job?

These are all questions that athletes have tried to block out and avoid for the last four years. It wasn't necessary to think about this because they were so goal-driven and caught up in the structure and routine of training. All athletes eventually venture into a transitionary period whether they succeeded or failed at the Games.

When athletes were not successful they often have a burning desire to go out there and "make it right". However, is that the "right" decision or is that just an emotional decision to try and get rid of the hurt? They feel lost and then they go back to the sport because they feel that is the only thing they know best. Other athletes have the genuine desire to compete again.

When athletes were successful they are bombarded with praise from the media, sponsors and the public and commercial commitments may also increase . It therefore, seems unnecessary to entertain the questions immediately. However, the hype also subsides and after a while the "silence" and questions above appear and apply to them as well.

For many athletes their concept of self-worth is tied up with being an athlete. The adjustment and transition after Rio can be huge and if athletes are not ready for it, it can even be experienced as traumatic.

The transition is much harder if the decision of retirement is forced upon athletes for example, if they can't compete, make selection or get dropped from a team or squad as opposed to them deciding for themselves.

Transitions are challenging because they require athletes to change from "the known" to "the unknown". It changes one's assumptions about self and the world. This is a process that requires specific coping mechanisms. Transitioning athletes therefore, need to adapt to either another chapter in their sporting career (another Olympic cycle) or a new chapter in their life (a vocation or job). Both of these bring excitement, uncertainty, fear and expectations.

Here is some practical wisdom shared by athletes who have made some of these transitions already. It is supported by professionals working in the high performance sport context. It might be a worthwhile exercise considering these principles before making attempts to answer the questions above:

Take time out!

Don't attempt to answer these questions straight away. Take a holiday, relax for a bit or spend time with loved ones, family and friends. The temptation to fill the void is strong but be careful. Rather be patient and spend some time giving back to yourself! Rather rest and recharge because what you have been through was emotional and intense.

Use learned skills and coping resources to develop a clear plan or new goal!

Some athletes find it daunting and challenging to start thinking about a job or conventional lines of work because so far they devoted so much of their life to their sport. They even sometimes feel as if they are "cheating on their sport".

If this is the case it might be beneficial to address and confront the underlying anxiety as opposed to pretending everything is fine. A successful transition is reliant on a clear plan where athletes can use their competitive skills to good effect. Athletes learned extreme discipline, resilience, time management and goal-orientation over the years and now these skills can assist with this process of deciding where to go and what the goal should be. These are all coping resources that athletes gained in their sporting career and can now be used in the transitioning process.

Athletes who wish to continue for another four years should go back to the drawing board to plan and set new goals. This should be in conjunction with their coaches and support staff. They should set proper short and long term goals and map out how to approach the next four years.

In contrast, athletes who are considering retiring from their sport can seek career counselling services to map out their career path. They are starting with a new life chapter which can either include studies, further studies or writing a proper CV for job applications.

Seek professional help!

However, when athletes allowed sufficient time to come to terms with their Rio experiences but still feel the following symptoms (nearly every day for a period of time) it will be responsible to seek professional help in the form of medical or psychological interventions.

- Decrease or increased appetite
- Insomnia or hypersomnia
- Fatigue or loss of energy
- Depressed mood for most of the day
- Suicidal thoughts
- Irritability
- Anger outbursts
- Excessive crying
- Nightmares
- Feelings of restlessness, worthlessness or inappropriate guilt

In summary, sport can be the most rewarding and satisfying experience or it can be frustrating, hurtful and soul-searching. That is what life after Rio presented to all athletes. It forced athletes into a process of either transitioning to another Olympic cycle where they need to recover, refocus and rebuild or transitioning into a new life chapter.

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SPORT PSYCHOLOGY
Department

ADVENTURE-BASED LEARNING AND DEVELOPMENT PROGRAMMES

What is adventure-based learning?

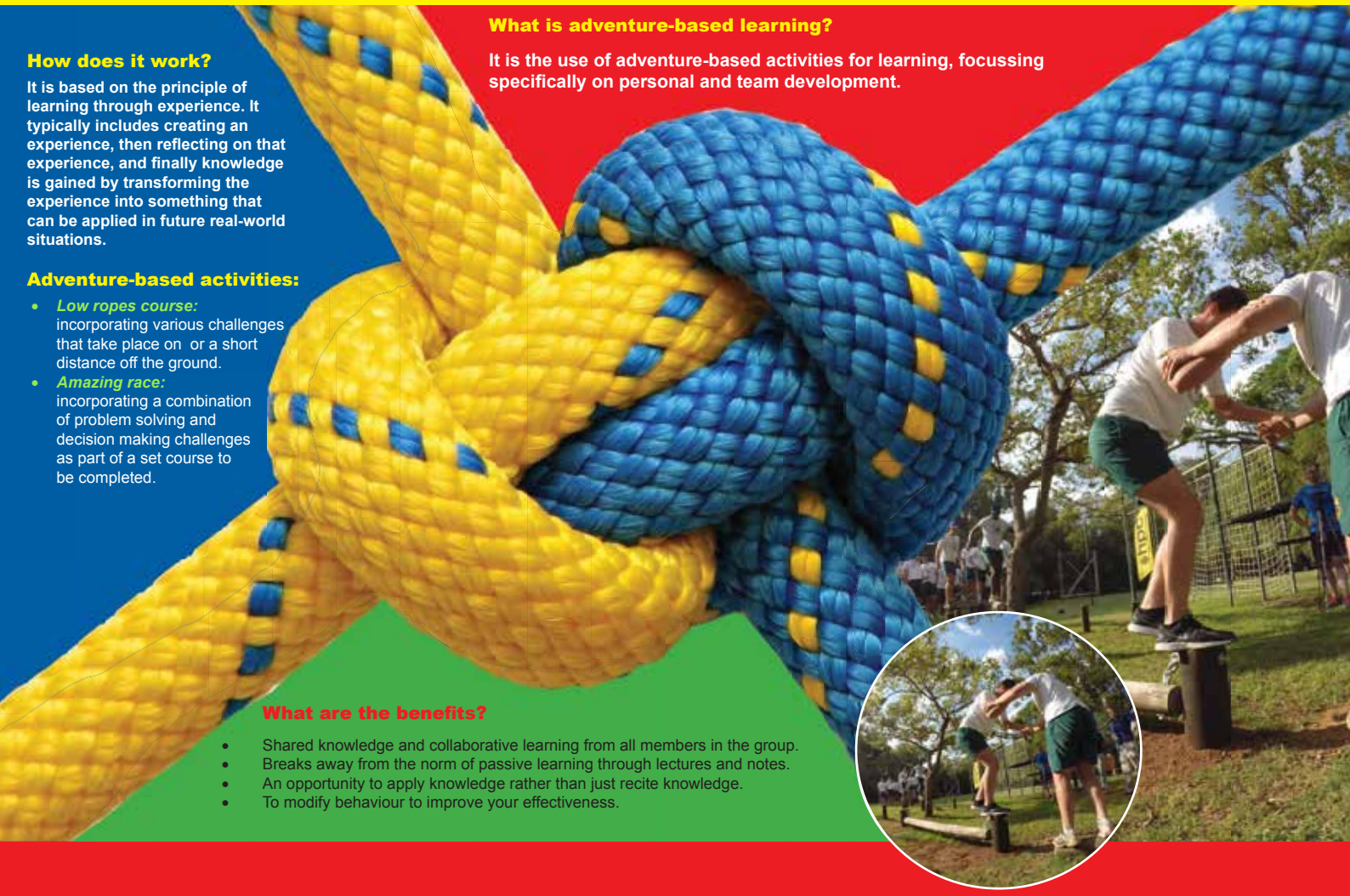
It is the use of adventure-based activities for learning, focussing specifically on personal and team development.

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 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.

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hpc
sport, science, knowledge

Sprinting Science and Coaching Collaboration

Text: Helen Bayne, PhD Head Biomechanist, hpc

In a high performance sports structure, the primary role of a sport scientist is to provide the coach with information that he/she can use to support their coaching decisions. Scientific principles, empirical evidence, and the multitude of data points that can be collected in the assessment of individual athletes, contribute to a vast pool of potentially useful information. The sport scientist needs to filter through this information and determine which pieces will be most valuable to the coach and have the greatest impact on athlete performance. Together, the coach and scientist will examine and question this information, until the coach decides which components to implement and how to transmit the information to the athlete.

This process doesn't happen overnight, and it rarely occurs in isolation. In sport, most of the challenges and questions we have are the same as those that others are dealing with, or have dealt with previously. So, a trusted network of like-minded people can be a huge asset to your programme.

In the sprinting context, some of the biomechanical data we collect includes visual analysis of technique using high-speed video, acceleration analysis to determine an athlete's force-velocity-power profile, and analysis of race performance. Together, this information tells us about the individual strengths and weaknesses of the athlete, and allows us to monitor changes through different training phases, over a number of seasons, or when there is an injury or other disruption to the programme.

I had been working with a number of sprint coaches, including Werner Prinsloo (coach of Akani Simbine), when I was invited to Jamaica by the Division of Sports Medicine at the University of the West Indies in 2014. The University is also home to Racers Track Club and, in between delivering lectures for their Sports and Exercise Medicine Masters programme and the Jamaican Sports Medicine Association Conference, I was able to spend some time with Glen Mills, who has coached Usain Bolt and other Jamaican athletes to over a hundred World Championships and Olympic medals. We discussed all things sprinting, and I showed him clips of athletes I'd been working with and asked his views on the approach we'd been taking. After I'd asked many questions, he promptly pulled out videos of his own athletes and asked my opinion on how he could improve Bolt's start! The willingness to learn, no matter how much you've already achieved, is vital for continual improvement and is a common trait in successful people.

Sprinting performance is determined by how the athlete applies force to the ground with each step. During the early acceleration phase, the direction of force application is more important than the size of the force – better sprinters don't necessarily produce larger forces, but they exhibit the technical ability to orientate the force vector in order to maximise the horizontal component. Using video analysis, we examine the athlete's movements to ensure that he/she positions the body and limbs in a way that is believed to maximise horizontal force. My discussions with Mills and Prinsloo have largely centred on identifying these movement patterns and finding appropriate coaching cues to help the athlete make the desired changes.

In 2015, I was able to visit the National Institute of Sport and Physical Education (INSEP) in France and see how sprint coaches such as Guy Ontanon (coach of Jimmy Vicaut) and Giuseppe Rabita (INSEP biomechanist) work together using objective measurements in conjunction with subjective observations. Rabita and a group of French sport scientists, led by Jean-Benoit Morin, had a developed

a method of quantifying horizontal force and power during sprint acceleration, using velocity measurements from a radar gun instead of prohibitively expensive force plates. We now utilise this method to analyse Simbine and other sprinters' acceleration profiles. This gives us an objective measurement that we can use to assess whether technical changes that we observe are having the desired effect.

This two-year process of building the coach-scientist relationship and gathering and filtering relevant information placed us in good stead during the preparation for the 2016 season. In Simbine's case, we saw the improvement in acceleration mechanics that has greatly improved his start this year. We knew what his physical capabilities were and what we could expect from his performances, especially after returning from an injury in April.

Records will show that Simbine had a superb year on the track, but we know that there is still room for improvement because we have the data to show it. Simbine competed in the Racers Grand Prix in Jamaica in June and spent some time training with Bolt and co, under the eyes of Coach Mills. The feedback from Mills about his start agrees with our observations and the work that he has been doing with Prinsloo. When training resumes, there will be a clear picture of what needs to be done in pursuit of continual improvement.

Rebuilding the basics, *Refocus* on behaviours & *Recover* from misconceptions

Text: Nicki de Villiers, Registered Dietitian, hpc

Sport nutrition is a discipline directed to a range of individuals; from those who start living actively with regular, structured exercise programmes; to the athlete in the making; and the high performance athlete aspiring to optimal results. Dietary intake of all these individuals is influenced by the life cycle, gender, type of sport, training load, goals (performance and anthropometric) and competition schedule and should therefore be individualised.[1]

THE START OF SPORT NUTRITION

The relationship of food and performance was established long before the science confirmed what we know today. Reports of the dietary preferences of Greek and Roman athletes refer to diet similar to the general population, including whole grains, fruits, cheeses and diluted wine with sporadic intake of fish and meat. Goat meat was although advised for jumpers and bull meat for runners; a myth based on the specific animal properties converted to the athlete![1]

The use of certain foods and ergogenic aids were already described as strategy to enhance performance in the first Olympic Games of the modern era in Athens in 1896. Marathon runners competing in these games refrained from eating the night prior to the event. The following games saw the winning athlete consuming egg whites, brandy and strychnine during the run. The use of caffeine, alcoholic beverages and ether were common, obviously all in attempt to decrease pain![1]
There was obviously a definite need for science. The first studies linking nutrition and sport were published in 1842, mistakenly suggesting that muscle protein stores were the main energy fuel during exercise. Vitamins were identified in the beginning of the twentieth century and during the 1920s and 1930s studies discussed the use of carbohydrates and fats as fuel substrates during physical activity. Despite the identification of the association between low blood sugar levels and fatigue and confusion in runners in a study in 1924, it is only in the 1960s that the role of glycogen in performance was confirmed, leading to what we now know as carbo loading. The studies exploring carbohydrate intake and fatigue lead to development of carbohydrate based drinks during this decade. The relationship between protein intake and muscle mass gain was indicated in studies from 1940 leading to the appearance of the first protein supplements.[1]
The use of steroids to enhance performance started with the use of organs, especially testicles, in ancient Egypt to the Middle Ages which lead to the production of testicular extracts in 1889, culminating to the massive use of steroids in the Olympic Games held in Tokyo in 1964. The use of strychnine as a stimulant was later replaced by amphetamines in the 1930s. The use of various substances leads to the introduction of the first doping tests in the 1960s.[1]

Looking at the Olympic Games

The history of food intake and supply during the Olympic Games illustrates how food provision gradually became valued and describes the various practices of athletes throughout the years.[1]

Athens (1896)
- Athletes were responsible for their own food
- Catering was only available for dignitaries

Saint Louis (1904)
- Well water available to runners from the 19th kilometer

Paris (1924)
- Dining hall for athletes
- Three meals were served daily

Los Angeles (1932)
- Athlete's village was initiated
- 31 dining halls to serve athletes from different cultures

Berlin (1936)
- Three-story catering complex
- 40 kitchens and dining halls serving meals defined by chefs after discussion with coaches and physicians
- Water was provided for long distance runners every three kilometers
- Most popular supplements: lecithin, glucose and malt

London (1948)
- Difficult economic conditions
- Inadequate food availability
- Many countries provided food for their own athletes and donated food to other countries

Helsinki (1952)
- Central restaurant with various cuisines
- Honey, maltose and grape sugar were seen as performance enhancing

Los Angeles (1984)
- Catering company and complex logistics to provide food
- Suggested, after the games, that dietitians should be involved in menu planning for future games

Atlanta (1996)
- Participation of about 10 thousand athletes
- More than one million meals were served
- Snacks were introduced at training and competition venues

Sydney (2000)
- Team of ten dietitians developed a 10-day cycle menu: 1 500 food items and 345 recipes
- Emphasising carbohydrate sources and the use of a variety of preparation techniques
- Nutrition information about the ingredients made available
- Dietitians delivered a service to assist in food choices

London (2012)
- Challenged to meet the requirements of athletes involved in the 30 days of Ramadan fasting

WHAT WE KNOW NOW

Nutrition goals can be directed toward sports performance, recovery, brain function, anti-inflammation, supporting bone health, enhancing immunity and the provision of anti-oxidants.[2]

- Nutrition is one of the foundation elements during the preparation and training of athletes.[2]
- Nutrition goals and requirements are not static. Food intake should be periodized to support the goals of daily training sessions and overall nutritional goals.[2,3] Planning of food intake should be personalized to the individual athlete to take into account the specificity and uniqueness of the sporting event, performance goals, practical challenges, food preferences, and responses to various nutritional strategies.[3]
- Nutrition during training would aim to assist the body for metabolic efficiency and flexibility. Competition nutrition would aim to provide adequate fuel stores to optimize performance and cognition.[2,3]
- Adequate energy intake supports optimal body function and assists with achieving the ideal body composition. Energy intake should match energy expenditure which varies with training mode, volume and intensity. Athletes should aim to achieve optimal energy availability throughout training phases to support health and function.[2,3]
- The achievement of a suitable body composition advantageous for the specific sporting code is an important, but challenging goal.[3] In attempt to lose fat, energy intake is often manipulated. Ideal weight loss should be gradual (1 kg per week) and should aim to maintain fat-free mass. Rapid weight loss could result in hypohydration, loss of glycogen stores and catabolism with an overall reduction in lean body mass, resulting in impaired endurance cardiac function and body temperature regulation.[2] Body composition goals should consider sport specific needs and be realistic in considering individual characteristics.[2,3]
- The availability or absence of nutrients influences functional and metabolic adaptations. Optimal performance is achieved through the provision of proactive nutrition support but training adaptations may be enhanced in the absence of nutrition support.[3]
- It is important to, apart from general daily targets for nutrient intake; consider the timing of nutrient intake in relation with training sessions and over the rest of the day.[3]
- Nutrition intake during competition should aim to reduce or delay factors contributing to fatigue. These factors can be specific to the event, the environment and the individual athlete.[3]
- The presence of carbohydrate and potentially other nutritional components in the oral cavity can be sensed by the brain to enhance perceptions of well-being and increase self-chosen work rates. These strategies could enhance performance in shorter events by influencing the central nervous system.[3]
- Supplements should be evaluated through a cost-to-benefit analysis of the use of products. The use of supplements is of the greatest value when added to a well-chosen eating plan.[3]
- Protein is important for the building, maintenance and repair of tissues in the body.[4] Recommended protein intake for athletes aligns closely with the recommendations for healthy eating with suggestions for a modest increase of protein as part of a mixed diet for athletes, with a higher intake assigned to strength athletes compared to endurance athletes. Protein requirements are also influenced by training in that protein requirements are higher in athletes initiating training compared to the “trained” athlete who is ready for competition. The role of protein supplements for competitive athletes is minimal as the requirement can be fulfilled with a balanced diet.[2]
- Carbohydrate serves as the key fuel for aerobic training and the nervous system. Bodily stores of carbohydrate are limited and athletes should pay attention to optimal carbohydrate intake to enhance

performance. Strength training requires less carbohydrate when compared to endurance training. Poor carbohydrate availability contribute to an increased sense of fatigue, a decreased work rate, impaired cognitive skills and concentration and an increased perception of effort.[2] Carbohydrate is found in various foods, with the key indicators of quality of carbohydrate sources being the amount of added sugar and the fiber content.[4]

- The glycemic load and glycemic index of carbohydrate-rich meals seems not to affect the metabolic or performance outcomes of training once carbohydrate and energy intake is adequate.[3]
- Dietary fat provide fuel, aid in the absorption of fat soluble vitamins, give food a hedonistic quality through affecting its taste, smell, palatability and satiety.[4] In general, a quarter to a third of total calories consumed should be comprised of fat with emphasis on limited intake of saturated fat. The use of a high fat/low carbohydrate diet has become popular, and could be beneficial during training with prolonged sub-maximal exercise. Most studies up to date although show no performance benefit and do not seem to enhance training capacity. In fact, it could be detrimental to use a high fat/low carbohydrate diet at the time of actual competition with maximal intensity of exercise.[2]
- Meals before training or competitions should be high in complex carbohydrates, and low in fat, protein and fiber to limit gut discomfort.[2,5]
- Small carbohydrate feedings may be required during endurance events lasting longer than one hour in duration to delay the sense of fatigue. The requirement for carbohydrate depends on the overall fuel stores of the athlete and exercise intensity. Fluids should be ingested on a fixed schedule during the activity.[3]
- Nutrient intake after training or competition can aid recovery and glycogen repletion that will support maximal athletic gains. Protein intake after exercise enhances protein synthesis and the combination of protein and carbohydrate intake after exercise enhances muscle reserves, recover performance and replete glycogen.[2,3]
- Chocolate milk provides dairy protein, high in leucine and branched-chain amino acids to optimize muscle strength and improve body composition.[2]
- Physical activity may increase the need for some vitamins and minerals which can be met through a balanced high-carbohydrate, moderate-protein, low-fat diet.[2]
- Iron deficiency anemia may impair athletic performance through impaired muscle function and limited work capacities. A low energy intake, a vegetarian diet without meat, heavy menses, rapid growth, high altitude training, or continued blood donation can increased the risk for iron deficiency anemia.[2]
- Calcium is important to maintain the structure and integrity of the skeletal system, vascular contractility, vasodilation, neuromuscular function, cell membrane integrity, intracellular signaling and hormonal secretory activities. Dairy products are rich natural sources of calcium, with lactose, casein and peptides to promote calcium absorption. Additional sources include salmon and sardines canned with their soft bones, almonds, Brazil nuts, sunflower seeds, tahini, dried beans and molasses.[4] Female athletes can be at risk for osteoporosis based on reduced calcium intake, low estrogen levels, ingestion of alcohol or caffeine, family history, or the amount and type of physical activity. Assuring an adequate calcium intake may help prevent the development of osteoporosis.[2]
- Adequate levels of vitamin D may prevent injury, promote rehabilitation, reduce inflammation, decrease risk of stress fractures and acute respiratory illness and improve neuromuscular function.[2,4] Athletes at risk for vitamin D deficiency include those living north of the 35th latitude, those who compete primarily indoors, those with high body fat and those with dark complexion.[2]
- Sodium intake is tightly correlated with hydration. Athletes are advised to not restrict sodium in their post-exercise nutritional intake. Ingestion of sodium during exercise should be considered in an athlete has a high sweat rate, salty sweat or in exercise conditions with a duration

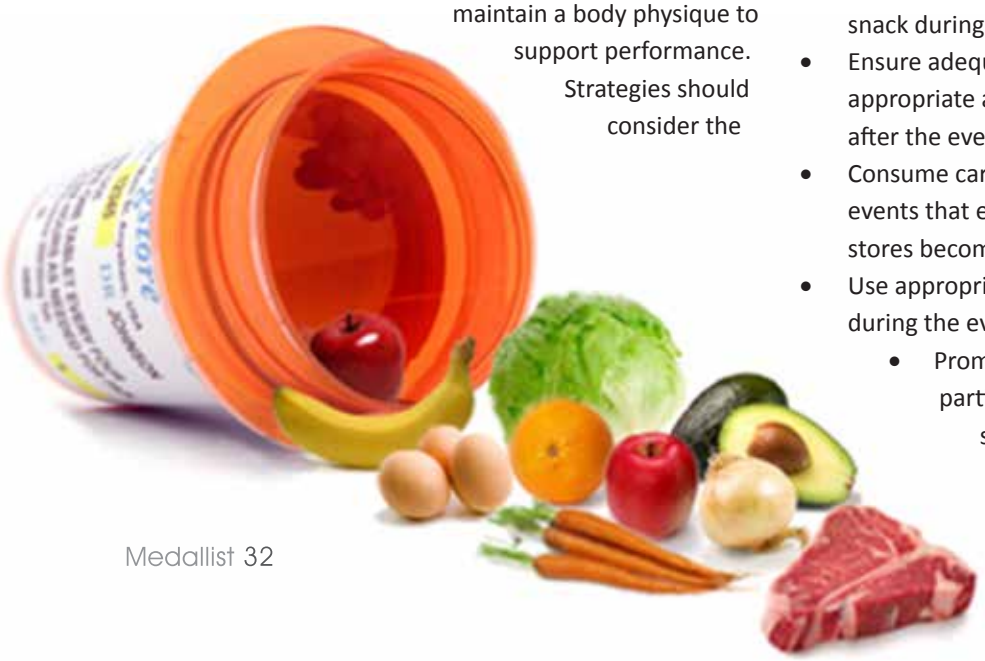
greater than 2 hours. Over-drinking fluids in excess of sweat and urinary sodium losses, can lead to hyponatremia and water intoxication.[2]

- Chronic training could contribute to a constant oxidative stress on cells, but the supplementation with antioxidants seems not to enhance performance, and may even negatively influence training adaptations.[3]
- Dehydration impairs athletic performance. Increased dehydration results in reduced muscle strength, endurance and coordination and increases the risk for cramps, heat exhaustion, heat stroke, cardiovascular strain, altered central nervous system function and likelihood for injury.[2,3]
- Athletes should ensure adequate intake prior to exercise to enter the session in a fully hydrated stated and should ensure adequate fluid intake after exercise to recover any dehydration. Athletes are encouraged to test different drinks throughout training, to avoid gut discomfort during competition.[2]
- Alcohol can contribute to unwanted energy intake, suppressed lipid oxidation, increased unplanned food consumption and may compromise the achievement of body composition goals. Taken prior to or during training it can impair exercise metabolism, thermoregulation and skills or concentration. Alcohol intake after exercise may interfere with recovery by impairing glycogen storage, delay rehydration and impair muscle protein synthesis necessary for adaptation and repair.[3]
- And so much more….

NUTRITIONAL GOALS

During Training[5]

- *Ensure* adequate energy and nutrient intake to ensure adequate fueling during training.
- Set realistic goals and plan strategies to achieve and/or maintain a body physique to support performance. Strategies should consider the manipulation of training and nutrition to achieve levels of body mass, body fat and muscle mass that is consistent with good health and good performance.
- Ensure adequate nutrient intake supportive of adaptation and recovery after training sessions.
- Refuel and rehydrate well during each training session to support quality sessions.
- Apply intended competition nutrition strategies during training sessions to identify and fine-tune beneficial strategies.
- Ensure adequate intake of all nutrients to maintain optimal health and function, emphasising the increased needs for some nutrients resulting from heavy training.
- Support optimal immune functions through heavy training periods by maintaining a healthy body composition, achieving an energy balance and including nutrients believed to assist immune function (e.g. consume carbohydrate during prolonged exercise sessions).
- Make well-considered decisions about the use of supplements and specialized sport foods based on a benefit-cost analysis.
- Eat for long-term health by following healthy eating guidelines
- Enjoy food and the pleasure of sharing meals



During Competition[5]

- Achieve the competition weight division with minimal harm to health and performance when competing in weight division sports.
- Fuel up adequately before an event through the intake of carbohydrate and the tapering exercise during the days leading up to the event depending on the importance and duration of the event. Carbohydrate loading strategies can be considered before events that exceeds 90 minutes.
- Top up carbohydrate stores with a pre-event meal or snack during the 1 to 4 hours before competition.
- Ensure adequate hydration through the intake of appropriate amounts of fluids prior to, during and after the event.
- Consume carbohydrate foods or beverages during events that exceeds 1 hour or if body carbohydrate stores becomes depleted.
- Use appropriate fluid and food options before and during the event to minimize gut discomfort.
- Promote recovery after the event, particularly during multi-day competitions such as tournaments and stage races.

- During a prolonged competition program and traveling, ensure good dietary behaviours to support overall energy and nutrient intake goals.
- Make well-considered decisions about the use for supplements and specialized sport foods that have been shown to enhance competition performance or meet competition needs.

FROM THE LAB TO THE KITCHEN

Athletes should concentrate on overall eating patterns that benefit health and performance and supply adequate nutrients within individual energy needs. Foods cannot be labelled as “good foods” or “bad foods”. All foods are allowed with emphasis of moderation and proportionality. It is for example acceptable to use small quantities of added sugar and fat in order to enjoy nutritious foods, such as a sprinkle of sugar on a grapefruit, but a regular intake of large portion of energy-dense food, such as fried chicken or cold drinks can impair performance. Athletes can make food choices within a broad range and accommodate their own preferences, genetic background, health status and performance goals. Food intake therefore should reflect personal choice.[7]

Food choices should promote:

- Variety
  - **Include foods from all food groups**
- Proportionality
  - **Eating more nutrient-dense foods and beverages (fruits, vegetables, whole grains, fat-free or low-fat milk products) and less of others (high in saturated or trans fats and added sugars)**
- Moderation
  - **Control portion sizes**
- Gradual improvement
  - **Take small steps to achieve interim, realistic goals**
- Food patterns, rather than individual nutrients or individual foods.7

Skill Check[6]

- Can you read a nutritional label and make sense thereof?
- Can you locate CREDIBLE sources of nutrition information?
- Can you personalise nutrition information to suit your training and competition needs?
- Do you know where to buy healthy food?
- Can you make healthy food choices from a variety offered?
- Can you identify the warning signs of dehydration?
- Can you assemble a balanced meal?
- Do you shop with a grocery list?
- Can you use simple recipes to prepare food in bulk?
- Do you know how to safely store fresh and leftover food?
- Do you time food intake to include a pre-training meal?
- Do you apply an individualised hydration strategy?
- Can you identify a false supplement claim?
- Do you plan food intake ahead of traveling?
- Do you have a realistic body composition goal?
- Do you know how to adjust your food intake for different training phases?

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WHEY'ING UP YOUR OPTIONS

When it comes to proteins in sport, many people see whey protein as the be all and end all. Whey is great, but there are many other protein alternatives also offering an array of benefits. Let's explore the key benefits of 3 of the most popular options as well as the alternative option of a blend, to help you decide which will be best for your specific requirements.

WHEY

is a protein naturally found in milk. It is a fast-release protein that is quickly and easily digested and absorbed by the body. This characteristic makes it ideal for muscle repair immediately after exercise. It has a more complete amino acid profile when compared to its sister protein, casein. Whey protein contains all of the essential amino acids, which cannot be produced by the body and should therefore be included in your diet[1]. Rich in branched chain amino acids (BCAAs) which, among other benefits, reduce protein breakdown and stimulate muscle protein synthesis.

SOYA

is a plant-based complete protein making it a suitable protein source for vegans. Soya has a high biological value, containing all of the essential amino acids[2]. Soya has a slower digestion rate compared to whey, which may be beneficial in some instances as it allows for the absorption of amino acids over a longer period[3]. Soya is rich in glutamine and arginine[4].

CASEIN

is the other, more abundant, but also complete protein found in milk. The slower rate of digestion associated with casein results in a longer, steady release of amino acids. Casein makes an ideal protein source when you are not able to fuel up for a few hours, for example before bed. It is also rich in the Glutamine – great for recovery.

SMART**PROTEIN**3D BLEND

is a combination of these 3 proteins which is an ideal blend for muscle maintenance, building and repair as they each provide different speed-release and amino acid ratio benefits. FUTURELIFE®'s SmartProtein3D blend is found in FUTURELIFE® HIGH PROTEIN Smart Food™, FUTURELIFE® High Protein and High Protein LITE SmartBars and FUTURELIFE® Smart Drink.

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SMART PROTEIN 3D BLEND

AVAILABLE IN 50G, 500G & 1,25KG, AT SELECTED RETAILERS.

FUTURELIFE® High Protein Smart Food™ is the first and only scientifically formulated, low GI food that's high in energy, dietary fibre and protein (SmartProtein3D). SmartProtein3D is a scientific blend of 3 protein sources - Whey, Casein, and Soya protein. Latest international scientific research* shows that providing a blend of protein sources provide a more balanced, longer lasting amino acid profile than a single protein source, thereby optimising the muscle repair process.

Enjoy at breakfast, lunch, dinner or as a snack. Mix instantly with water or milk and requires no cooking. Ideal as a post exercise shake to repair and refuel tired muscles - making it the perfect high protein solution.

*Gregory L Paul's article published in the journal of the American College of Nutrition

Take advantage of the benefits that a protein blend can offer by enjoying the various FUTURELIFE® products which contain the protein blend SmartProtein3D.
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Refocus on 2020!

Text: Andri Smuts B.Physt, M. Physt (sport) UP

Aquatics is the second largest Olympic sport based on the number of athletes competing and is as popular as ever. SA swimmers have proofed to be medal winners in numerous Olympics and there are many more to come. Our Refocus on our new, young swimming talent starts now!

This unnatural sport requires higher neural demands as humans are not born with the capability to swim. In what other aerobic sport do you constantly use a motion that is completely unnatural? Swimming forces athletes to move through an unstable medium that is unfamiliar to humans. To develop elite skills, manipulation of this different medium requires long hours of staring at a black line. High-volume swimming is essential to turn this unnatural mode of transportation into a fluid, effortless movement.

Therefore, the best mode for swimming improvement is … swimming! However, strength and conditioning is essential for every competitive swimmer.

Despite their notoriety for being klutzes on land (Michael Phelps breaks wrist getting out of car door), swimmers do require strength and conditioning for success. These unique amphibians typically endure unimaginable hours in the pool for sporting success. Many outside of the sport consider this atrocious time in the pool a form of dogmatic overtraining, but in a sport driven by "feel," countless laps staring at a black line are essential. "Feel" is an ancient term used by swimmers describing motor control. All sports require high neural demands, but swimming is an especially different beast.

Water is a unique medium when compared to the rigid, stable ground. Swimming also requires a high volume of overhead movements. In fact, there are a staggeringly large number of overhead movements in swimming when compared to baseball or tennis. Additionally, there is no limit, or stroke count, to protect the shoulders of a swimmer like there is for baseball pitchers. According to Wilk, swimmers perform approximately sixteen times the volume of overhead movements when compared to baseball pitchers (Wilk, 2008). This conundrum is unsettling at first, but considered essential to developing sport-specific "feel" in an unnatural medium, which is a necessity for competitive swimmers.

Consider a runner who takes a break from their sport. If a track star misses a few days, they are able to hop on the starting blocks and perform best times. If a swimmer misses a few days, they will hit the water like a wet noodle and be far from their best times. This difference is due to high the neural input required in swimming, specific to the unnatural medium of water.

Swimming and strength training have a unique relationship compared to other sports. In fact, the swimming community broadly calls all forms of strength training "dry-land". This blanket term suggests the unfamiliarity with strength training which is noted in many "dry-land"

programmes across the globe. If you want to cringe, head to your local swim team and watch countless hours of band exercises, sit-ups, swim bench, or push-ups.

These forms of "dry-land" training were introduced to the swimming community as swim coaches are weary of strength training and not without reason. Many studies suggest out of water strength does not correlate with swimming success (Costill 1983; Tanaka 1993; Crowe 1999). Even more discouraging, many studies have studied the effects of resistance training with swimmers and found minimal improvement (Crosser 1999; Cronin 2007; Bulgakova 1987; Tanaka 1993; Breed 2000). However, strength training is suggested to correlate with sprint swimming (25 and 50 distances … aka one lap!) (Carl 2010; Sharp 1982; Hsu 1997). Moreover, more up-to-date training programs may positively influence the few ground-based movements (start and turn) in swimming (Kilduff 2011; West 2011; Potdevin 2011) It is hard to argue these studies as many of you reading this is likely able to squat twice their body weight, but are unlikely to finish one lap of butterfly! However, strength training is more than just improving strength, especially in sports where the neural demands and biomechanics are the driving factor for success. Strength training for swimming must prevent injuries, muscular imbalances, improve speed, enhance recovery, increase force production, and address any impairments impeding success.

5 Considerations when Training Swimmers

1. Don't be too specific:

A lot of emphasis is put on "sport-specific" movements (swim bench, cable crossovers, straight arm pulldowns, etc.). Unfortunately, the transference of these movements is uncertain and likely minimal to the sports of swimming. Every land exercise you create is far from the demands in the pool. Despite visual similarities, every swimmer uses unique yet imperceptible micro-adjustments in their strokes to optimize balance, force, and deceleration. It is impossible to replicate these movements on land and attempting to be too "sport specific" may lead to confused motor programming (McGuff 2009). Therefore, stay away from specificity to prevent motor programme confusion and returning to these resisted patterns when fatigue occurs in the pool. Instead, building motor control and learning the big movements (squats, push ups, box jumps, commandos) is ideal. Moreover, performing the similar movements outside of the pool increases the chance of overuse injuries and time away from the most specific form of training…swimming (Stiff 2000; Vermeil 2004).

2. Respiratory Training:

The relationship between breathing and swimming is unique in the sport world, as land-based sports do not require breath holding. Swimming in adolescence is even believed to enhance lung volumes (Courteix 1997). Moreover, inspiratory muscle fatigue is noted as a cause of fatigue at the end of a swimming race (Cruichshank 2007; Jakovljevic 2009). Many studies have suggested inspiratory muscle strengthening is beneficial in endurance underwater (Ray 2008; Ray 2010; Wylegala 2007). If you are able to improve their inspiratory muscle endurance, you can prevent muscle fatigue and enhance their swimming performance, the ultimate end game, not maximal pull-up number. Lastly, understanding the intricate role of breathing and shoulder health is essential for preventing and improving the high volume of shoulder injuries in the sport.

A method for improving breathing is repeated maximal inhalations and breath holds.

For example:
30 seconds of normal breathing with 10 second exhalations
30 seconds of holding your breath
60 seconds of normal breathing with 10 second exhalations
60 seconds of holding your breath
90 seconds of normal breathing with 10 second exhalations
90 seconds of holding your breath
120 seconds of normal breathing with 10 second exhalations
120 seconds of holding your breath

3. Keep Them Healthy:

Like all athletes, keeping them in their arena and out of the training room is quintessential. Too often overzealous strength coaches throw swimmers in the weight room, only to be injured. In fact, weight training was the most common ground for injuries in freshmen swimmers (Wolf 2009)! Just because you are working with a National level swimmer doesn't mean they are a good athlete in the weight room! If they are a novice, treat them like one, take some time and teach them proper form on the basic lifts (bench, deadlift, squat). Make sure these uncoordinated athletes are safe, with proper biomechanics, and loads. Also, don't make them overly sore during weights, as this impairs their "feel" or motor control in the pool, potentially increasing their risk of injury. Remember, many swim programmes perform high volume training, 20 hours of swimming a week is not uncommon, make sure you are not burning the candle on both ends and increasing the likelihood of overtraining.

4. Improve Weak Points:

Even though many people idolize a swimmer's body, many weak points are evident. Like all strength programmes, screening swimmers is essential. When I'm screening swimmers, I am taking a close look at their shoulders, low-back, knees, and respiration. Relating to point #3, keeping them healthy is essential and overuse is the most common reason for shoulder injury, but guess what, this isn't going to change! Therefore, finding their weak points and addressing and improving them with proper preventative care are essential! Don't neglect the core when you see six-pack abs! These internal rotation excessive creatures need instruction for shoulder stability and differentiation between the cervical spine, and shoulder stabilizer muscles.

5. Don't Neglect Synergy:

Many novice swimmers suffer in the pool due to an inability to synchronize their movements. For example, if you hop in the pool and flex every body part, you're going to sink. Elite swimmers make this difficult task simple by timing the correct muscles for the movement pattern. Therefore, learning the task of turning on and off muscles is essential in this sport where sensory input is essential. Teaching proper neck, shoulder, core, and hip differentiation helps these athletes improve motor control with the goal of improving the ease of biomechanical corrections in the pool. Make sure you're a valuable asset to their improvement in the water!

Basic Assumptions

The design of these programmes are influenced by several principles of growth and development. It is believed that these principles should be adhered to because they are in the best interests of age-group swimmers. The design assumptions are listed below.

1. **Age-groupers are not miniature adults.** Age-group swimmers are structurally and physiologically different to adults. Consequently, beneficial training activities are likely to be different to those employed for adults even though the aims of such activities might be similar.

2. **Age-group swimmers are better served by general programmes of development than specialized programmes.** The question of whether age-groupers should specialize in particular sports at an early age has been asked for many years. The evidence now seems to support programming activities that develop overall capacities rather than specialized functions while young athletes grow. Consequently, even though a young athlete may be training for one sport, any auxiliary training should promote balanced overall growth stimulation. Some of that stimulation will be appropriate for the sport in question.

3. **Age-group swimmers are better served by auxiliary training activities that do not employ localized restrictive apparatus.** If resistance training is to be done with children and young adolescents, exercises should involve submaximal loads, such as one's own body weight, light dumbbells, weighted bags and/or medicine balls. Sophisticated and restrictive weight exercises, particularly on machines, are note ideal for children. General whole-body activities are more important and beneficial for young swimmers than the exercises used for adult or mature athletes.

4. **Flexibility and strength/power development should be developed concurrently in age-group athletes.** As young people mature, it is important to maintain a high degree of flexibility while increasing strength and power. Such an emphasis will maintain the athlete's capacity to employ improved capacities through the full range of movement potential.

5. **Auxiliary training should occur after the sport training session so that any fatigue will not interfere with the potential for skill development.**

All sports, and swimming in particular, require a high degree of skill for superior performance. The major emphasis of an age-group swimming programme should be skill excellence. For skills to be developed, learning should occur in non-fatigued states. If exhaustive auxiliary training was to occur prior to a swimming practice, fatigue would reduce the learning potential of the swimming session. Thus, it is advisable to schedule auxiliary training sessions either after a swimming session or at some time that allows complete recovery from its execution so that no residual fatigue is carried into the swimming practice. If fatiguing auxiliary training occurs prior to a practice, it is advisable to have the following pool training session emphasize energy training rather than intense skill development.

When performing the routines coaches and swimmers should avoid stressing working each exercise and the programmes to fatigue failure. The programmes must be designed to produce body coordination, functional strength, and explosiveness. Those capacities are compromised when an athlete works in high states of fatigue because the development of these qualities, like skills, are neurally based, not energy driven.

6. **Progress rates in strength and power will be particularly individual in age-group athletes.** The development of physical capacities is governed by the stage of maturation of the individual. Since growth rates of children and young adolescents vary considerably, it is only appropriate to judge improvements within the athlete. It is inappropriate to compare athletes. Thus, no child should be made to feel that he/she has to improve as much as another when participating in auxiliary training activities.

7. **The types and amounts of auxiliary activity improvements will be governed by the stage of maturation of the individual.** The developmental stages of growing children and adolescents dictate the physical capacities that can be improved. There are particular times when forms of activity are initiated so that they will coincide with the growth potential of each individual. This phenomenon further complicates social comparisons between athletes. When some individuals improve rapidly on some exercises, others may not be "ready" to progress in a similar manner because their "biological clocks" have not been turned on.

8. **It is better to do too little than too much auxiliary training.** If a programming error was to be made it would be best to schedule few auxiliary training sessions than too many. It has been shown that when developed slowly strength, power, and flexibility achieve higher levels and are retained longer in periods of detraining than programmes that attempt quick development. It may be beneficial to limit the number of auxiliary training sessions to two or three per week. Excessive auxiliary training may reduce participant motivation and may not facilitate improvement in an optimal manner.

9. **There is an optimal level of strength and power that is appropriate for swimming.** Excessive capacities in these factors do not enhance swimming capabilities. Thus, training needs to develop capacities to a certain level. A preoccupation with auxiliary training would usually be to the detriment of the age-group athlete.

10. **Auxiliary training activities should either be explosive or static.** The many hours of long distance swimming which is a necessary part of training has a tendency to stifle quick and powerful movements. Auxiliary training programmes can be used to counteract this suppression. Activities should be either explosive and powerful, as in sprint swimming, or static, as in holding postures and stabilizing movement bases or ideally both.

For many new age-group swimmers their muscular condition and capacities may not be sufficient to engage in the prescribed activities. Consequently, it is necessary to evaluate the status of each swimmer before embarking on these conditioning programmes. There are three levels of preliminary fitness testing that are recommended. It is only after all the activities of the third level are performed satisfactorily that a swimmer should be allowed to participate in this foundational conditioning programme.

1. The conduct of these activities is dependent upon complete cooperation between athletes as they function in their paired activities. Cooperation will be facilitated if the pairings comprise athletes of similar abilities in this category of exercises.

2. Activities are performed in *SEQUENCE IN A CONTINUOUS MANNER.* Because there is considerable partner activity, there are intermittent short rests while the resistance object is passed from one partner to the other.

3. The resistance to be used should be one that is "suitable," that is, it can be handled by the athletes, so that the skilled activities can be performed well and with effort. The type of resistance should be a weighted soft bag or a medicine ball. It is advised that bags/balls be of 3, 4.5, and 6 kilogram sizes.

4. The activities are skills which require catching and throwing from a variety of positions and in several manners. Early participation should be devoted to developing the skills of catching and throwing in the prescribed exercises so that there will be no threat of injury or accident. At all times the skill of executing the throws and catches and the delivery of the object to the most accommodating position for the partner should be emphasized.

5. Overload is developed by increasing the number of repetitions of each exercise, the number of "circuits" of the exercises, and/or increasing the weight of the object thrown. It is desirable to work with a heavy object so that strength and power will be the main physical capacities developed. The resistance of the activities should be such that obvious "effort" is always required of participants.

There are other sports that are highly recommended to develop young swimmers into future Olympians:

- **Volleyball:** In this instance, it's more of a matter of correlation than causation. The same body type that makes for good volleyball players makes for good swimmers. The exploding off of the legs can really help with starts and turns however. I've also had several swimmers report that the strength they develop from swimming does a lot to improve their volleyball serves.

- **Cross-Country Running**: Cross-country runners often make good swimmers because they have great overall conditioning which allows them to train long and hard. The mental conditioning of long runs also helps prepare them. Finally, they develop highly efficient muscles that are needed for swimming. Couple this with some upper-body development, and you've got the beginnings of a great swimmer. Note, however, that this combination is more effective when the athletes are younger. Most adult runners struggle mightily in the pool.

- **Dance:** Dancers develop perfect muscles for swimming, that is to say long and lean, and powerful legs. Plus, they have great ankle flexibility (point your toes like a ballerina!) which gives them powerful kicks.

- **Baseball/Softball:** The key here is the way stickball players use their hips. In both baseball and swimming, the big key to generating power is the hips. This is much more obvious in the baseball swing, however, than it is in the freestyle stroke. It is also something that is difficult to think out, and requires swimmers to feel it out. Swimmers who start developing this feeling on the diamond really seem to have a much easier time grasping it in the water. Shoulders is the real thing to look out for here, so make sure your kid gets a quality coach who teaches them proper throwing mechanics.

- **Soccer**: There are many soccer players who, without even training, I've seen demonstrate a lot of ability in the pool. Soccer helps develop overall conditioning, along with lower body strength and fast-twitch muscles. It also puts very little strain on the shoulders which might manifest itself in the form of tendinosis/ rotator cuffs/etc. as the swimmer ages and logs more pool time.

- **Water Polo**: Ok, this might seem like a no-brainer. But aside from the obvious (swimming), it helps the swimmers get a very good feel of how their bodies move in the water. It can also help strike a balance between keeping a swimmer in the pool/swimming shape year round, and not making them swim monotonous laps year round.

- **Gymnastics/tumbling**: For evidence, see one Kukla Yolane, who in just 3 years went from gymnast to a 14-year old swimming Phenom and Australian National Champ. You can always tell a gymnast in the pool, because their turns are awesome, and they learn very quickly. All of the flipping and twisting helps them develop incredible core strength, but even more importantly, they develop the body awareness to recognize what their body is doing wrong and how to correct their strokes. Most other swimmers don't really get this skill until they're teenagers. Gymnasts also have incredible starts, derived from their power.

6 Questions Regarding Resistance Training for Teenage Swimmers

Back to resistance training for teenage swimmers. Here are the most common questions I receive regarding resistance training for teenage swimmers:

- **Is it safe?**

  In all honesty, it often isn't. This doesn't mean it can't be safe with proper guidance, progressions and supervision, but if a swim coach with no education in resistance training is teaching weightlifting to your growing child, I'd argue it isn't safe. Just because you lift weights or did as a swimmer doesn't make it safe. A proper programme is safe, but must start with many basics and progress to weight training. Once again, when done properly with proper guidance, weight training scientifically is safe for all ages; however you must be able to perform proper body weight form correctly, master all body weight exercises first, then progress to weight training. Also, performing some type of lower-body loading (i.e. body weight training, weight training, jumping) during years of maturation is likely beneficial for preventing low bone mineral density (BMD) in the hips. This increases the risk of osteoporosis and fractures later in life. These formative years are a huge opportunity for bone growth and health! Too often, people are allowed to lift weights on a club team once they reach a certain age. Just because they are a certain age doesn't make them competent and safe.

- **Does it help swimming?**

  In all honesty, it hasn't been scientifically proven. However, few things are scientifically proven in swimming or sport, as results are very individual. Nonetheless, I believe dryland is beneficial for many things — swimming performance being one of them — but a poorly-designed dryland programme is likely more harmful and wasteful than not doing one (at least have them perform another sport or run around so they can develop BMD, see above).

- **If Not weight training, then what?**

  A well-designed dryland programme must be a unified and consistent program within an entire club. Many clubs have their coaches run their programmes separate from one another, resulting in confused swimmers as they progress through programmes. Ideally, a club should provide a progressive programme from the time children enter the programme to the time they leave. This well-planned programme must start with the basics: dynamic warm-up, coordination, games, and biomechanics. Next, improving strength, power, and improving muscular imbalances are the next key areas. It should build on these principles, preventing muscular imbalances, while continually developing strength without creating habitual soreness. Once movement mastery with challenging body weight exercises in varying planes of motion occurs, then consider weight training.

- **Should we run for dryland?**

  Running is a great way of warming up for dryland. However, dryland is a practice, just like swimming. You should have a purpose and goal for everything in your dryland

- **Will I get too bulky?**

  Body weight training and dryland can certainly put on muscle. Some feel more mass can benefit certain swimmers by increasing their potential for force production and/or increase surface areas for grabbing water. Others feel it adds unwanted resistance in the water, resulting in drag. Luckily, there are methods for increasing strength with putting on muscle mass and without putting on muscle mass. If you are looking for the latter, performing low volume, high-intensity lifts, but not to failure. This routine can build power and strength without adding excess muscle mass. This type of training is also the most supported in the literature for improving maximal swimming velocity.

- **Will I get too stiff?**

  One misconception about resistance training is the idea that resistance training reduces mobility. Resistance training can certainly cause soreness by causing muscular damage believed to result from the cross-bridging of actin and myosin, especially during the eccentric phase of a lift. This soreness will acutely limit motion and the sensation of "stiffness." However, resistance training over a longer period appears not to reduce range of motion and more likely facilitates greater range of motion when combined with static stretching. Therefore, if you are worried about becoming stiff, start light with low volume, and start when stiffness is less vital (during the off-season, although a brief window for most). Then progress slowly, hopefully through a progressive approach set-up at your club from the age-group to the senior level.

We are very fortunate to welcome some new great talent at our HPC school and TUKS swimmimg:


James Freeman


Suné Liebenberg


Ruan Breytenbach

Images: Reg Caldecott

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How to rebuild after the Olympics

Text: Shona Hendricks MBA, Head of Sport Science, hpc

The Rio 2016 Olympic Games is all but a memory, but for many the thought of Tokyo 2020 would have entered their minds long before the Rio flame was being put out. Training for an Olympic Games, as we know, requires a huge amount of sacrifice, discipline & commitment for 4+ years. Therefore the concept of how best to recover, rebuild and refocus after an Olympic Games is of a particular interest to coaches and support teams all around the world.

After the numerous hours and years of sacrifice many athletes succeed, while others fall short of their dreams, this post-Olympic time is vital. There is no magic way to recover from the Olympics, and more importantly, each athlete will respond differently to a post-Olympic "aftershock". There are many factors to take into consideration about the athlete before setting out their physiological recovery. (Note: The psychological component should be the focus of this recovery time and while aspects of these will be touched on in this article, it is not the focus of this article, as this is in an intricate component well outside my sport science scope of practice)

Did the athlete achieve his/her goal(s) at the Games?
The obvious disappointment from the years of sacrifice aimed at a sole goal has many psychological implications for the athlete's will and desire for the sport. Rest and perhaps even time away from the sport itself may be required.

An athlete who achieved all their goals comes with their own set of new challenges and is not necessarily the "easier" athlete to deal with.

In both instances rest and unstructured training will be key for the athletes post the Games and for a duration anywhere of 6-12 weeks, depending on the athlete.

Is the athlete considering retirement or looking to continue in their sport and perhaps for the next four year cycle?
An athlete retiring from the sport will not require a structured sport specific training programme again and will have the flexibility to do their own training as and when they want. However, a setback that could affect a retiring athlete could be the loss of identity and the finding a new passion, this can be dealt with by a professional sport psychologist.
An athlete wishing to continue in the sport at this level should take time off from the sport directly after the games, while continuing to maintain fitness through an unstructured, light and fun programme. The athlete should want to train and not be forced to a structured programme in this time. The athlete can return to the structured setup with the coach once agreed upon.
(Timing will differ per sport.)

Is the athlete in the middle of their season, with the Olympics not being the final event/competition in their season?
For certain sports this was the case- for example: many tennis players were to play in the US Open directly after the Games. For the sport scientists and coaches of these athletes, recovery from the games would be the equivalent of a usual periodisation plan taking multiple competitions into account.

With all this in mind, it's clear that directly after the Games the focus should not be "RECOVER, REBUILD AND REFOCUS" but rather "REST, RECOVER AND REGENERATE". Athletes can continue to train to maintain fitness but this should be left to their own discretion, light and fun. Training should be not focused or driven by stats/ data and should not be routine based. It's important to note that each athlete is different and will transition in this time at their own pace.

Any coach and scientist worth their weight in gold (pun intended) would be using this time to plan for their athlete's return and their next four year cycle leading up to Tokyo 2020. They would then focus on their debriefing and lessons learnt in Rio to better their systems and processes. Talent and opportunity alone, do not guarantee success; a good support structure with the right personnel and the athlete as the centre of the programme have proven time and time again to be successful. As training programmes are ready to begin, and athletes are ready to return both physically and psychologically to the intense demands, the time for REBUILDING and REFOCUSING on their new goals can commence.

Towards an understanding of the impact of socio-economic factors on talent development in South African cricket

Text: Mary Ann Dove, PhD student, University of Cape Town

Introduction

Over the past number of years questions have been raised as to the limited number of black African (BA) cricketers that have represented South Africa at the national (Proteas) level. Despite significant resources and a number of development initiatives since the country's return to international cricket in 1991, only 9 BA cricketers have played for the Proteas in the 20 year period to 2012.

Recent research conducted at the University of Cape Town (UCT) by the author and her colleagues sought to better understand the experiences of BA cricketers in South Africa (Dove et al, 2016). This was done by interviewing BA cricketers who have played at least at the franchise (professional) level and a number of coaches and administrators who have extensive experience in the development of BA cricketers. Research of this nature identifies common and recurrent themes highlighted by the participants and the quotations used in this article are examples of comments made by the participants that support these themes.

The research identified a number of enablers and barriers faced by many BA cricketers as they progressed through the talent development pathway within South African cricket (Fig 1).

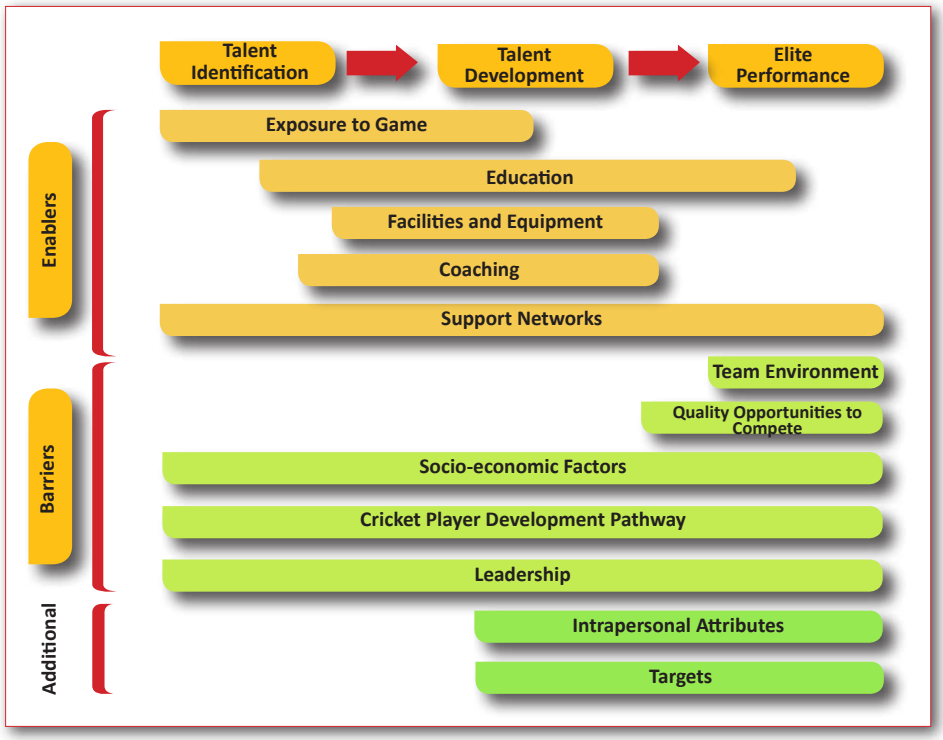


Fig. 1: Enablers and barriers along the talent pathway (Dove et al, 2016)

Socio-economic factors

One of the main barriers to progression identified by all participants was **socio-economic factors.** The vast majority of potential BA cricketers and a number of current BA players grow up in relatively poor homes and communities where they are exposed to gangsterism, alcohol and drug abuse, HIV/AIDS, poor nutrition, a dysfunctional education system, single- or no-parent families and differing family priorities.

"A problem that I've found in townships is not that boys can't play cricket, but because of the social life that is outside cricket, which is a problem, which brings gangsters or drugs and there's lots of dropouts of school." (Participant 2)

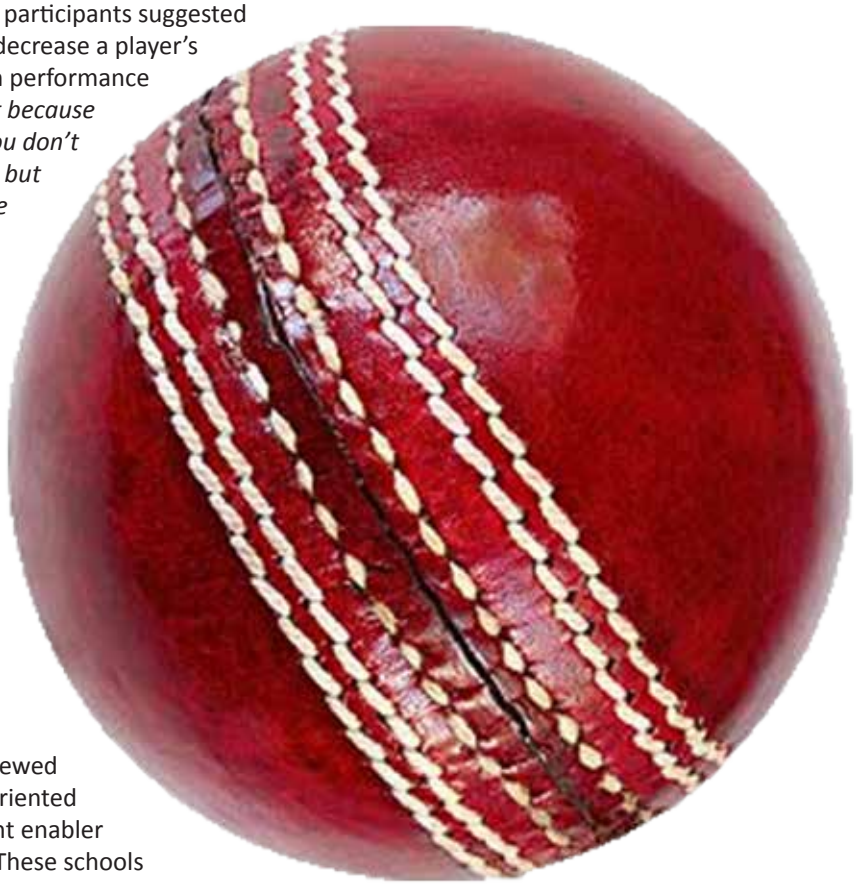
"I spoke to him he just said to me he hasn't eaten for the last six days because there has been like nothing in the house." (Participant 1)

".....his parents are telling him to go and have circumcision in December." (Participant 9)

In addition, accessibility to training grounds is limited by transport constraints, distances from venues, time and money. *"Do you understand this guy has got to get on two trains and three taxis and then he has to walk the last three kilometres to get here?" (Participant 4)*

Furthermore, due to financial circumstances many BA players become responsible for family members after leaving school. *"They don't have the luxury of going even, getting a good education for the first 3 or 4 years because they haven't got that luxury, so they have to literally go back and go back home and get a minimum paying job and look after their families. It's a difficult one but it obviously has a lot to do with social and poverty." (Participant 19)*

This dysfunctional environment in not conducive for enabling a talented player to develop into a high performing elite cricketer. The participants suggested that many of these factors were likely to decrease a player's mental state which has a direct impact on performance levels. *"....with African players it's difficult because you come from a poor background and you don't only have to worry about cricket coaches, but have to worry about your family, you have to worry about what you going to eat at night..... so to a certain extent that it affects you mentally because when you go onto a cricket field when you play at your best is when you clear and you comfortable with what you do." (Participant 22)*



Not only do socio-economic factors directly hinder cricket progress, but the lack of financial resources impact on enablers such as education, coaching, facilities, equipment and support networks.

Education

Most of the players and ex-players interviewed were given bursaries to attend a cricket-oriented school. This was recognised as a significant enabler to progressing along the talent pathway. These schools

provide access to facilities, equipment, experienced and knowledgeable coaches, a good general education and discipline, all of which facilitated the development of intellectual, social, emotional and cricket intelligences. Unfortunately many BA players in South Africa do not benefit from the advantage of such an education. *"….guys speak about education/schooling going hand in hand with the sport." (Participant 14)*

Coaching

Many of the players believed that coaching was one of the most important aspects of their development and it had enabled them to enhance their talent and progress to the level they had achieved thus far. Unfortunately, for many potential BA players, financial constraints contribute to the inability to obtain quality coaching resulting in another limitation to progress through the system. This is particularly true for BA batsmen who require specific technical coaching. *"If you don't have the quality coaching, you know, to take a guy's natural skills and make it to be what it should be, that could be the reason why there is not enough black players coming through because I mean I go to [township] quite a lot and I go to the nets and I watch the guys and I see the guys, the guys have the same talent as I have, they have the same skill, hand eye co-ordination, everything. There is just there is no one there telling them that, you know, keep your arm straight or anything like that." (Participant 3)*

Facilities and Equipment

Although not considered as important as coaching particularly at the younger ages, the participants felt that a lack of facilities in BA communities was a barrier for the vast majority of players looking to play cricket and develop their talent. Many facilities that have been built in the BA communities are now reportedly non-functional mainly due to on-going maintenance challenges. This is either due to a lack of finances or interest in the game in some of the communities. *"Facilities are crucial. So without facilities you can't play cricket." (Participant 13)*

Cricket equipment, particularly for batsmen is expensive and for the majority of BA players this is yet again another obstacle to climb. *"….it's a game that involves money and you can never shy away from that personally, that's how I feel. If one bat at a professional level costs R5000, then you should understand that this is not soccer. Soccer, with that I could buy 18 soccer boots." (Participant 6)*

Support Networks

Although the majority of the research participants benefited from having a significant individual who supported them through their cricket career progression, they indicated that many young BA players do not have such support. The reasons for this are the social challenges faced by many BA communities, the need for parents to work long hours and spend lots of time away from home to provide for their families and a lack of cricket culture in some BA areas. *"He needs family. There is another thing, a story a guy told me. A child came home one day and he asked how did it go? He said I scored a duck. He said that is great, can we cook it. The point is, he has a parent, his parents know nothing about cricket, they probably work stupid hours so they cannot support him." (Participant 4)*

This lack of mentors or adequate support networks compounds the difficulty in developing into an elite cricket player. Support networks whether from family, community, sport and non-sport personnel and the sports process are well recognised as being important contributors to sporting success at the elite level (Gould et el, 2002).

Conclusion

Socio-economic factors have been acknowledged as playing a significant role in cricket participation around the world. An Australian study found that financial factors may be a barrier to participation in junior sport (Kirk et al, 1997).

All of the factors described above may constitute a barrier to BA cricketers progressing to the elite level of the game in South Africa. Interventions need to be introduced to overcome or minimise these specific barriers in an attempt to develop the game in all communities around the country.

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Institute for Sport, Exercise Medicine and Lifestyle Research

The University of Pretoria has identified sport, exercise medicine and lifestyle interventions for chronic disease as one of its four main strategic niche areas for research activity in the next decade. To realise this strategic goal the Institute for Sport, Exercise Medicine and Lifestyle Research (ISEMLR) was established in June 2015, under the directorship of Professor Martin Schwellnus.

The vision of the Institute is to be an international leader in scientific, translational research that promotes health and well-being in the population through lifestyle interventions, reducing exercise-related injuries and medical complications, and promoting sporting excellence on a platform characterised by world class education, service delivery and the use of modern technology.

The Institute's Headquarters will be based at the High Performance Centre building on Pretoria University's LC de Villiers Sports Campus in Pretoria, while the design and construction of a new Institute Headquarters occurs - completion of which is estimated to be within the next 5-10 years.

As constituted, the ISEMLR functions as a formal Institute of the University of Pretoria, which prioritises research, education and training. Although its main focus is research, the Institute will also develop and grow a clinical services and consultancy platform within the Headquarters and adjacent buildings. This clinical service platform will form an important part of clinical training in the disciplines of Sport and Exercise Medicine, Biokinetics, Sports Science, Sports Psychology, Sports Nutrition, Sports Physiotherapy, Orthopaedics, Radiology and others.

The clinical services will be accessible to UP staff and student athletes, students at the TuksSport high school, members of the public and visiting national and international athletes, and will include private clinicians that are committed to research and teaching in a university, public sector, private sector partnership.

The Institute recognises the importance of knowledge sharing between research institutions and industry, government, civil society etc., and as such encourages collaborative relationships with organisations outside the academic environment.
The Institute plays an important role not only in contributing to the scientific and medical knowledge base in the areas of sport, exercise medicine and lifestyle interventions, but to the application and relevance of this knowledge in a variety of population groups. Thus a key focus of the Institute is in translational research and in the dissemination of the work of the Institute to the broader community.

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Karin Prinsloo

A tribute to the Lady of TuksSwimming

Text: Steven Ball
Images: Reg Caldecott

It can be said without hesitation that any one whom has crossed paths with this decorated Tuks swimmer, that she is the true Lady of Swimming in South Africa. The humble, well decorated 2012 London Olympian, multiple national and continental record holder, has had an illustrious career in the sport that spanned more than 20 years. However, in June this year Karin decided to hang up her Speedo goggles and call it a day, in the sport that she has loved so much, and given enormous amounts too. This amongst the excitement of planning a wedding to the love of her life, Phil Buys, as they tie the knot in December.

Karin, having joined TuksSwimming in 1999 when the club started their satellite programmes, has only ever represented the club with absolute dedication and pride throughout, where she won numerous national titles, continental victories, having worn the green and gold at numerous World Championship events, Commonwealth Games and the highlight of her career, becoming an Olympian in 2012. Whilst having achieved these successes, her modesty has always come through as her most outstanding characteristic, never allowing any successes go to her head. Her approachability, either by fellow athletes, young up and coming stars and the media, has allowed her to have an impact on many through sharing honestly about the highs and lows of her performances and career, all which making her a favourite amongst those interacting with her or following her career.

"For 21 years swimming was part of my life. I never thought the sport I loved so dearly would also be the very thing that brought so many tears. But today I walk away with a grateful heart," was the words echoed by Karin on announcing her retirement, lessons that many a young swimmer may learn from. Retiring as the SA record holder in the 100m, 200m and 400m freestyle events, as well as the 100m backstroke, the 2013 African swimmer of the year was highly respected for her work ethic and dedication. In the words of her coach of the past 8 years, Igor Omeltchenko, it was a pleasure to work with her. "Don't get me wrong. Even if Karin complained about the training she was expected to do, once she got into the pool she became a complete professional who set out with determination what was expected of her to do." "Karin is definitely one of the most talented swimmers I ever coached" said Omeltchencko. "My biggest regret as a coach is that I could not get her to really fulfil her true potential, of winning a medal at a major championship. I wish Karin the very best for the future. I know she will have a positive influence on many of our young upcoming swimming stars."

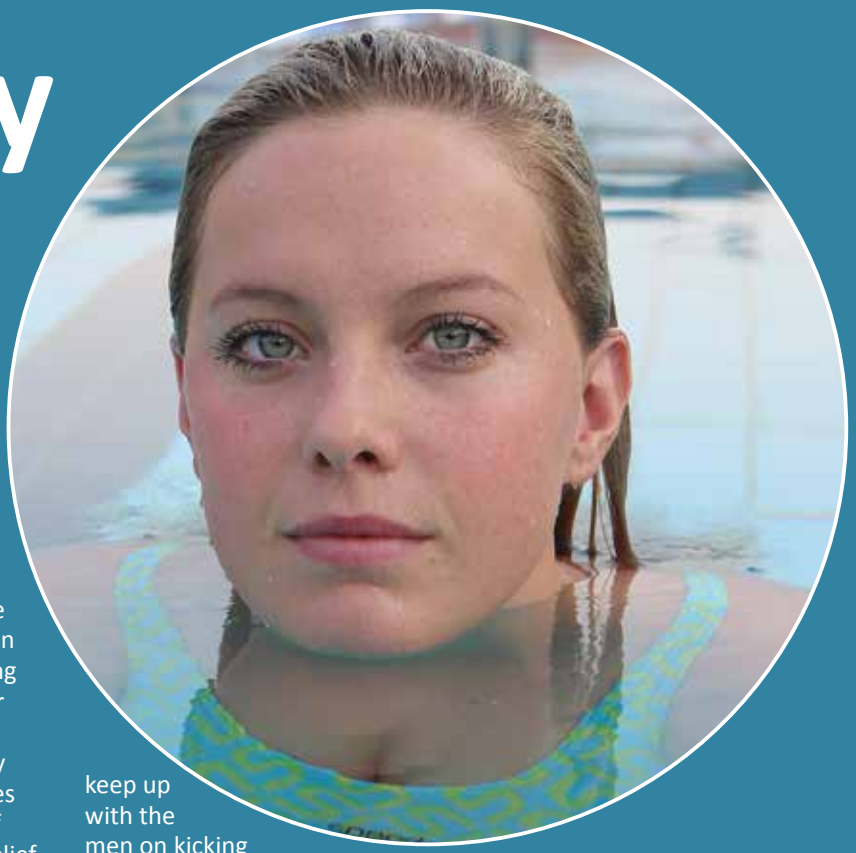
One thing is for sure, the ever shy blonde young girl from Marble Hall, Mpumalanga, blossomed into a role model of a lady whom all the future swimming stars have continually looked up to, and will do so for many years to come. She has left the sport, showing the power of giving everything to something you love, continually striving to be better, following the absolute guidance of your coach and embracing the unwavering support of your family and those close to you, whilst striving to honour God in all that you do. Having been fortunate to have witnessed the growth and journey of this special person, whom was known to many as an athlete, and having walked a road long side over numerous years, I have no doubt that her performances, attitude, legacy and 'just being Karin' will carry her in good stead in all her future endeavours. ***"For everything there is a season, a time for every purpose under heaven …" Ecclesiastes 3:1***

Go big Karintjie! You have embraced #TuksofNiks and epitomise the #StripeGeneration.


THE

Emily Gray

A tribute to an Inspirational Gem



The quite, yet decisive and loyal Tuks swimmer and University of Pretoria BSport Science Alumni, leaves the sport of swimming having become a personal inspiration to so many people whom she crossed paths with. Having joined TuksSwimming in 2008, the then young teenager set about with a focus and dedication comparable to professional athletes across the world. With a never say die attitude, Emily quickly showed her fellow teammates that 'Impossible' is not a word in her vast vocabulary of abilities, but rather that anything is possible through belief, dedication, hard work and the willingness to become better. Swimming has over the years provided the mode for Emily to showcase to the world that you are not defined by your circumstances.

Emily throughout, kept a key balance between academic and sporting performances. During this time Emily represented the club at USSA student national championships, NTS Provincial Championships, the province at SA Nationals and South Africa at numerous World Championships. Having won numerous national titles and medals, and making finals at Worlds, her highlights of her career has to be having represented South Africa at three Paralympic Games, namely 2008 Beijing, 2012 London and the 2016 Rio edition. Here she made finals at these games, placing her consistently amongst the best in the world.

"Emily, her dad Bob, and I would regularly meet to discuss the plan going forward and to analyse where we were at that time. Both Emily and Bob were always highly positive and provided excellent feedback that I could utilise as a coach" said Emile De Bruin, Emily's coach over the last Paralympic cycle. With Bob, her Dad, and her close family Emily received the continual support that any athlete requires to achieve at the highest level. This allowed for honest discussions to determine what the best way forward is, something I witnessed and experienced throughout our involvement since arriving at Tuks. As an elite disabled athlete, Emily was never considered disabled by those around her and she never demanded special treatment. "Sure there were times when we had to figure out technical things because of only one leg. I never designed workouts with the mind-set that she would not be able to do what everyone was able to, up to the point where she would keep up with the men on kicking sets" said Coach Emile. Giving up has never been in Emily's vocabulary, as Claire Rolt, Strength and Conditioning coach said, "Her motivation, bravery, drive and focus made my job very easy . I became inspired to think out of the box, implement new ideas and find different ways to challenge her to further improve".

In announcing her retirement Emily said, "I will forever be grateful to this sport that changed my life. It's funny how 2,500,000 L of water can have such a major impact on your life and who you are. I can't imagine my life without the amazing people I have met and the incredible places I have been to" Having witnessed this journey, you may be proud of what you have achieved and become.

Emily, the quiet, hardworking and focused individual has become a role model to all her fellow athletes, both in TuksSwimming and with swimmers across the country. As a highly respected and well-loved athlete, she has gained the utmost respect for her focused approached to training, competition and studies. As Coach Emile said we will miss her humour and laugh, her consistency and her example. ***"There comes a time when you have to choose between turning the page or closing the book"*** (Anonymous) Many years ago Emily, after fighting the Big C, decided to turn the page, and the water became her world. However, the time has come, in a sport that that has given much to her, has provided hope to her and others during darkest times, to close the book and start writing a new one.

Thank you Em for showing us all how it's done! You have truly #EarnedYourStripes. Go out and tell the world!

Roberts wants young athletes to excel internationally

Text: Wilhelm de Swardt | Images: Reg Caldecott

2016 was a great year for South African triathlon and there is certainly no reason why local athletes cannot continue to be regular fixtures on winners' podiums across the country in years to come.

Kate Roberts, head coach at the Tuks Triathlon Academy, admits that this is a big ask but maintains that she and her athletes are up to the challenge.

"It would be a real shame if Henri Schoeman's bronze medal performance at the Olympic Games in Rio and the victories he and Richard Murray achieved in the World Series should turn out to be once off achievements."

For Schoeman and Murray to finish fourth and fifth respectively on the international rankings for 2016 was unprecedented. It certainly is not a regular occurrence for South Africa to have two athletes in the top five in any sport.

According to Roberts the biggest handicap for most of the Olympic sports in South Africa is funding.

"The trademark of South African sportsmen and women is their mental toughness and commitment, which certainly helps them to go a very long way. However, our downfall is that we live in a third world developing country and that we don't necessarily have the finances required to fund our sporting structures and programmes. It would be helpful if corporate companies should get involved and assist us, but until that happens we have to make do with what we have."

At the moment Roberts has only four athletes in the Academy, but she is coaching a few others on the side as well.

"Like anything in life, I am conscious that as a coach I won't be an overnight success. I will first need to gain experience, become a leader of a team, and be patient and willing to put in the required time and effort.

"I am also aware that I cannot train my athletes in exactly the same way that I was trained. I will have to adapt to other coaching styles as well because there are many coaching methods that can lead to an athlete's success. However, the basis for success is a hard work ethic combined with dedication, persistence and a good attitude for coping with the demands of the sport.

"I prefer not to work with too many athletes because as a coach I believe in a hands on approach. With fewer athletes it is easier to be preventive rather than reactive. I don't want an athlete to be struck down at a crucial moment because of some problem that I should have picked up earlier.

"I think the Academy is actually a good environment for young athletes to improve because it is linked with the TuksSport High School. This makes it possible for the athletes to train twice a day and do proper schooling as well. The athletes also have access to the High Performance Centre's physiotherapists, dieticians, sport psychologists and doctors.

"For me as a coach it is not always important where an athlete finishes in a race. I value the effort they put in

more. In other words did an athlete give it his all while preparing for the race and while racing?

"One of the important things I try to install is that my athletes should never give up. The only valid reasons for an athlete to quit are things such as mechanical problems or similar problems that are beyond an athlete's control.

"It is very important to get feedback from the athletes after a race because it helps me to properly plan the way forward for them. If something did not work, I need to know about it. If necessary we can either revert back to something we did in the past or try something new. As I have said, there is no blueprint for success. You have to keep working at it until you get to the 'secret formula' that helps an athlete to perform at his best. That can take a few years."

Roberts gets quite excited once she starts talking about the four Academy athletes: Gizelde Strauss (SA under-17 champion and former youth duathlon world champion), Peta-Leigh Venter, Tshepo Botsane and Lebogang Finger.

Those in the know predict that, if Strauss is prepared to be patient and put in the long hard hours in the next four years, she is a future Olympian in the making. If nothing unforeseen happens Strauss might get to represent South Africa at the 2020 Games in Tokyo, but Roberts does not expect her to be at her best yet then.

"I believe athletes perform at their best the second time they compete at the Games. For most athletes their first Games is a learning experience."

Roberts predicts that the 13-year-old Botsane could be the athlete who will really turn things around in South African triathlon, and maybe even internationally.

"Tshepo is really talented and with the right guidance she can become the first black triathlete to win major titles. She is already a good swimmer as well as a good cyclist. I purposely decided that she should not compete in triathlon this year. However, it is a pity that the South African duathlon championship was cancelled.

"It is important that Tshepo stays at the TuksSport High School because I need to work with her another four years. I think it will be great for the sport to have a black athlete who can perform at the highest level.

"Lebogang is also a real talent but he still has to work on his swimming.

"Peta-Leigh comes from a swimming background so at the moment we are focussing on helping her to become a confident racer on the bike and to improve her running times."

Roberts considers Dylan Nortje as one of her other success stories as a coach. At last year's South African Championships he finished 30th.

"Dylan does not know the meaning of the word quit. This year he really buckled down during our training and it is paying dividends. He is now good enough to represent South Africa at the World Championships. He did the best of all of the local juniors who competed."

TuksSport High School learners up to the challenge of having to "scale the mountain" again

Text: Wilhelm de Swardt

Imagine being 18 years old. You're sitting in the call room at the Olympic Games, waiting to be called to race against the world's very best athletes. Somewhere, across from you, you see the legendary Usain Bolt. A little farther away another 'legend', Justin Gatlin, is going through his final warm-up routine. At this moment life simply cannot get any better. You are rubbing shoulders with your heroes and living your dream.

For a young athlete this surely must feel as if the gates to the 'promised land' have been thrown open to let him in. However, before the blink of an eye, the gates close behind him and he is back at school, sitting behind his desk, trying to understand what the teacher is talking about. It cannot be easy.

Hettie de Villiers, TuksSport High School principal, compares it to having to scale a mountain all over again.

Gift Leotlela and Clarence Munyai, who both represented South Africa in the 200 metres at the Olympic Games in Rio, admit that it took some doing for them to adapt to being just two more learners at TuksSport High School.

"We saw the 'big world' and it was really exciting. It made me realize what I really wanted to be in life. The first few days back at school was definitely not easy. It was like a reality check. I battled to focus on what the teachers were saying because I kept thinking back to the Olympic Games, trying to figure out what I need to do to ensure that, next time round,I will be a medal contender," said Munayi (Grade 11-learner), who missed more than five weeks of schooling because of athletic commitments.

But Munyai certainly does not plan to stop dreaming. He has already set himself a definite goal for next year. He wants to qualify for the senior World Championship in London. If he manages to qualify, he will get a second opportunity to take on the champions of the world.

After completing his matric exams next year, there will be nothing to stop him. Providing he does not fall victim to some serious setback, he plans to concentrate only on fulfilling his dream of becoming a professional athlete.

Munyai admits that he is not always the keenest of students, but he realizes the importance of at least finishing matric because he knows that there are never any real guarantees in sport.

"The ultimate secret to being a successful athlete and pass your exams as well, is proper planning. Not that I always manage to do so, but before the Olympic Games I worked very hard to make sure that I did not fall behind in my schoolwork. When possible I even tried to plan ahead and I can honestly say it made being back at school slightly easier."

Munyai credits Wayde van Niekerk, who not only won the 400 metres in Rio but broke the world record as well, for being a true inspiration.

"The 400 metre world record was seen by many as an almost impossible record to improve but Wayne did not let that faze him. This proved to me that anything is possible if you have the right mind set. The challenge for me is to try to follow Wayne's example of racing as well as studying."

Apart from competing at the Games, Leotlela also competed at the World Junior Championships in Poland where he won a silver medal in the 200 metres. Needless to say that he missed out on quite a lot of schooling, but in spite of this he is still confident of getting maybe two distinctions in his end of the year matric exam.

"I will be honest. It was not easy to find time to commit to my athletics obligations and focus on my studies as well. For me personally the most difficult time was before the Olympic Games because I kept thinking about athletics, specifically about the races I was meant to race in Rio and in Poland. This meant that my mind kept wandering and I was not really paying attention to what the teachers were saying.

"Being in Rio was good because I experienced first-hand how the world's best athletes go about their training and how they prepare for their races. I could not help but notice how focussed they became when the time for them to race neared. Since I am back at school I am trying to follow the same dedicated approach when I am studying."

Hiha Katjiveha (Grade 12-learner) is playing for Namibia's under-20 soccer team as well as the Tukkies under-19 team. This meant he also missed quite a few weeks of schooling.

"When I am back in the classroom I find it difficult to stay focussed because I am tired, physically as well as mentally. It can be frustrating because you feel that you will never be able to catch up with your schoolwork. Luckily there is a good support system at school which includes extra classes."

Paul Schwieger (Grade 10-learner) is equally passionate about making a name for himself as a tennis player as

well as academically. In fact he pretty much has his life planned for the next few years.

After finishing matric he hopes to get a bursary at one of the American universities where he wants to further his tennis career while also studying. His big dream is to become a neurologist when his tennis career comes to an end. According to him there is no secret to excelling in sport as well as academically.

“For me it is all about proper planning. Even when I am away playing tournaments I try to make time to study between matches. When I am back at school and I don’t understand something I will ask the teacher to give me an extra class if possible.”

Hettie de Villiers, TuksSport High School’s principal, always reminds the learners about the importance of time management. According to her time management is the vital key to finding a proper balance between excelling in sport as well as studies,

“What sets us apart from other schools is that we understand sport and the psyche of dedicated and passionate athletes. TuksSport High School is for learners who have a dream and a passion for their sport. They set themselves goals to achieve and they are willing to work hard to achieve those goals. In short, the school is a first class ticket to high performance. We aim to help our learners to live and train like future Olympians without ever neglecting their studies. Our goal is to ensure that our learners, by the time they get to matric, will truly understand what it takes to be dedicated and passionate about all the challenges life will offer them,” De Villiers said.

2016 TuksSport Colours and Awards

The 2016 TuksSport Awards saw rowers Lawrence Brittain, Shaun Keeling and Ursula Grobler & Kirsten McCann take top honours by winning the Sportsman and Sportswomen of the Year respectively. The prestigious event took place in Pretoria on Friday, 14th October 2016 where a total of 426 TuksSport athletes and officials were honoured.

After surviving a Stage 4 Hodgkin's Lymphoma two years ago, Lawrence continued on his quest to participate in the Olympics. Both he and Shaun Keeling were included in the Men's Heavy Weight Pair and went on to win a Silver medal for team South Africa at the Rio Olympic Games.

In 2015 Ursula and Kirsten qualified for the Rio Games at the World Championships and went on to compete in the World Cup 1 in Varese Italy were the Single Sculls pair rowed to a Bronze medal. This achievement was followed by a Silver medal in their boat class at the World Cup 2 in Lucerne, Switzerland. Ursula and Kirsten finished fifth in the Final A at the 2016 Rio Olympics.

A total of forty-six athletes, coaches, managers and medical staff from TuksSport represented South Africa and our neighbouring countries at the Rio Olympic and Paralympic Games. TuksSport athletes managed to bring home three Silver medals for team South Africa while numerous other athletes made history.

Mr. Kobus van der Walt, Director of TuksSport said the University of Pretoria has experienced another remarkable year. "We provide a home for our athletes where they can be cared for, have trust in the people around them and supported as best we can in all aspects of sports performance." Highlights of a great year in which TuksSport achieved in over 35 sporting codes, were:

- 43 Olympic and 3 Paralympic representatives represented South Africa and neighbouring countries,
- 95 Senior National Protea/Springbok representatives,
- 8 National Coaches & Managers and 18 National Federation/SA A team representatives,
- 46 National Age Group representatives,
- 13 University of Pretoria students were selected to be part of USSA National teams and other National student team representatives amounted to 21
- A total of 15 TuksSport athletes represented South Africa at the CUCSA games while 159 athletes were senior provincial representatives.
- Assupol TuksCricket won the annual Varsity Cricket competition and represented South Africa at the Redbull Campus Cricket World Finals in Sri-Lanka and made it to the semi-final narrowly losing to host nation Sri-Lanka with two balls to spare.
- TuksRugby, TuksNetball, TuksWomen's 7's, TuksRowing-men's A VIII took gold at their respective USSA competitions.

Awards:

- Student Sports Administrator of the Year: Maram Mahdi (SSC);
- Administrator of the Year Award: Margie Meiring (Judo);
- Student Sportswoman of the Year: Tebogo Mamatu (Athletics);
- Student Sportsman of the Year: David Hunt and Jake Green;
- Coach of the Year – Team sport: Jenny Van Dyk (Netball);
- Coach of the Year – Individual sport: Roger Barrow (Rowing);
- Sports Team of the Year: Assupol Tuks 1 (Cricket);
- Student Sport Club of the Year: Rowing;
- Sport Club of the Year: Netball;
- Principal's Award for Exceptional Performance in both Academics and Sport: Izette Lubbe (Netball);
- Principal's Award for Outstanding Performance by a Team Representing the University in Inter University Competitions: TuksVolleyball Ladies and TuksHockey Men;
- Newsmaker of the Year: Luvo Manyonga and Lawrence Brittain;
- Student Sportswoman of the Year: Izette Lubbe (Netball);
- Sportswoman of the Year: Kirsten McCann and Ursula Grobler (Rowing);
- Sportsman of the Year: Lawrence Brittain and Shaun Keeling (Rowing).

Student Sports Administrator of the Year: Maram Mahdi (SSC)

Student Sportswoman of the Year: Tebogo Mamatu (Athletics)

Student Sportsman of the Year: David Hunt and Jake Green

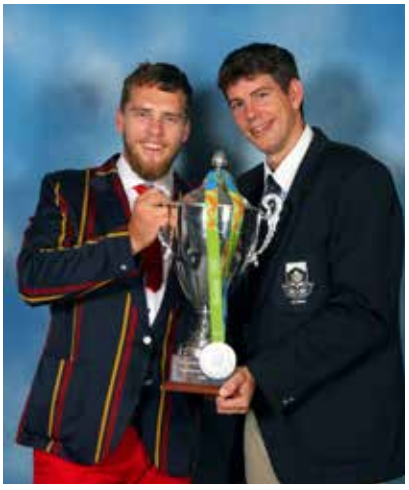
Coach of the Year – Team sport: Jenny Van Dyk (Netball)

Newsmaker of the Year: Luvo Manyonga and Lawrence Brittain

Principal's Award for Outstanding Performance by a Team Representing the University in Inter University Competitions: TuksVolleyball Ladies and TuksHockey Men

Principal's Award: Izette Lubbe (Netball)

Sportswoman of the Year: Kirsten McCann and Ursula Grobler (Rowing)



Sportsman of the Year: Lawrence Brittain and Shaun Keeling (Rowing)

INSIDE NEWS

ROWING

2016 World Cup I, Varese, Italy:

Gold - Kate Christowitz & Lee-Ann Persse in women's pairs

James Thompson & John Smith – Gold in men's lightweight double sculls

Bronze - Shaun Keeling and Lawrence Brittain in men's pair

Bronze - Ursula Grobler & Kirsten McCann in lightweight women's double sculls.

2016 World Rowing Cup II, Switzerland:

Silver LW2x Kirsten McCann & Ursula Grobler

Bronze LM2x John Smith & James Thompson

2016 FISA European & Final Olympic Q Regatta, Switzerland:

M4 Jonty Smith, David Hunt, Vincent Breet & Jake Green Qualified for Rio

JUDO

Zack Piontek: Silver at African Champs in Tunis, Tunisia

2016 USSA Judo Tournament:

Special Awards: Best Male Judoka - Dale Whittaker (four years in a row) & Michaela Whitebooi Best Female Judoka & Lady Prestige Award.

RACE WALKING

Wayne Snyman's team Silver in the Taihu R/W Multi-day competition in China. Lebo Shange 4th in Individual event.

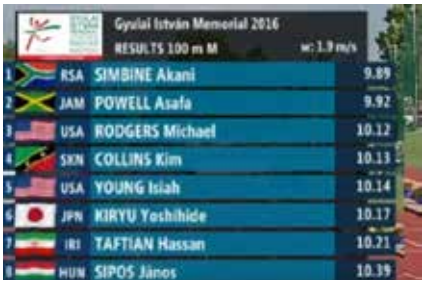
TENNIS

Prince and Tennis group from Zimbabwe

ATHLETICS

Chané Bosman triumphs in 2016 Comrades women' s race

Wayde v Niekerk & Akani Simbine at training camp with Bolt in Jamaika



Akani Simbine beats Asafa Powell & breaks SA 100m record in 9.89 at Diamond League in Budapest

Luvo Manyonga won the long jump at the IAAF Diamond League in Brussels with a personal best jump of 8.48m

CAA Athletics, Durban June 2016 women's 4 x 400m Relay – Caster, Wenda

LJ van Zyl– won 200m H in Brussels at the Van Damme Urban Meet – 4 Sep

CAA Athletics, Durban June 2016 men's 4 x 100m relay – Akani, Gift

Gift Leotlela (3rd), Hennie Kriel (coach), Thando Roto (1st) in the 100m sprint at the Internationales Pfingstsportfest in Rehlingen, Germany on 16 May.

SWIMMING

2016 RIO OLYMPICS – SA SWIM SENSATIONS Ryk Neetlingh, Cameron vd Burgh & Roland Schoeman

Emily at 2016 Rio Paralympics

Cameron van der Burgh – 2016 FINA/ airweave World Cup Series:

Series #1: Paris – won gold in 50, 100 & 200m Breast

Series #2: Berlin – won gold in 50 & 100m and silver in 200m Breast

Series #3: Moscow – won gold in 50 & 100m Breast.

FOOTBALL

Vodacom NXT LVL Boot Camp held at the hpc from 26 September – 03 October

Launched in May of this year, over 1000 hopefuls were narrowed down to 100 boy and girl footballers aged between 14-16 with the number reduced to 32 players ahead of the exhibition match at AmaTuks home ground.

Following a week of intense training at the High Performance Centre in Pretoria, the Vodacom NXT LVL Boot Camp reached its climax in the capital on Sunday 2 October.

Victory for Team Fish secures full scholarships for all 16 players to TuksSport High School. Despite defeat, it is not all doom and gloom for the runners-up, though, as the 16 players from the losing team each receive R50 000 towards their studies.

Portia Modise who formed part of the Team Fish coaching staff

Lunch at Time Out before the main Game on Sunday the 2nd Oct

Lukas Radebe teaching kids some ball skills

Young players being briefed

Fish's team won

Young players in training at hpc

Next level sport testing

Vodacom Open Field Boot Camp trophy

TUKSSPORT HIGH SCHOOL (TSHS)

TSHS learners donated food to the Centro-Dia-S.Francisco de Assis

TSHS 2016 Olympians: Gift Leotlela, Linda Motlhalo and Clarence Munyai

TSHS turns One Year!

TV - Live Broadcast

Neil Cornelius, Luvo, Shaun and Lawrence, and Danie live on Robertson

VISITORS

Mrs Mbeki at the hpc during the Women's Development Business (WDB) 25th Anniversary Celebratory Dialogue held in July 10 – 15, 2016.

New Zealand "Black Caps" Cricket team - Training and having lunch at Time Out Café

Croydon High School

Niue Rugby League

Dr Challoner's Grammar School (DCGS) hockey and rugby Educational Visit

SportSense Copa Coca Cola Camp

Estonia Swimming Team

French Rowing Team (bronze, Rio 2016)

ITF Regional Coaches Conference 2016 Speakers

Slovenia Swimming Team Rio 2016

Bloxham School - Edwin Doran group

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Contact: banqueting@hpc.co.za

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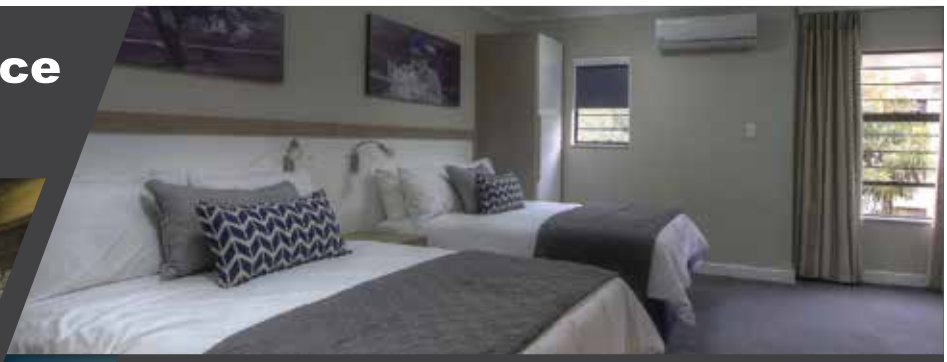

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TEAM BUILDING / CORPORATE FUNCTIONS

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Team Building

Option 1:	Option 2:	Option 3:
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Activity Options:

Tug of war, Ropes Course, Mine field, Wattbike Challenge, Ergo Challenge, Football goal scoring, Netball Scoring, Tyre flipping, Move Tennis Balls

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