

# the MEDALIST

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August 2011



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# CONTENTS

## Feature

6 The Culture Combination

## People

8 Not begging for crumbs

10 Superstars in the Making

12 Could this be the new Madam Butterfly

14 Legend: Elize Kotze

17 The Right Kind of Sticky

## High Performance Services

18 Psychology: Part 3: Performance Impairment: Putting Sport Psychology in context

20 Exercise Science: Debunking the Dogma

24 Biomechanics: Dartfish® - Tagging the way Forward

27 Biokinetics: Run Faster and Jump Higher

28 Biokinetics: In-Toeing Gait

30 Biokinetics: Overtraining

33 Nutrition: Taking it to the limit

36 Nutrition: Conditioning and Supplementation of High School Rugby players

38 Sport Science Gym: Training during Winter: how to adapt

40 Physiotherapy: Common shoulder injuries in athletes

33 Medical: Tiredness in Sport



Cover Image: Reg Caldecott

## TuksSport High School

44 Attending a Sport School - having your cake (or shake) and eating it

## TuksSport

47

## Inside News

49

## From The Sideline

54



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# from the CEO'S OFFICE



In the last edition of the Medalist I made mention of the results that our young up and coming athletes had achieved in National events in preparation for their respective upcoming World events and stated that this was a good beginning towards their build up for the Rio Olympics in 2016.

Subsequent to this article the results have been outstanding and a number of them have performed exceptionally well on the International stage. Of the four hpc athletes that represented South Africa at the World Youth Athletics Championships, three of them made the finals and one of them Albert Janki won a Silver Medal in the triple jump.

Wian Sullwald came first in the 16 - 19 yr category in the 2011 Maputo ATU Triathlon African Championships on 3 July 2011 and then went on to take third place in the Holten ETU Triathlon Junior European Cup held on 9 July 2011 in Belgium.

As I am writing this article, eight of our swimmers are taking part in the World Swimming Championships in Shanghai and already after the first few days we have had Vanessa Mohr winning the swim off for the first reserve for the semi final for the 100m Butterfly. What makes this achievement special is that at the age of 16 at her first Senior World Championships she swam a time of 58.66 sec, thus coming in under the London 2012 A qualifying time for next years' Olympics, as required by SASCOC. Quinton Delie then went on to swim a new Namibian national record in the 200m freestyle event, coming in under the record set in 1996.

These are International events that our athletes/learners at the TuksSport High School have taken part in, whilst on the local scene their performances have been as impressive with our Golfers winning the Gauteng Schools tournament and as such will be representing the Province at the National Schools Championships later this year. Our young Judokas all did exceptionally well at the SA Junior championships walking away with a number of Gold and Silver medals.

These results are all based on the well rounded and balanced training and education that they receive on a daily basis within the TuksSport High School structure. In this edition of the Medalist Mrs. Hettie de Villiers

(the Head of the TuksSport High School) takes a look at the system employed in Denmark where "*Team Denmark*" is responsible for the national development of Elite Sport in Denmark, and young elite athletes belonging to this programme attend *Team Denmark schools* or schools with Team Denmark classes. The vision of *Team Denmark* is "to make Denmark the best place in the world for an athlete to be". To achieve this, the institution, in association with its partners, aims to create the best possible conditions for the athletes – including in schools. When looking at their system and that in our High School then we are surely on the right track, as our results are starting to show.

One of the risks to the system we have employed is the support and help we receive from the various National Sporting structures including Sport and Recreation South Africa (SRSA), the South African Sports Confederation and Olympic Committee (SASCOC) and the respective National Federations who partner with us in the development of this young talent. This then brings us to the feature article by Wayne Goldsmith (world renowned Australian high performance consultant) who looks at the critically important structure of any successful sporting organisation as well as the key decision making positions that require competent people fulfilling those roles. It makes for interesting reading, especially in the current local turmoil that some of our federations find themselves in.

*Toby Sutcliffe*

# The Culture Combination

## 5 People and Positions You Must Get Right to Build a Winning High Performance Culture in Your Sporting Organisation

*Text: Wayne Goldsmith*

There is no **one** thing that you can do which will guarantee success: no **single** change which, in isolation will create and sustain a winning culture in high performance sport.

There are however a **combination of things** that you can do to increase the likelihood of success: “**The Culture Combination**”: 5 People and Positions You Must Get Right to Build a Winning High Performance Culture in Your Sporting Organisation.

People. People. People.

Achieving peak performance in high performance sporting organisations and professional teams is about three things:

### 1. People; 2. People; 3. People.

Sure...money, programmes, structures, systems, facilities, innovation etc etc are all important but the critical factor is now, always has been and always will be – **people**.

Get the people factor right and everything else is possible.

Get it wrong and all the money, facilities, equipment, gimmicks, gizmos and gadgets will not deliver to you the success you seek: **it's about people**.

More than that: its about the **right people** in the **right positions** driving the **right programmes** at the **right time**. But it all starts with the right people.

### The “Big Five” – the Culture Drivers.

So what are the 5 People and Positions You Must Get Right to Build a Winning High Performance Culture in Your Sporting Organisation?

**They are:**

1. The **Political** Leader; Chairman of the Board.
2. The **Strategic** Leader; CEO.
3. The **High Performance** Leader; High Performance Manager, Performance Director (or similar leadership role, e.g. Football Manager).
4. The **Technical / Tactical** Leader; Head Coach.
5. The **Team** Leader; Team Captain.

**Culture Driver 1: The Political Leader:** This leadership role is critical in every sporting organisation. The Chairman (man or woman) of the Board needs to have outstanding political skills and the capacity to position the Club within the business community to ensure the Club's long term financial viability. The Political Culture driver needs to have strong connections at the “big end of town” yet be the consummate politician: being equally skilled in shaking hands with corporate leaders and yet being able to listen to, talk with and respond to the needs of club members.

**Culture Driver 2: The Strategic Leader:** The CEO (the Strategic Leader) drives the culture of the sporting organisation through the systematic implementation of the vision of the Club's political leader. If you like, the Political Leader decides that the organisation needs to build a new car, then the CEO pulls together the plans, the people, the programmes and the places (facilities) to build it.

**Culture Driver 3: The High Performance Leader:** The area of high performance has evolved to become a specialist culture area in its own right. Innovation, creativity and the effective integration of all the aspects of high performance are critical if the organisation is to develop and sustain a genuine high performance culture.

In sports with a “draft” system and “salary cap” in place, the role of the High Performance Manager, Performance Director or similar role will only become more important in the future as the ability to create and sustain a winning high performance environment becomes the only real advantage available to sporting teams.

**Culture Driver 4: The Technical / Tactical Leader:** The Head Coach drives the culture of the organisation from a tactical and technical perspective. It is the Head Coach's job to build and sustain a winning culture through superior tactical and technical skills and the ability to see tomorrow today: i.e. to help the organisation accelerate its rate of learning and change and gain a winning advantage over the competition. An outstanding Head Coach sees where the Game will be – and knows how to get there first.

**Culture Driver 5: The Team Leader:** The team captain is responsible for driving the culture of the player group: on and off the field. Winning culture grows from within. It spreads like a “virus” - starting with the

inspiration of a quality captain, then spreading to the leadership team and on to each individual in the player group.

Leadership from all five Culture Drivers is vital in a sporting organisation in **four critical moments**:

1. When the team is **winning**;
2. When the team is **losing**;
3. When the organisation is **under pressure** (e.g. due to scandal, financial failures, misconduct etc);
4. When **change** is involved.

So how does **leadership, culture and change** fit together in a sporting organisations?

### Culture and Change.

To change the culture at your Club or your sporting organisation means you have to:

- Accept the limitations and problems of the current one;
- Define what your culture actually is, what's good about it and who owns it;
- Find people who can strategically, systematically and effectively change it (i.e. The "Big Five").

### It's a Big Job.

**No one person can change the culture of any sporting organisation.** A brilliant head coach with a great winning record and proven skills in technical and tactical leadership can not change the culture of the organisation without the support of the other culture drivers.

An outstanding CEO with years of corporate successes can not change the culture of the organisation without the support of the Chairman, the COO, the Head Coach and the player group.

Real change, meaningful change, sustainable change in a high performance sporting organisation requires the combined commitment, energy, passion and expertise of the "Big Five" working together towards a single goal: to create and sustain a winning team and a successful organisation.

### Change is like exercise.

Everyone knows that exercise is important. Everyone knows it is good for you and it is essential for both the quality and quantity of life but no one wants to actually go through the pain of starting an exercise programme, particularly after a long period of inactivity.

It's the same with Change in sporting organisations. Everyone accepts that change is important. Everyone agrees that "success is a moving target". Yet, when change does occur it is usually in the "superficial" areas, e.g. facility development, the purchase of new technologies, minor changes to organisational structures etc.

The thing that requires the most meaningful change and the thing that can potentially make the biggest impact on the organisation's performance now and in the future, is the organisation's culture.

And to change culture, like commencing an exercise program, requires a willingness to experience a little pain.

Changing **what you do** is easy: changing **who you are**.....now that's the real challenge.

But, to the few sporting organisations who are prepared to embrace a little pain, the rewards are immeasurable.

**Dare to be different!** 🏆



# Not begging for crumbs

We chat to the under-73kg African Champion, Jacques van Zyl, about confidence, respect, and motivational quotes from Rocky VI.

*Text: Rick de Villiers Images: Reg Caldecott*

Statistics are misleading 80% of the time. For instance: Jacques van Zyl, the man sitting opposite me, weighs under 73kg, is 1.75m tall, and has just come from the physiotherapist rubbing his shoulder. In other words, I outweigh him by about 20kg, I'm at least a head taller, and he is likely nursing an injury. My thinking: I can probably take him.

This conviction lasts only until I watch a YouTube clip in which van Zyl hurls a man half-way across the screen. The move – swift, elegant, violent – is called an ippon, and it brought the 21 year-old a gold medal at the African Judo Championships in Dakar earlier this year.

This was no mean feat. Only once before has it happened that a South African male judoka has gone to the African Champs and come up with the goods. That was 19 years ago. This was van Zyl's third time there, and things were about to change.

'In the past I was kind of overawed at just making it that far,' says van Zyl. 'This time round there was no question: losing was not an option. The key to my success was confidence. I wasn't going to be happy with merely saying "I was there". I didn't want the crumbs. I wanted to win.'

His Egyptian opponent, 13 positions higher up on the world rankings than van Zyl, probably had gold-medal designs of his own. But after the fight he got up from the *tatami* (the contest mat) a stunned man. The result was a surprise to many, but not to van Zyl himself.

'I recently met up with my first judo coach, Danie Bruwer, and he reminded me that I've had big ambitions since I was young. He used to ask his students what they wanted to achieve one day, and most would say they'd like to be the SA champ.

Apparently my reply was always the same: I want to go to the Olympics.'

In all likelihood, van Zyl's dream will come true next year. It will be the culmination of a decade's hard work and sacrifice. Pursuing a professional career in any sport means time away from friends and family, and in 2008 van Zyl spent a whole year away from his loved ones.

'I'd won a scholarship to go study judo in Japan at the Tokai University. It was tough being away from home, because I had to leave my friends, my girlfriend, and my mom's cooking behind. In the end it was worth it, though. I didn't pick up a great deal of Japanese, but I learnt so much about judo. I absorbed not only technique and skills, but also the culture of respect and discipline that feeds into the sport.'

Other trials have come in the form of injury. Since his victory in April, van Zyl has been struggling with his shoulder. The London Olympics is only a year away, and more imminent is the World Judo Championships in August this year. But, says van Zyl, his recuperation will just have to be fast-forwarded.

'Will I be fit? I have to. It isn't an option not to be. When there's doubt, I just plug into my ipod and listen to the words of Rocky Balboa: "It ain't about how hard ya hit. It's about how hard you can get it and keep moving forward. How much you can take and keep moving forward. That's how winning is done.'"

'That's all. I just have to keep moving forward' 🏆







# Superstars in the Making

*Text: Lester Mills Images: Reg Caldecott*

If success is measured in medals, then triple jumper Albert Janki (17) must naturally be named as the athlete whose achievement needs to be put up in lights when it comes to the University of Pretoria's High Performance Centre (hpc) group of four who represented South Africa at the recent IAAF World Youth Championships in Lille, France, in June. Janki hopped, skipped and jumped to a fine 15.95m in France to grab a silver medal and sandwiched the Bahamas twins of gold medalist Latario Collie-Minns (16.06) and bronze medalist Lathone Collie-Minns (15.51). Janki also bettered his personal Best (PB) set in Germiston in February of 15.50m in France.

Now back at his school desk at the TuksSport High School and also again under the watchful eye of coach Danie Cornelius, Janki is preparing for the Commonwealth Youth Games in the Isle of Man next month.

Manager of the athletics academy at the hpc, former SA women's 100m champion, Geraldine Pillay reckons Janki can also go a step further at the Commonwealth Games and grab gold in the triple jump for his country. While, of course, prepared to fully sing young Janki's praises for his achievements, Pillay also suggests we not forget the other hpc athletes who did their country proud in France in June.

Sabelo Ndlovu (17) another up and coming triple jumper based at the hpc, made the final in France and recorded a PB of 14.91 there to show he is not too far off the pace either. Remember these guys may not necessarily be eyeing the Olympics in London next year, but look out for them in 2016.

Long jumper Duwayne Boer is still only 16. But this lad from Eersterivier in the Western Cape is another certainly enjoying his time and thriving at the hpc. Having made the long jump final at the Youth Champs with a qualifying jump of 7.20m, Boer went on to finish 10th in the final (7.13). China's Oing Lin grabbed gold with a jump of 7.83m. 2000m steeplechaser, Jacob Tseko (17) dropped out in heat 2 of the event in France with a time of 6:21:18.

Some way off his PB of 5:18:11, but this was no mean feat either for someone competing in one of the most difficult disciplines at the champs. Make no mistake though, under the watchful eye of Michael Seme - who of course also takes care of World 800m champ Caster Semenya - this lad is sure to stay in the fast lane. These four athletes then have shown they can compete with the very best in the world in their age group and are no doubt certain to star in the future for their country.

Has the road to these achievements been easy? "Of course not," says Pillay. "They've had to balance getting an education with achieving against the very best in the world on the athletics track. They are a dedicated group of youngsters who are focused and work their socks off," says Pillay.

For Pillay though, there is an unsung hero when it comes to the road to success for these four athletes. SRSA (Sport Recreation South Africa) or better known as the Department of Sport and Recreation have played a huge role in the lives of these athletes according to Pillay.

All four of the hpc athletes who represented South Africa at the World Youth Championships in France have been beneficiaries of grants from SRSA.

"Without them none of our athletes would have even boarded the plane to France at OR Tambo.

"For these youngsters being able to study and train and not worry about anything else is an opportunity of a lifetime.

"When the idea of a junior hpc was mooted, critics said it was not a good idea to take youngsters out of their usual environment and that they would not be able to perform at all.

"Well that has been proven to be incorrect and we believe we are going from strength to strength at the academy," says a confident Pillay.

Talking of these SRSA sporting grants, the hpc are currently awaiting the next list of names up for grants. Each September, SRSA meet to consider these grants and those at the hpc are confident that there are another group of sporting superstars in the making 🏆

The young TuksSwimmer and one of the hpc Sport Science and Medical unit sponsored athlete, **Vanessa Mohr** is already at the tender age of 16 making waves on the South African swimming scene and it's a matter of time before she does on the international arena. These waves can already be seen in her performances at this years Telkom SA Nationals, that was held in Port Elizabeth during April.

During this years SA Nationals Vanessa stamped her authority on the women's butterfly events in South Africa, by winning the 50m and 100m events by swimming the A qualifying times for the FINA World Aquatic Championships, which take place in Shanghai China from the 24-31<sup>st</sup> April 2011. With those swims she also stamped her footprint on the international stage with her times placing her top 12 in the world at that time. What was even more remarkable was that her 100m time is just a mere 0.05sec off the London Olympics A time for next year.

An exciting future lays ahead for Vanessa and this year will serve as important preparation in her goal to qualify for the London 2012 Olympics. This year alone she will have the opportunity to compete internationally at the World Senior Championships (as mentioned above, the World Junior swimming championships, the Junior Commonwealth games and the Mare Nostrum swimming series).

TuksSwimming Manager and Coach, Steven Ball caught up with 16 year old Tuks and SA National Swimmer, Vanessa Mohr to find out what makes her a stroke above the rest.

**Coach Ball: At what age did you start swimming, with who and Why?**

**Vanessa:** "I started swimming at the age of 18 months, because my mom was very concerned about water safety, although only competitive at the age of 10. Never really liked the water before the age of 13"

**Coach Ball: Who was your first coach and what lessons did you learn from him/her?**

**Vanessa:** "My first coach was Odette Brink, but the one that really got me enthusiastic about swimming was my primary school coach, "Smittie". He taught me the basics of swimming and I got the feel of competing and training as a team. After that Coach Linda de Jager coached me to my first senior national title in the 50m butterfly."

**Coach Ball: Who is your current coach & how long have you been with him/her?**

**Vanessa:** "Igor Omeltchenko, which I've been with for about a just over a year now. We have a really good relationship and trust each other."

**Coach Ball: What is your greatest achievement in your opinion so far?**

**Vanessa:** "My greatest achievement so far in my opinion was qualifying for the World Championships



for the first time, since it's my highest achievement so far and it broke the barrier for me between being a SA swimmer and swimming internationally."

**Coach Ball: What is your ultimate goal, both in your swimming and life?**

**Vanessa:** "To get married, get a degree, have kids and be able to tell them that I went to Olympics for swimming, that's my ultimate goal."

**Coach Ball: What lessons has swimming taught you so far?**

**Vanessa:** "Swimming is constantly teaching and shaping me and the ways in which I've changed as an athlete and in character are endless. The main things it has taught me is endurance, courage and perseverance. Although I think the most important things are things which I still have to learn or are currently learning. For me it's not about learning how to be the best, because the recipe is easy, but rather to find the courage to follow it and overcome your fear of pain. Your biggest challenge is yourself and you first have to beat yourself before you can beat someone else."

**Coach Ball: Who is your greatest role model?**

**Vanessa:** "I don't have a specific role model, but the people who inspire me the most are the people I train with and race against everyday. Everyone has a different story, but the same goal."

**Coach Ball: What motto in life can you associate with?**

**Vanessa:** "The body follows the mind, and the mind is limitless. There's nothing you can't do."

**Coach Ball: If you could meet anyone person in the world, who would it be and Why? What is the one question you would like to ask him/her?**

**Vanessa:** "Nadia Comaneci, the first gymnast ever to achieve perfect scores from all her judges. Such a strive to perfection requires hard work that goes beyond our comprehension unless we try do the same. I would ask her how she found the uncommon moral courage to do it and if it was all worth it for her in the end."

**Coach Ball: So what is happening in your life and what are your aims for the next 18 months.**

**Vanessa:** "I hope to qualify for London 2012 Olympics now in Shanghai for the first time and a second time at Senior Nationals next year. I still have a lot to learn and a lot of experience to gain before I can compete against the best, and I plan to do as much of that as I can in the next year during the build up to Olympics. The main goal for me right now is to swim PB's and train hard to push the limit higher every time since I know I'm still in a preparation stage."

These are some very wise words from such a young lady, but the maturity and drive is clearly there. From TuksSwimming and the hpc side we are really excited about Vanessa's abilities and the prospects which she holds to truly make her stand on the international stage. The international stage beckons. Go make some waves Vanessa! 🏊‍♀️

*Text: Steven Ball, TuksSwimming Manager and coach Images: Reg Caldecott*





*Text: Morris Gilbert Images: Reg Caldecott*

# Elize Kotze

New national netball head coach and TuksNetball’s Technical Director, Elize Kotze has the know how, track record and pedigree to be justly called a sporting great.

In her case, however, it goes further as she also belongs to an even smaller and special group. Elize is a living legend.

People near and dear to her will tell you her recipe for success is very basic: she has never forgotten from where she comes, never forgotten who and what attributed to her success as player, coach, administrator, mother and wife.

As one of her biggest admirers puts it: “She will never ever ask you to anything she has not done herself – more than once.”

It was already evident at high school, Tuine in Pretoria, that Elize was destined for sporting greatness.

She excelled in athletics, netball and gymnastics. Her list of achievements included captaining the Northern Transvaal High Schools in netball.

In her matric year she knew she had to make a difficult choice about the sport she would make her own after school, because at that stage she was not really interested in specializing.

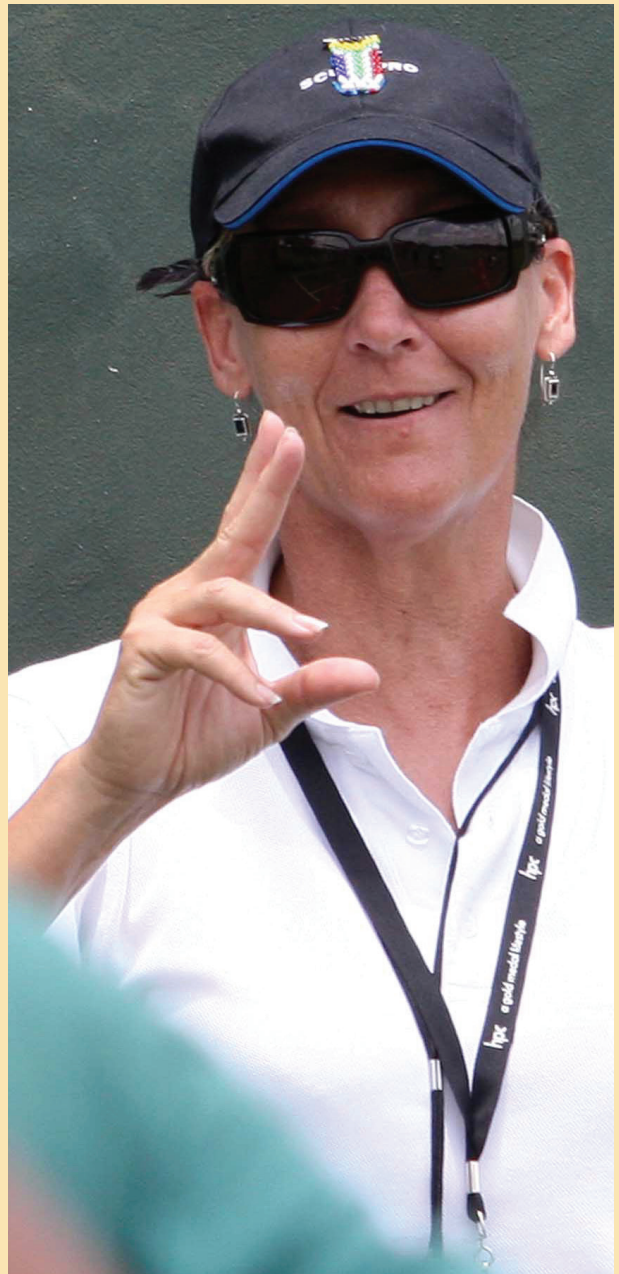
“I finally decided on netball, one of the best choices I have ever made. My track and field coach was very disappointed as he thought I had more potential as an athlete. When making the decision to only play netball after school I did not base it on the assumption that I was necessarily better in it than athletics. I chose netball because I wanted to keep on competing in a team sport. There is nothing better in sport than to be part of a team. It enhances your people skills and teach you the truth about yourself, unkind as it may be at times.”

Her success after school was immediate. She became captain of the Gauteng North senior team, made it to the South African u.25 team, got voted best defender in the country in 1994 and gained senior national colours in the same year. She lists winning the silver medal at the World Cup in Birmingham, England as the biggest feat of her senior playing career.

“New Zealand won the World Cup, but I was very chuffed with my silver medal – especially because I was the Proteas’ vice-captain.”

Elize joined TuksNetball in 2004 as head coach. Her attention to individual development set her apart from other team coaches immediately. She did not just focus on team dynamics but also spend countless hours developing the Tuks players individually – preparing them for any possible challenge.

Her loyalty towards TuksSport and TuksNetball in particular is evident in the way she leads the club. Elize fights for





what she believes in. She has the highest standard and encourages her players to set the standard, not just reach the standard. To her it's not just about netball, it's about life. She develops the players and coaches at the club to become high performers on and off the netball court.

2010 was her best year so far. She was deservedly named TuksSport Coach of the year (Team Sports). She coached the Gauteng North A team that won both the SPAR National Netball Championships and NSA Merit Tournament, the Thunderbirds that came second in the national league and Tuks 1 that won the Gauteng North title.

She also deserves most of the credit for Erin Burger being named Player of the Tournament at both the SPAR National Netball Championships and NSA Merit Tournament; Leigh-Ann Zackey named Defender of the Tournament at both the SPAR National Netball Championships and NSA Merit Tournament; 3 players in the SA Protea team; 4 in the SA A squad; 2 SA u.19 players; 12 Gauteng North representatives at the SPAR National Netball Championships (gold medal winners); 10 Gauteng North representatives at the NSA Merit Tournament (gold medal winners); 7 Gauteng North B representatives at the SPAR National Netball Championships (silver medal winners); 10 Gauteng North u.21 representatives at the SPAR National Netball Championships (bronze medal winners) and 9 Gauteng North u.19 representatives at the SA u.19 National Netball Championships.

Elize's biggest break as coach came this year when she succeeded besieged Karin Strauss as the

Proteas' head coach.

"I knew I would have my hands full as I did not become part of an ideal set-up. On the other hand I love challenges – the bigger, the better. We still have a long way to go, but I can truly say that we have improved a lot in the short time I have been coaching the Proteas. We won the Tri-Nations Series against Botswana and Singapore. We beat the fancied Trinidad & Tobago in a test series and finished 5th at the World Championships where we beat Malawi for the first time since 2003. It's not bad at all."

Elize is the owner of the Raloka Netball Ranch where 3500 players undergo specialized training annually.

"It's like playing netball on a farm! What a pleasure, what a privilege."

Netball may be her passion, but she is first of all a wife and mother.

"I am married to Martin, a very patient and loving husband who allows me to live my dream. I have two great sons: Christoph, a musician and Altus, a diving instructor in Zanzibar. Like me, our sons are living their dream and we are very proud of them!"

And there you have it – Elize Kotze: down to earth, easy to warm up to and someone who has been a true servant to netball and all the players she coached.

Living legend, indeed 🏆





# The Right Kind of Sticky

*Text: Rick de Villiers Images: Reg Caldecott*

**The Medalist talks to Lebo Ngobeni and discovers that the expression ‘safe as a house’ has found a new home.**

**T**hey call him ‘Matanya’. Think glue. Think spilt Oros. Think melted toffee bars. You are now approaching a translation of the nickname that fellow AmaTuks teammates have given Lebo Ngubeni. And it fits (dare I say it?): when a spinning soccer ball hits his gloved hands, it sticks.

Seeing the 17 year-old soccer player in front of the goalmouth – diving, hurling, punching the white off the ball – you’d think that he’s been schooled in the art of goalkeeping since childhood. You’d think that, but you’d be wrong. Rewind to 2009 and Lebo is knocking balls into the back of the net rather than blocking them.

‘Yes, I used to be a striker,’ he chuckles as he recalls this not-too-remote part of his soccer career. ‘But I’ve been a goalkeeper for the past two years now, and I’m loving it. The one really good thing about it is that I don’t have to be as fit as the other guys!’

It’s impossible to take this quip at face value. In his yellow Fifa Fair Play t-shirt, Lebo cuts an imposing figure. And if he didn’t, he certainly wouldn’t have been included in the South African u/20 squad. Nor would AmaTuks have shown their interest in signing

him. Though this particular deal hasn’t gone through, things are looking good.

But, says Lebo, none of this would have been possible without the support of his family and the opportunities that the hpc and TuksSport High School have afforded him. Apart from having to deal with a slight drop in temperature, the transition from his hometown, Mookgophong (Naboomspruit), to Pretoria has been seamless.

‘Being at this school means that someone sees something special in you. The teachers definitely make you feel this way, and they’re always positive and willing to help. Without my teachers and coaches I wouldn’t be the guy I am’

But who is the ‘guy’ behind the gloves? Lebo offers a shrug and a smile.

‘I guess I’m a guy who likes horror movies, hates playing soccer TV-games because I always lose, and listens to house music. Most importantly, I’m the guy who catches the ball’ 🇿🇦

## Part 3: Performance Impairment

### PUTTING SPORT PSYCHOLOGY IN CONTEXT

*Text: Monja Human and Maurice Aronstam*



#### Introduction

To thoughtfully and successfully implement an intervention in the context of sport psychology requires that the difficulties that an athlete experiences be identified and that the best intervention be used to assist the athlete. This often requires that the difficulties presented by an athlete seeking sport psychology services be categorised into the following four categories.

- I. Performance development
- II. Performance dysfunction
- III. Performance impairment
- IV. Performance termination

The interventions that will be best suited to the difficulties experienced by the athlete will differ according to the above categorisation. In part one performance development was addressed and in part two we addressed the performance dysfunction category. In part three we now look at performance impairment.

#### Part III: Performance impairment:

The performance impairment category is characterised by athletes that experience clinical difficulties, for example, a swimmer that is so conscious of her weight that she starts to develop dysfunctional eating patterns which results in an eating disorder.

The development of clinical symptoms often involves the interplay of biological, social and intrapersonal causes. The most common clinical disorders that you can look out for among athletes include depression, anxiety and stress disorders, eating disorders, anger and impulse control disorders and drug/alcohol abuse disorders.

Let's look at the following example of a performance impairment case:

### The Story of Bruce

Here is an example of a rugby player to illustrate a typical performance impairment case:

The situation	The development of clinical symptoms
Bruce is an enthusiastic rugby player that wants nothing more than to play well for his team and coach. His coach has a soft spot for Bruce because he is always giving his all and going the extra mile for the team. Nothing makes Bruce happier than being part of this team.	So far Bruce is an athlete that every coach wants in his team. He has great qualities such as placing the teams' needs before his own and always putting in more than is expected.
Bruce's game on the field takes a bit of a dip and he is finding it tough to keep up to the other players in his team. He starts to think that he is not playing his part in the team and he starts to worry about what the other are thinking and saying about him. Bruce has always valued the opinion of his coach higher than anybody else's. He feels that he is letting down his coach despite his coach still showing confidence in him. He becomes preoccupied by this worry of letting the team and his coach down.	Bruce experiences a normal aspect of sport where an athlete loses confidence and goes through a bit of a dip. His thoughts become increasingly pessimistic, but he becomes preoccupied by these thoughts which result in a drastic increase in his worry and anxiety.
His parents have always been supportive and are always next to the field supporting him when he's playing. He has never questioned their support but for the first time he questions whether they want to watch him play. His parents don't want to say something that might further upset his so they avoid conversations that have a negative theme. This results in more quiet times when they are together. He now further questions whether they are now ashamed of him.	His anxiety and pessimism spreads to other areas of his life and starts to impact his belief of support from his parents.
Bruce becomes increasingly nervous before the matches. He is even getting nervous at practice. Because of the nerves he makes elementary mistakes at practice which just increases his worry and nerves. He has become so anxious that he now refuses to go to school because of his fear of what the others are thinking and saying about him.	Bruce's anxiety has had a major impact on his behaviour and he now goes to extremes to try to avoid situations that will increase his experience of anxiety.

In the example of Bruce, the effect of the experience with anxiety had a far reaching impact in a major area of his life. In this case it developed as a result of an interplay between his personal characteristic of wanting to prove himself to and please others, a biological predisposition, and the social context that promoted worry. The treatment of clinical disorders is often a combination of both a therapeutic as well as a medical intervention. If you are ever concerned about an athlete it will be in the best interest for the athlete to refer them to a professional for further investigation.

#### Summary

The performance impairment category is characterised by athletes that experience clinical difficulties. The effect of clinical difficulties is most often far reaching and will have a drastic impact in at least one major area of the athlete's life. In conclusion I leave you with the paradoxical effect that sport can have on a person; while sport is often used as a tool that can aid in the treatment of clinical symptoms, it can also form part of the cause for the experience of clinical symptoms 🏉

# Debunking the Dogma!

*Text: Jimmy Clark  
Institute for Sport Research, Department  
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University of Pretoria*

**A** warning upfront: this series may uncomfortably challenge your beliefs. Sport and exercise science is overrun with cherished untruths, the product of decades of misinformation and mindless perpetuation. Dozens of areas in our discipline are littered with falsehoods in their use or explanation, from muscle cramps to  $VO_{2max}$  to dehydration, lactic acid and loads more. The accompanying table lists a few of the more common ones, some of which we will tackle individually in this series. Check to see whether your favourite saying makes our worst 15.

**Table 1.** Some of the worst myths and misconceptions in sport and exercise science

Maximal oxygen uptake ( $VO_{2max}$ ) cannot be altered by exercise training.
Lactic acid is the cause of pain during and fatigue during exercise.
Loss of body fat is best achieved by performing lower intensity exercise.
Resistance exercise training makes athletes slower and less flexible.
Preventing body fluid loss during exercise improves performance.
$VO_{2max}$ predicts future endurance exercise performance capability.
Post-exercise soreness and stiffness is the result of lactic acid accumulation.
Training within specific target heart rate zones is required to optimize training.
Fat reduction at some body area can be targeted by exercising that specific area.
Muscle cramps during exercise are mainly the result of electrolyte imbalances.
Stretching prior to an exercise session reduces injury risk in the exercise.
Preventing fluid loss during exercise prevents heat exhaustion or heat stroke.
The anaerobic threshold. Full stop.
Heart rate monitoring is the best measure of exercise intensity or training load.
Females engaging in resistance training will become big and bulky.

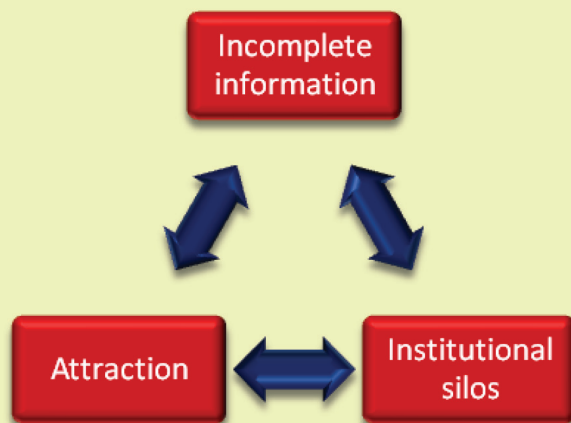
## Part I: Ruffling Feathers

### Myths and Misconceptions in Sport Science...



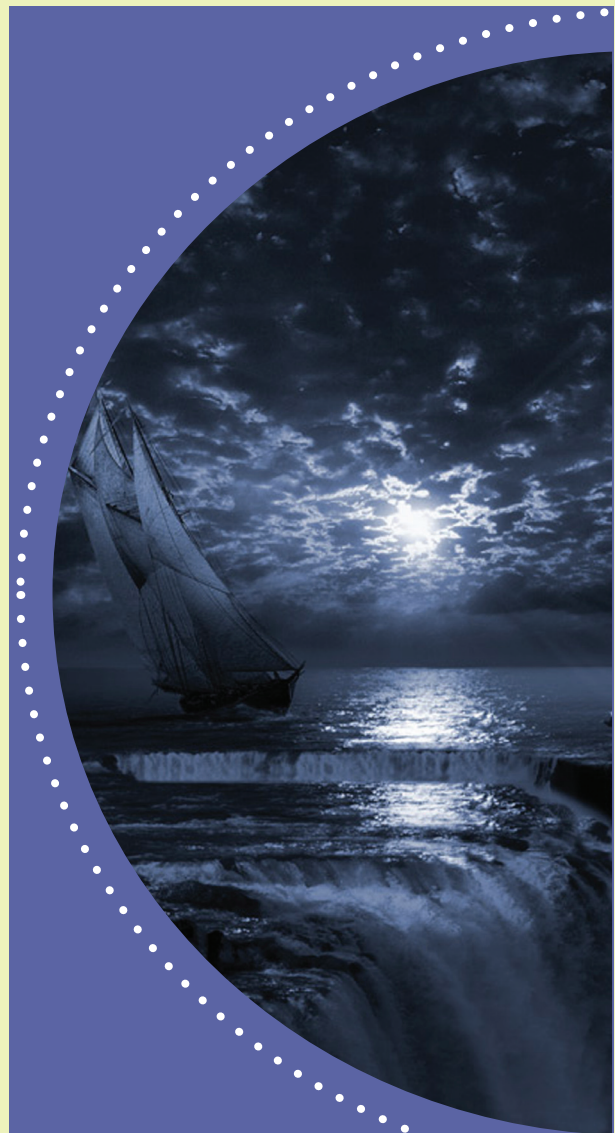
The fact that incomplete information exists in a field is not unusual – after all, the addition and evolution of knowledge is continual. What is disturbing is the extent to which exercise-related fallacies have become ingrained in our greater sports industry and even deeply rooted within core thinking of the lay public. An ever increasing frustration has been the popular and casual sustenance of outdated ideas by coaches, athletes, managers, students and parents I've worked with in the last decade. This despite abundant scientific evidence against these urban legends!

What's the origin of the affliction? Myths by their nature are often multi-layered in development. Unproven or false collective beliefs throughout history (think: Loch Ness monster, leprechauns and flat earth theory) are only partly the result of misconstrued facts. It's when a set of limited observations and flawed interpretations get cheered on in a falsely plausible setting by a group of people for which the explanation holds value that a legend is born!



**Figure I.** Theory of myth generation and perpetuation

It's been the same for our sport science folklore. It almost certainly emerged from the eager (and initially successful) adoption of attractive, oversimplified interpretations of early research in exercise science by individuals with a bit-part, superficial knowledge of the subject. That status quo simmered for decades, and while scientific knowledge about exercise advanced (particularly in the last 20 years), the major source of information for those in the industry remained their own well-meaning but misinformed disciples. Little has changed. Fictitious phenomena roll off tongues faster than ever and fad equipment or procedures plague the sporting environment. So deep have some of these myths penetrated that a viscous cycle of re-infection has developed in which perpetuation by coaches, fitness experts, the media, and equipment manufacturers bamboozle themselves and us within the same framework of pseudoscience. Frankly I am shocked by how far some statements by current coaches, managers and parents reflect scientific fact! This is not to say that it's done intentionally - misconceptions like those in the table are genuinely believed and fiercely defended, and so in my opinion, most protagonists of these myths have simply not been exposed to the flaws in their framework or the availability of new knowledge. Maybe it can start here.



**"Sport and exercise science is overrun with cherished untruths, the product of decades of misinformation and mindless perpetuation."**

Here are two brief examples. Future parts of this series will tackle some of the big myths as individual posts.

### 1. Resistance exercise training makes athletes slower and less flexible.

This myth gained momentum in the 1950's but re-appears in sport science-fiction regularly. A coach or parent might mention that they don't want bulky, slow and stiff athletes from work in the gym. Perhaps this is linked to the belief that getting stronger must occur by getting bigger muscles. Wrong. Apparently Alvin Roy, a high school strength coach, laid the foundation for modern strength and conditioning around 60 years ago by demonstrating how weight training for his American football squad decreased injury rate while improving speed. There remains no solid scientific evidence that appropriately planned and supervised resistance training leads to muscle-bound and inflexible athletes. The results of a study by Nobrega et al (2005) are typical in this area – strength training was found to have no interference on flexibility. Strength change can result from more than simple muscle size change, and weight training forms some part of most modern conditioning programmes. In fact, weight training to increase muscle mass sufficiently to slow athletes down and reduce their flexibility would require some pretty special, extreme and directed approaches! Not the work you are likely to find incorporated in sport performance focused strength programmes. Lose this myth and work with a reputable strength coach.

### 2. Spot reduction, i.e. fat reduction at a body area can be targeted by exercising that specific area.

Another great one from the last century, and typified by images of vibrating belts around bulky thighs, body specific toning products and claims by magazines of targeted exercises to 'melt away' fat from a region. Early research in the 1960's and 1970's supporting this house-wife-targeted marketing gimmick has long since been known to be debunked, at least within the scientific community. Body fat reserves are globally (as opposed to locally) drawn on for their metabolic fuel stores based principally on the overall energy demands of the body, against the background of individual body fat distribution tendencies. Localized body fat reduction has not been proven to occur, borne out by a recent study (Kostek et al 2007) which used MRI analysis to assess body composition changes following a typical 'spot reduction' programme. Drop the home shopping exercise apparatus now, start expending more energy or consuming less energy, or both.

So to sum up: limited measurement, observation and knowledge becomes misinterpreted, regurgitated and re-circulated within an isolated and independent sector by groups who dogmatically perpetuate the myth because it holds some value or comfort or familiarity for them. Attempts to alter these beliefs are, understandably, met with resistance, but the cycle must be broken and fact separated from fiction. The way we think about these phenomena affect how we apply our knowledge in preparing athletes. While some are harmless, allowing them to fester unchallenged risks side effects which are tougher to reverse. To effectively

tackle high performance sporting problems we must move past the deeply entrenched hogwash of the arm-chair sport scientist.

I suppose ways of doing this include encouraging sustained interaction between coaches and scientists while maintaining an open and logical mindset to dialogues such as these. In the parts of this series to follow I will attempt to use contemporary research and our own first-hand measurements to illustrate why so many traditional explanations in sport science need to be updated radically in some cases, and finally laid to rest in others 🌈

#### References:

1. Kostek MA, Pescatello LS, Seip RL, Agelopoulos TJ, Clarkson PM, Gordon PM. Subcutaneous fat alterations resulting from an upper-body resistance training program. *Medicine & Science in Sport & Exercise* 2007, 39(7): 1177-1185.
2. Nobrega ACL, Paula KC, Carvalho ACG. Interaction between resistance training and flexibility training in healthy young adults. *Journal of Strength & Conditioning Research* 2005, 19(4): 842-846.



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## Dartfish® – “Tagging” the way Forward

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

**M**ore than seven years ago, Dartfish® released its first video “Tagging” software, allowing users to mark events in video and extract relevant clips and statistics from these events. Originally designed for use in team sports to reduce the amount of time spent reviewing game film and to highlight specific stats and performances of specific athletes, Dartfish® has moulded tagging technology into the incredibly powerful tool it is today. And here at the hpc we use it for all our match and game analysis needs.

Tagging is not at all limited to team sports or even sport in general for that matter, and has truly become an invaluable tool to many professionals in many fields. The publishing tools incorporated into the software, make it the perfect tool for “editing” video and extracting only the clips you want to use i.e. eliminating “wasted” video with no action/purpose. Taekwondo and cheerleading use it as their basis for video-based judging and replay systems worldwide. In the corporate environment it has found favour for use in meetings, interviews, etc. and is being used by universities to evaluate student-teacher classroom performances. Because tagging being used in so many fields and customer’s needs differing so dramatically, Dartfish® has five main tagging solutions.

### MANUAL TAGGING

With the ability to create customized tagging “panels” in the Dartfish® software, users are able to tag videos and extract relevant information required for their specific coaching staff/athletes. Short video clips/highlights can be easily extracted from long videos, and creating statistical reports or highlighting and sharing certain data is quick and painless. Creating “events” is as simple as one mouse click, and applying descriptors or ‘values” to these events, not many more. The descriptors or values allow quick and accurate video searching/sorting to locate the exact performance event desired.

Want to examine each slower ball bowled in the opening spell for your opening bowling in cricket? Or look closely at each foot fault performed by your centre in netball? Or even evaluate the consistency of an umpires calling of a game in hockey? The event/value system locates the exact event you choose to view – depending on how you have constructed your tagging panel. You can do a simple text search, an advanced multi-level search or a hyperlinked table search to filter your events. And all this information can simply be exported into Microsoft Excel® for the creation of intricate tables and creative graphs. This very powerful and time saving solution is used by thousands of organizations today.





#### AUTOMATED TAGGING

In 2008 Dartfish® created a customizable SDK (software development kit), providing a fully automated tagging solution which allows Dartfish® to be “controlled” by existing scoring or data capture software to automate the capture and tagging process. In use today by organizations such as the World Taekwondo Federation, the automated tagging solution has revolutionized the tagging world.

#### EASY TAG

Dartfish® EasyTag was designed for use on Apple® operating system devices such as the iPhone® or iPad® and allows users to tag live events and later send those tags to their computer with Dartfish® software. Here their “events” are merged with the video to display all of their tags. This is done by synchronizing captured “events” with the timeline of the video clip, and can be used to tag various video clips simultaneously, i.e. different video views of the same event. Easytag, is a free application, and allows users to create their own customized tagging panels and also share them with other Easytag users, or to synchronize their information through iTunes®. Gone are the days when video analysts and coaches had to sit alongside the camera with a laptop to tag events live.

#### ONLINE TAGGING

The latest release of Dartfish.tv® has also addressed the prospect of on-line tagging. Users can now tag

events and add customized values on-line, eliminating the logistical problems of being personally present at events in order to analyse them in a time-efficient manner. The Dartfish.tv® platform, has also incorporated unique search and share tools allowing users to take full advantage of the in-depth tagging Dartfish® offers. Now, instead of applying keywords to entire videos, the “value” data can be searched and shared, allowing viewers to create and share customized playlists with other viewers. Want to sort through a video of a match and see only your favourite player’s shots on goal, wickets, tackles, etc? And then share them with others? No problem - simply search for your desired results and click “Share”.

#### OTHER TYPES OF TAGGING

Dartfish® also has the ability to import other data files such as .CSV data to tag video. This means almost anyone, anywhere can create a data report to tag videos. Dartfish® users can also export their tags to a data file to share with other users on other computers who don’t have the software to maximize this experience. For example, a unique and powerful solution has been delivered by Dartfish® and Edge® for utilizing detailed baseball charting data and game video to search for simple or complex data on all pitchers and hitters, over an entire season. Served up on the web for easy-access viewing and searching, the video related to this data is in an embedded playlist and provides a very advanced use for Easytag and the Dartfish® software in general 🌈



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## Technique

Filming specific techniques allows both coaches and athletes to analyze movements in slow motion and see faults/compensations that are often not obvious with the naked eye

## Game/Match

Review of filmed game/match content can produce highlights, statistic, trends and much other vital information needed for improved performances in both individual and team sports



## Biomechanical

Links functional movement patterns to technique performances and bridges the gap in understanding, rehabilitating and preventing injuries

## Gait

Slow motion filming links patterns in our gait to pain, injuries, and related conditions which might restrict an athletes walking comfort or running potential

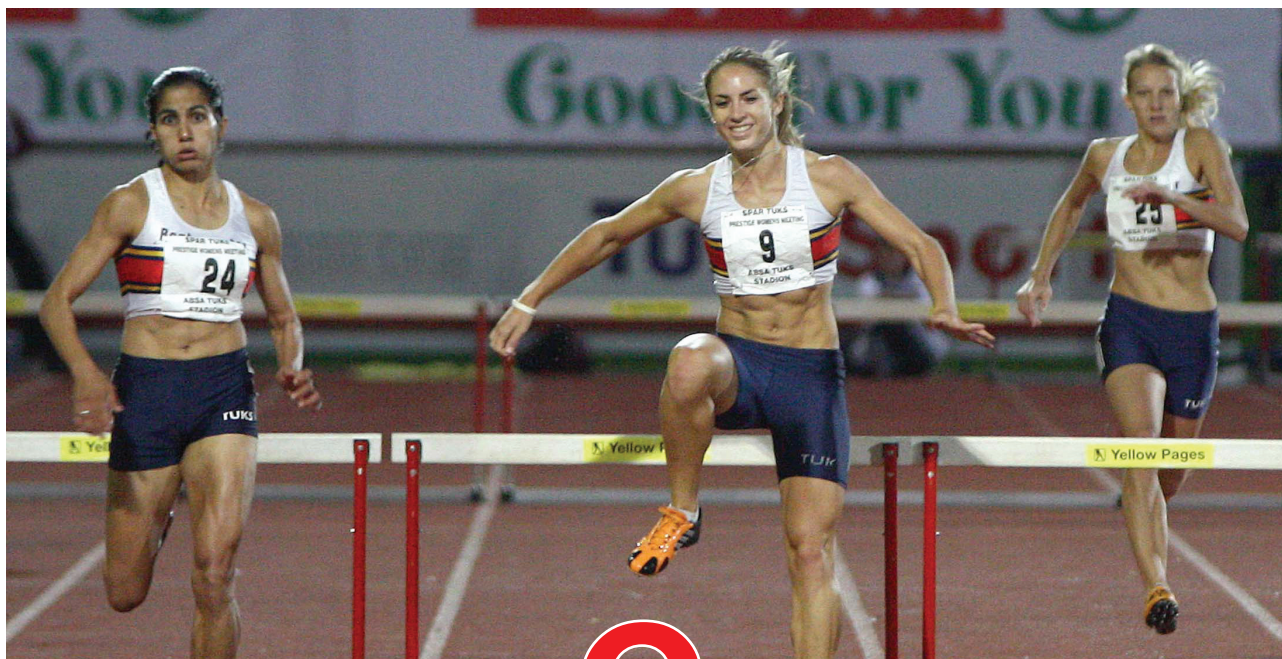


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# Run Faster & Jump Higher

*Text: Wayne Coldman*

Since the beginning of competitive sport, people have always asked the question of how can we as humans run faster and jump higher.

To answer this question, we need to have a look what physical aspects affect our ability to perform the given tasks. If we want to run faster or jump higher, firstly we need to realise that the two are not separate skills but more that they are very closely related skills and in that improving one skill will improve the other as well. What physical aspects are important for either running or jumping?

1. Co-ordination
2. Strength
3. Power
4. Flexibility
5. Balance
6. High Proprioception
7. Stability
8. Technique
9. Mental Characteristics

All of these physical aspects will help us run faster and jump higher but what is the order of importance when working with children. However, when we ask this question to our coaches, what people are actually asking is not what will help but rather, "Which aspects will bring about the biggest change in performance the quickest"?

In my experience, working with elite athletes and working with children need to be kept separate. Elite athletes will hone certain skills over and over as these are the most directly linked for their sport. Young developing athletes need a more holistic view. Coaches need to make sure that they are not neglecting to basic skills need to perform most skill efficiently. Co ordination, technique, balance and proprioception must not be excluded when it comes to training developing athletes. If we hone the basics early on in their young sporting lives, the ability to perform the bigger motor skills will become easier to learn and also raise the ceiling of their ability to perform. Too many young athletes are held but by physical deficiencies due to a lack of a holistic point of view. Training the bigger movements in a gym will serve a purpose for all athletes but in conjunction with a properly structured developmental plan.

Coaches can simply improve on one aspect of the athlete such as flexibility and this will improve their speed and power, but this can be said by all these aspects. This means that if we improve any of the physical trainable aspects we can improve speed and power. It is crucial that when we look at speed and power (Running and jumping), we must have a holistic view as all physical characteristics have a role to play within these to skills. We simply cannot just apply the most important aspects that will provide huge improvements at the expense of other, just as important aspects of an athlete 🌈



*Text: Menzi C. Ngcobo, Biokineticist, Institute for Sport Research, University of Pretoria*

Posture is a composite of all joint positions of the body at any given time. Dynamic postural alignment is best described in terms of various joint positions in relation to the movement of body segments. Joint motion in turn occurs through the different axes and body planes which are at right angles to each other. In-toeing gait (also termed hen toed or pigeon toed)

is a transverse plane deformity, more specifically the caudal (lower) portion. The transverse plane is horizontal and divides the body into the cranial (upper) and caudal (lower) portions. In-toeing is attributed to the transverse plane development of the lower limb. Three areas may be the cause of the in-toed gait: the hip joint, tibia and foot.

The hip joint is the articulation of the acetabulum of the pelvis and the head of the femur. These two segments form a ball and socket joint with three degrees of freedom: flexion/extension, abduction/adduction and medial/lateral rotation in the transverse plane. There are two angulations made by the head and neck of the femur in relation to the shaft, the angle of inclination and the angle of torsion.

The angle of inclination occurs between an axis through the femoral head & neck and the longitudinal axis of the femoral shaft. There are variations among individuals in the angle of inclination of the femur. The angle of inclination is approximately  $125^\circ$  with respect to the femoral shaft. A pathological increase in the angle of inclination is called coxa valga.

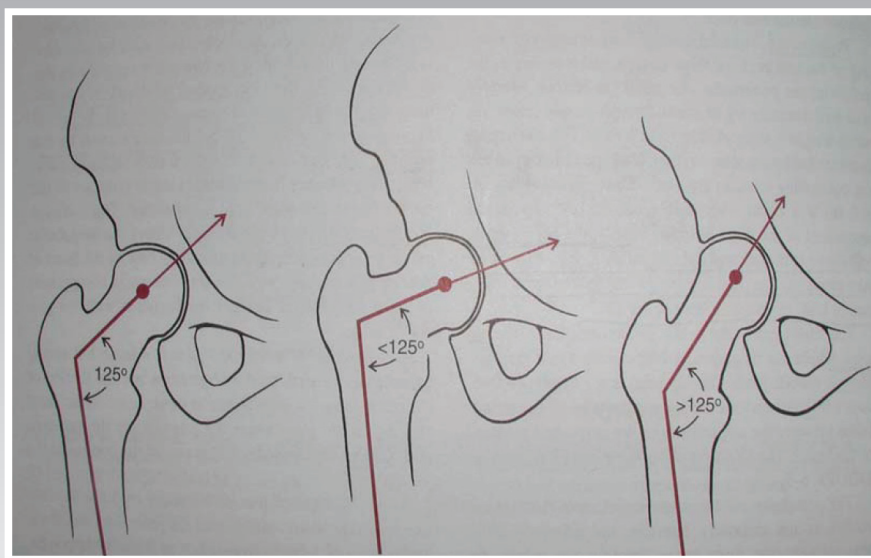


Fig 1: Angle of Inclination in the neck of the femur - (Hamill, 1995 p208)

# In-Toeing Gait

*Text: Menzi C. Ngcobo, Biokineticist, Institute for Sport Research, University of Pretoria*

Coxa valga causes the distal end of the femur to be directed away from the midline such that the knees are further apart. (Spencer, 1978 p21). Although coxa valga is not directly related to in-toed gait, it is associated with genu varum which is a deformity of the knee or tibia in which the distal end of the tibia is directed toward the midline (hen toed or pigeon toed).

The angle of torsion can be best viewed by looking down the length of the femur from top to bottom. An axis through the femoral head and neck will lie at an angle to an axis through the femoral condyles with the head and neck twisted forward with regard to an angle through the femoral condyles. Normally the femoral neck is rotated anteriorly (forward) by 12 to 14 degrees with respect to the femur. If this angle increases, a toe-in position is created in the extremity. A pathologic increase in the angle of torsion is called anteversion and a pathologic decrease or reversal of torsion is known as retroversion.

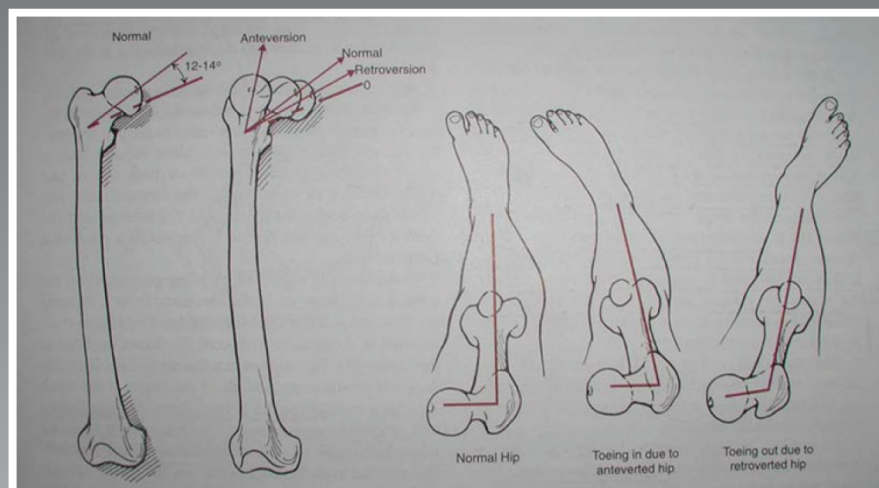


Fig 2: Angle of Anteversion Hamill, 1995 p209



The origin and variability of these angulations are related to the embryonic development of the lower limb. In the early stages of fetal development, the upper and lower extremity limb buds project laterally (side) from the body as if in full abduction (away from the midline). At the end of the eighth week, the “fetal position” has been achieved and the lower limb buds have undergone torsion medially. Although the head and neck of the femur retain the original position of the limb bud, the femoral shaft moves medially and undergoes medial torsion in relation to the head and neck. This is the normal evolutionary process of growth, the development of the angulations of the femur appear to continue after birth and through the early years of development. In-toed gate occurs where normal muscle function is not present to affect the evolutionary corrective process.

In the next article, the focus will be on the knee and foot and how they relate to In-toed Gait 🌈

## References:

1. Pamela K. Levangie & Cynthia C. Norkin (2005). Joint Structure & Function, Fourth Edition.
2. Florence Kendall, Elizabeth McCreary, Patricia Provance, Mary Rodgers, William Romani (2005). Muscles – Testing and Function with Posture and Pain.
3. [http://www.feetonthehill.co.uk/feetonthehill/export/sites/default/PdfFolder/CaseStudyPDFs/CoxaValgaand\\_Anteversion.pdf](http://www.feetonthehill.co.uk/feetonthehill/export/sites/default/PdfFolder/CaseStudyPDFs/CoxaValgaand_Anteversion.pdf)

# OVERTRAINING



## Causes, Identification and Prevention

*Text: Shelly Malan, Biokineticist*

The definition of overtraining is: "...excessive frequency, volume, or intensity of training that results in extreme fatigue, illness, or injury".

It is often referred to as staleness, which may include a plateau or decrease in the individual's performance.

Alternative names for overtraining are: burnout, chronic overwork, physical overstrain, and over-fatigue.

Over-reaching, which is defined as excessive training on a short term basis allowing for improved performance in athletes, can become overtraining syndrome when this phase of training is continued beyond a reasonable period of time. The continuum is as follows:



### CAUSES

Overtraining can be caused by high stress in combination with inadequate regeneration. This occurs when the volume or intensity of training is too high for an athlete, or the progression of a training programme occurs too rapidly over several weeks. A mistake in any acute programme variable, when repeated enough can contribute to overtraining.

Highly motivated athletes using high volumes of heavy loads with high training frequencies and little rest are the most common victim of overtraining. Even though volume is important for continued gains in performance (over-reaching), excessive volume creates a stimulus that exceeds the athletes ability to recover from the stress, which results in excessive muscle soreness and residual fatigue.

Factors according to the study by Gustafsson *et al.*, (2008) that contribute to an athlete's burnout are:

- Sport and training-related factors: this includes insufficient recovery time, athletes not listening to their bodies, and athletes feeling like their lives were designed just for training and school, with little opportunity for recovery and social life. The hallmark of a successful athlete is to ensure that they set sufficient recovery from training.

- Psychology stressors: this includes stress that occurred due to the difficulty for athletes to combine school and sport. Another stressor includes athletes struggling to cope with the demands from coaches and parents. Also, sudden changes in stressors, such as a death of a significant other, can increase the risk for overtraining syndrome even though the training load remains the same.
- Personality: this involves athletes describing maladaptive perfectionist traits, and sometimes high levels of competitive anxiety, all of which contributed towards their burnout.

Reasons why athletes continued with their sport even when they had negative outcomes and distress due to their sport where divided into two categories namely:

1. Sport as identity and self-worth: Without their sport the athletes lose their sense of self, thus leading to a low self-esteem and a sense of shame.
2. Entrapment: This mostly occurs with athletes who attend certain schools due to their sporting talents. These athletes don't leave their sport because not only will they become ex-athletes but they would also have to leave their school and friends.



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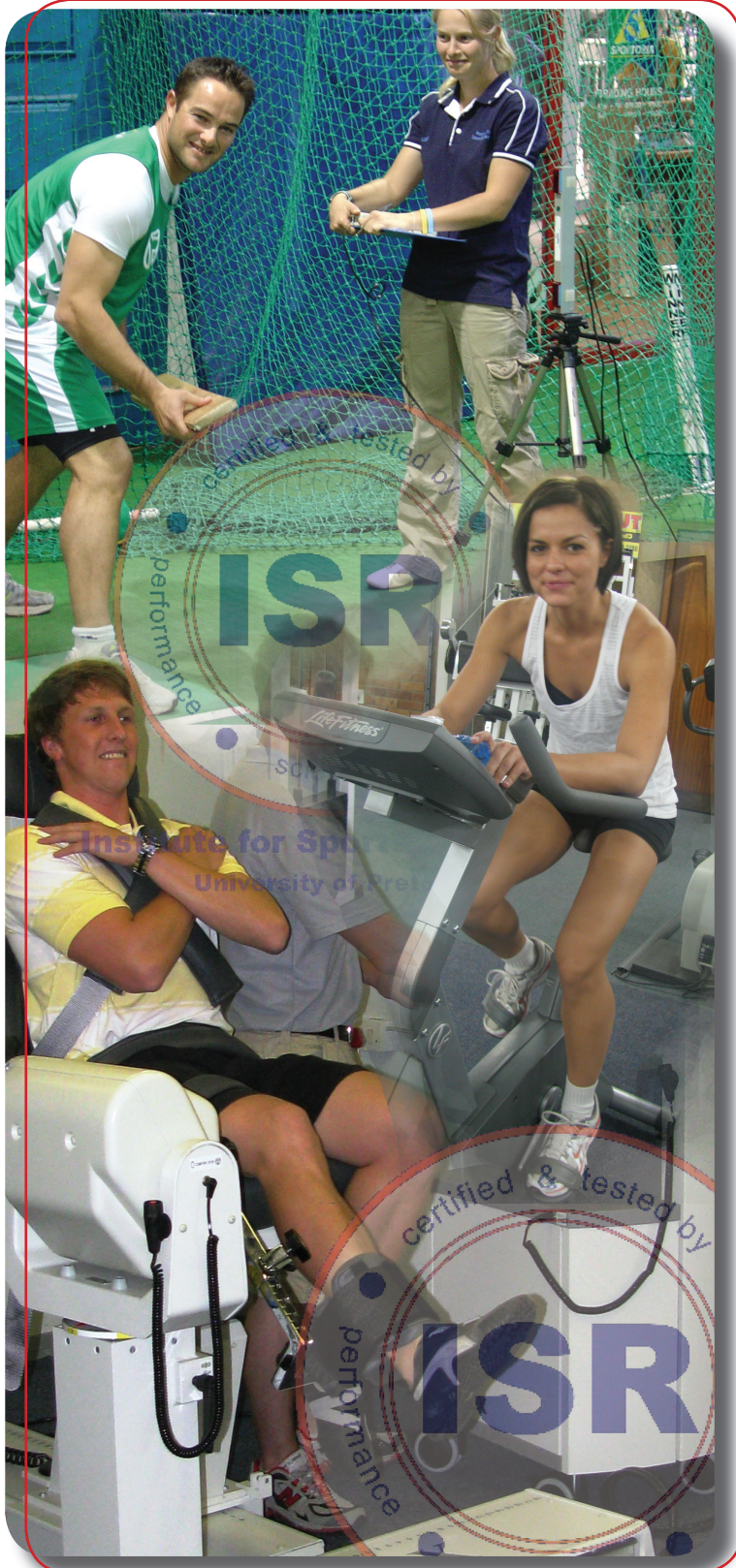
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## IDENTIFICATION

Ways to identify overtraining syndrome in athletes continues to be a challenge for coaches and athletes. This is mainly due to individualised responses in athletes to over-reaching. There is little consensus amongst sport scientists in regard to administration of accurate monitoring, testing and prevention of impending overtraining syndrome.

Because there is no diagnostic tool available to identify overtraining syndrome, diagnosis can only be made by excluding all other possible influences on changes in performance and mood state. One must exclude organic diseases such as endocrinological disorders, iron deficiencies with anaemia, or infectious disease. Coaches must not forget to look into the athlete's feeding behaviours, because anorexia nervosa and bulimia can also negatively affect performance. Early and unequivocal recognition of overtraining syndrome is virtually impossible because the only certain sign is a decrease in performance.



## PREVENTION

Due to the lack of a proven diagnostic tool for overtraining syndrome and because preventing any condition is always better than curing, the following pointers are very important for any coach to know in order to help prevent overtraining syndrome;

- Helping athletes cope with sport and money hassles, as well as building social support may help prevent athlete burnout.
- Making sure athletes do not participate due to entrapment.
- Maintaining intrinsic motivation for sport throughout the season.
- Monitoring eating disorders.
- Early identification and monitoring of susceptible athletes.
- Programming recovery training and rest days into the training cycle.
- Individualised training.
- Make athletes feel involved in their programme design
- Ensure athletes have a supportive atmosphere and proper communication with their coaches

Mackinnon (2000) describes 5 factors (at minimum) that should be avoided in order to prevent OTS;

1. Sudden increase in training volume and/or intensity.
2. Heavy competition schedule.
3. Lack of periodization or programmed recovery in the training schedule.
4. Monotonous training programme.
5. High self-reported stress levels, regardless of whether they are directly related to training.

In conclusion overtraining in athletes is a serious condition that coaches must be very careful in avoiding. Yes, in order to improve an athlete's performance they need to be pushed, however there is a fine line, which once crossed, the road to recovery both mentally and physically can be very costly for athletes to make 🌈

### References:

1. Baechele, T. R., Earle, R.W. 2008. *Essentials of strength training and conditioning*. Third Edition. Human Kinetics
2. Coutts, A. J., Slattery, K. M., Wallace, L. K. 2007. Practical tests for monitoring performance, fatigue, and recovery in triathletes. *Journal of Science and Medicine in Sport*. 10:372-381
3. Cresswell, S. L. 2009. Possible early signs of athlete burnout: A prospective study. *Journal of Science and Medicine in Sport*. 12:393-398
4. Gustafsson, H., Hassmen, P., Kentta, G., Mattias, J. 2008. A qualitative analysis of burnout in elite Swedish athletes. *Psychology of Sport and Exercise*. 9:800-816
5. Lemyre, P.N., Hall, H.K., & Roberts, G.C. 2008. A social cognitive approach to burnout in athletes. *Scandinavian Journal of Medicine & Science in Sports*. 18:221-234
6. Mackinnon, L.T. 2000. OTeffects on immunity and performance in athletes. *Immunology and Cell Biology*. 78:502-509.
7. Meeusen, R., Duclos, M., Gleeson, M., Rietjens, G., Steinacker, J., Urhausen, A. 2006. Prevention, diagnosis and treatment of the OTS. *European Journal of Sport Science*. 6(1):1-14
8. Nederhof, E., Lemmink, K.A.P.M., Visscher, C., Meeusen, R., Mulder, T. 2006. Psychomotor speed: possibly a new marker for OTS. *Sports Medicine*. 36(10):817-828



# Taking It To The Limit

Text: Nicki de Villiers Registered Dietitian, hpc



Preparing for a competitive event usually involves a heavy training schedule that will demand a great physical output. To invest not only in a proper training programme, but also in good nutrition, will pay off well with results like quicker recovery between training sessions, resistance against injuries and more endurance during your training and ultimately a great performance on the BIG DAY.

Endurance activities require sustained production of high rates of energy production, with typical dominant contribution of aerobic energy systems varying according to the speed and duration of the activity. Fatigue during endurance activities can be caused by variety of factors, which some can be manipulated through appropriate nutrition. These factors include:

- Fluid Balance
- Availability of Carbohydrate Fuel
- Disturbance to Acid-Base Status

## Nutritional Issues and Challenges

- Supply athletes with fuel and nutrients needed to optimize performance during training sessions
- Optimal recovery after training sessions to improve training performance
- Optimal health and anthropometric shape
- Competition strategies with optimal intake before, during and after training or competition to reduce fatigue

## Summary of Common Nutritional Issues arising in Endurance Events

### Physique Issues

- Desire to reduce body fat and body mass to enhance performance via enhanced power to mass relationship
- Risk of dietary extremism, disordered eating and inadequate nutrition attributable to overemphasis on low body mass and body fat level

### Training Issues

- High energy and carbohydrate requirements to meet a heavy training load
- Recovery between training sessions (refuelling, rehydration, repair and adaptation)
- Adequate fuel and fluid intake during training sessions, including practice of race-day strategies
- Compromise in achieving fuel requirements, and adequate intake of protein and micronutrients when energy intake is restricted to achieve body mass and body fat goals
- Risk of low iron status, especially in female athletes and vegetarian eaters, secondary to inadequate dietary intake and some increase in daily requirements
- Risk of menstrual disturbances in female athletes secondary to energy drain
- Risk of gastrointestinal disturbances and discomfort during prolonged or high-intensity running sessions

### Competition

- Preparation of adequate fuel stores for race day: carbohydrate loading before races
- Pre-event nutrition: topping up fuel and fluid levels without causing gastrointestinal discomfort during the race
- Fuel and fluid replacement during races: consideration of need and opportunities for intake at aid stations
- Travel: travelling to major competitions and on race circuit

## Nutritional Solutions

It will be necessary to check your diet against the following:

### Energy intake

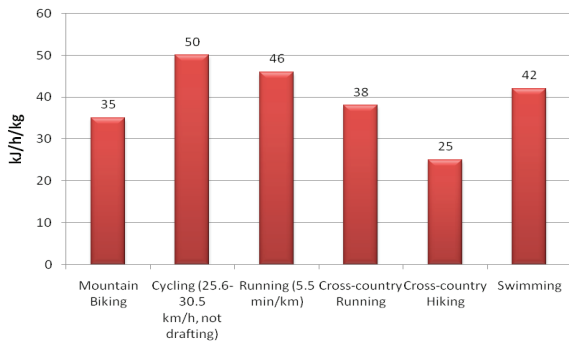
If you have the correct weight for height, age and gender and neither loses or gains weight, you are in a state of energy balance and are consuming the right amount of energy.

When determining energy need, one should consider the following:

- Resting metabolic rate which indicates the amount of energy needed every day to support daily physiological functions
- Activity energy which is influenced by the intensity and duration of activities
- In younger athletes, the energy needed to support normal growth patterns

**Energy costs of different physical activities:**

*A dietitian can assist in calculating your energy needs*



*as well as analysing your current food intake in terms of energy, carbohydrates, protein, fat, vitamins and minerals.*

**Carbohydrate: protein: fat ratio**

Once your ideal energy intake is established, you should determine the amount (grams) of carbohydrates, protein and fat that would make up the energy content of your diet.

- Carbohydrate is stored in glycogen stores within the muscle and liver. Carbohydrate is a significant energy source during higher intensity activities.
- Protein is stored within structures such as muscle. Muscles have a functional role in the body and therefore protein within the muscle is not normally as an energy source.
- Fat is stored in the adipose tissue in significant amounts. It serves as the main energy source during resting conditions.

Although physical activity places a high demand on energy intake, it is important to still focus on healthy eating with increased intake of carbohydrates, moderate protein intake and still a strict control of fat intake. An athlete should make sure that his total energy intake should be in the ratio of 55-60% carbohydrates, 15-20% protein and 25-30% fat.

Probably the single most important macronutrient the athlete should watch carefully is his/her carbohydrate intake. Carbohydrate intake should be optimal during training, but intake during the big event could also avoid early fatigue. Recovery before the next training sessions will depend on carbohydrate intake directly after an event or training session.

So, you've trained hard, preparing for the big one. Proper physical training is still the one factor that cannot be overlooked, but without expecting miracles, a lot can still be done to enhance performance and having a much more enjoyable ride by eating and drinking the right stuff.

**THE BIG DAY!**

**Before competition**

**Carbohydrate loading:**

Carbohydrate loading can prolong the duration of moderate intensity exercise before fatigue sets in. This can prevent the decline in pace or work output. A successful loading will although result in weight gain of around 2 kg. Carbohydrate loading is generally started 3 days prior to competition with an increased carbohydrate intake to reach an intake of 10 g/kg body weight combined with a tapering in activity.

**Example of a carbohydrate loading menu:**

65 kg male runner (± 650 g/day CHO)
<b>BREAKFAST</b> 2 cups low fibre cereal with ¼ cup Milk 2 slices toast with Jam 250 ml Fruit Juice
<b>SNACK</b> Fruit Bun + 600 ml Sports Drink
<b>LUNCH</b> 1 large bread roll with fillings 200 g flavoured yoghurt with banana 600 ml sports drink
<b>SNACK</b> 2 Crumpets with honey
<b>SUPPER</b> 1 ½ cups cooked Rice + ½ cup Sauce 1 cup Jelly 600 ml Lemonade
<b>SNACK</b> 1 cup liquid meal supplement
<b>THROUGHOUT THE DAY</b> 100 g Jelly Sweets

50 kg female runner (± 500g/day CHO)
<b>BREAKFAST</b> 1 ½ cups low fibre cereal with ¼ cup Milk Slice of toast with Jam 250 ml Fruit Juice
<b>SNACK</b> Fruit Bun
<b>LUNCH</b> 1 large bread roll with fillings 200 g flavoured yoghurt 600 ml sports drink
<b>SNACK</b> 1 Crumpet with honey
<b>SUPPER</b> 1 cup cooked Rice + ½ cup Sauce 1 cup Jelly 250 ml Lemonade
<b>SNACK</b> 1 cup liquid meal supplement
<b>THROUGHOUT THE DAY</b> 100g Jelly Sweets

The meal on the morning before a competition should consist of:

- High carbohydrates – 1-4 g carbohydrates / kg body weight (200 – 300 g) eaten 2 – 4 hours before the start of the competition
- Low fat content
- Low fibre content
- Low to moderate protein content

**EXAMPLES OF PRE-COMPETITION MEALS**

Breakfast cereal with milk and fruit
Porridge with low fat milk and fruit juice
Pancakes with maple syrup, honey or golden syrup
Toast, muffins or crumpets with honey/jam/syrup
Baked beans on toast
Spaghetti with low fat, tomato based sauce
Jacket potato with creamed corn
Low fat breakfast bar or muesli bar and banana
Roll or sandwich with banana and honey
Fresh fruit salad with low fat yoghurt
Smoothie with low fat milk, low fat yoghurt and fruits

**During competition**

**Fluid needs**

It is important to know your fluid needs prior to a big event. Earlier advice to drink as much as possible has since been proven incorrect. The idea is to drink enough to prevent dehydration, but not too much to avoid overhydration. A good guideline to follow is taking 125-175 ml fluid every 15 minutes. This adds up to 500-700 ml per hour that can be increased to 1000-1200 ml every hour in very hot conditions. Train yourself to drink enough during practise and competition. It may take some time to get into the habit, but you'll soon reap the rewards. You can use your weight as an indicator of the amount of fluid you've lost by weighing yourself before and directly after the race. The difference in kilogram will be equal to the amount of fluid you've lost in kilograms as 1 kg weight loss = 1 litre fluid loss

**Energy needs**

As muscle glycogen, which is your prime energy source, gets depleted within 1.5 hour's time, fatigue will set in as a result of low blood sugar. Athletes refer to this condition as "hitting the wall" or "bonking". This will easily be avoided if carbohydrates are taken during the activity if the activity lasts longer than one hour. The recommended intake is 30-60 grams of carbohydrate per hour of activity.

**EXAMPLES OF FOOD CHOICES SUPPLYING 50 G CARBOHYDRATES**

<i>CHOICE</i>	<i>AMOUNT REQUIRED TO PROVIDE 50 g CHO</i>
<i>Powerade (6% carbohydrate)</i>	<i>600 ml</i>
<i>Sports Gel (40 g sachet)</i>	<i>2 sachets</i>
<i>Sports Bar (60 g bar)</i>	<i>1 ¼ bar</i>
<i>Cereal or Muesli bars</i>	<i>2 bars</i>
<i>Bananas</i>	<i>2 medium</i>
<i>Other fruit (e.g. Oranges)</i>	<i>3 medium pieces</i>
<i>Jelly beans</i>	<i>60 g</i>
<i>Chocolate bar</i>	<i>80 g</i>
<i>Dried fruit</i>	<i>80 g</i>
<i>Cola drinks (11% carbohydrate)</i>	<i>450 ml</i>
<i>Sandwiches / Bread</i>	<i>2 thick slices with honey / jam</i>
<i>Fruit bread / Cake</i>	<i>100 g</i>

**Electrolytes (sodium, potassium)**

Small quantities found in sports drinks are sufficient to prevent deficiencies. It also helps to make the drink more palatable and ensure fast gastric emptying.

**The ideal drink/ snack**

Carbohydrate and fluid replacement can be done through the use of sports drinks. The ideal drink contains 4-8% carbohydrates (4-8 g/100 ml) as these concentrations assure fast gastric emptying for quick energy supply. 30-60 g of carbohydrates per hour will be sufficient to cover all losses. An intake of 600 – 1000 ml of a 6% carbohydrate drink provides 30 – 60 g carbohydrates.

During a relative long race snacks can also be taken if hunger pains strike. Again the rule should apply that only snacks high in carbohydrates, low in fat and fibre should be taken, so it can be digested faster. Bananas should therefore be a suitable choice.

Remember that needs varies among athletes. Fine tune your refuelling and rehydration strategies during practices and less serious competitions – well in advance and stay with what you know works for you! 🌈

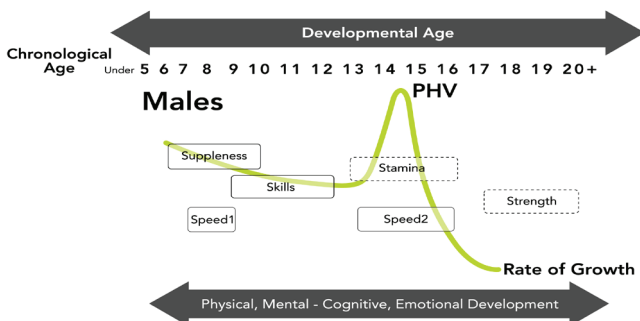


# Conditioning and Supplementation of High School Rugby Players

Critical development of athletic and cognitive ability begins at a very early age. As children mature, they progress through the same development stages of maturation and growth. Optimal windows of trainability exist, during a child's development that offers optimum opportunity to develop particular attributes such as basic movement skills, basic sport skills and physical capacities. Without developing skills and certain physical and mental attributes at the proper time, a child's ability to reach his or her full genetic potential will be significantly affected.

Although all people follow the same pattern of growth and maturation significant differences exist between individuals in the timing and magnitude of these changes. Science therefore underpins the fact that children cannot be treated as mini-adults and that the development of training programs of children should not only be based on their chronological age but also on their specific biological age. Exposing children to the appropriate stimuli before, during and after puberty is therefore crucial for long-term development and place a unique burden and responsibility on parents, coaches and trainers alike.

## Windows of trainability during growth & maturation (Balyi and Way 2005)



Unique windows of trainability exist for speed, suppleness, skills, stamina and strength before, during and after puberty. For e.g. studies indicate that males should refrain from resistance training with weights until 12 – 18 months after the PHV (Peak Height Velocity) in their growth curve during puberty has been reached.

It is a scientific fact that nutrition also plays an important role in the development of children. It has become fairly common practice for teenagers to start using nutritional supplements. Parents and coaches should

be aware of the potential dangers regarding supplement use.

It is PVM's scientific policy to discourage the indiscriminate use of nutritional supplements by high school rugby players because of legitimate scientific and ethical considerations. Parents and coaches should be aware of the fact that:

- Achieving success requires hard and smart work. Instant success is impossible and avoiding fads is important.
- Legislation does not put the onus on supplement companies to scientifically prove efficacy and safety of their products and of the claims they make.
- Rugby players run a high risk of consuming supplements containing banned substances.
- Product labels and persons advising on supplement use cannot be trusted blindly

Nutritional supplements should be seen as complementary to specific training regimes and good balanced nutritional intake on a daily basis. Only within this context do nutritional supplements play a contributory and scientifically valid role in health and performance. It is therefore advisable that parents and coaches seek professional assistance and advice buying supplements. PVM is not only subcontracted to condition the Free State Cheetahs but also provides nutritional assistance to various top schools most notably Grey College Bloemfontein.

To quote Dr. Johan Volsteedt, Headmaster of Grey College: "Parents and coaches who deal with teenage sportsmen must be made aware of the advantages and developments regarding fitness-, strength/conditioning-, psychological programmes and supplementation. Well-meaning parents/coaches with superficial knowledge or information can easily give the wrong advice or rely on quick-fix programmes in the hope that school children can be turned into "superstars" overnight.

Enjoyment of an activity and striving to be the best one can be, should be the main reason for participation and development at school level. At Grey College we are pleased with the involvement and expertise of PVM in school sport. At the heart of our partnership is PVM's ongoing research and genuine interest in what is best for our players."

Alfred Rheeder - PVM Nutritional Sciences. Should you require nutritional assistance contact PVM at (012) 804 7676 or visit [www.pvm.co.za](http://www.pvm.co.za)

PVM Nutritional Sciences offers superior nutrition through applied science. Since 1968 PVM, the producer of the world's original energy bar, has remained dedicated to a cutting edge understanding of the biology of energy exchanges between humans and their environment. PVM is involved with numerous top athletes and sport teams and is also subcontracted to condition the Free State Cheetahs.



IF YOU THINK YOU CAN EAT YOURSELF FIT, EAT YOURSELF THIN AND EAT YOURSELF INTO THE RECORD BOOKS, READ NO FURTHER.

But if you're serious about fitness and beating your personal best, read on.



"Ultimately it is about winning... being the best I can. I am serious about nutrition as I am about training. Winning at the level I compete is not easy, it requires hard work and dedication to detail. PVM knows that instant success is impossible and that avoiding fads is important. When it comes to performance nutrition I have learnt to distinguish between fact and fiction. That is why I use PVM"

**Mannie Heymans**



**Octane 90 : 10 : 0**

**Primary Usage**  
**Energy:** Before and during endurance events/training  
**Secondary Usage**  
**Recovery:** After training and events



**Reignite 82 : 10 : 0**

**Primary Usage**  
**Recovery:** After training and events  
**Secondary Usage**  
**Carbo-loading:** Day(s) before event

PVM products contain no stimulants and all ingredients are deemed legal substances by WADA.

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# Training during winter: how to adapt

*Text: Ignatius Loubser, Head Strength & Conditioning specialist hpc*

It is no easy feat to keep up your training when winter comes. Even professional athletes struggle with the chills and challenges of the season, which is why many of them end up seeking out warmer shores in the winter months. At the hpc, for instance, you will find European athletes escaping the cold of their countries to come bathe in our December sunshine. And the same goes for our South African sports men and women when the Northern Hemisphere has its summer. But for those of us who are not professional athletes, migrating tactics are not an option. Luckily, South Africa doesn't have winters comparable to those of, for instance, the Scandinavian countries or Canada. Nonetheless, taking precautions when winter closes in on you is essential. And with this in mind, here are seven tips to keep you fit and fighting in the frost:

## 1 Immune system

Give your immune system the support it needs by ensuring that you eat healthily and sleep well. You can also supplement your diet with juice-powdered super foods, super juices, vitamin D3, Vitamin C, certain amino acids and the like. This should be done throughout the year and not just in winter, but it is important to give this component even greater attention 2-3 months prior to winter.



## 2. Clothing: dress in layers

A big mistake people make is dressing to warm themselves, which can cause sweating during exercise. The layer of perspiration that forms on the skin creates a chill which might, in turn, produce a cold. The solution is to dress in layers. Start with shirts made from polypropylene materials. Avoid cotton because it will stick to your skin when it becomes damp or wet. The next layer can be a fleece or wool layer topped with a waterproof, breathable outer layer like a jacket or vest that can be removed as you warm up during the session.

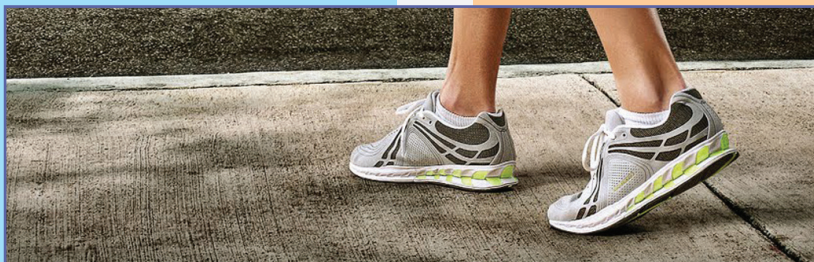


**3. Cover your outer extremities**

These are your hands, ears, nose and lips. The reason for this is that the human body has a survival mechanism that causes circulation of blood to move to the body's internal core when it is really cold. This means that blood gets moved away from the extremities when you are in a cold environment, which causes them to get cold first and feel negative side effects like numbness and, in the worst cases, frost bite! So if you want to keep warm and safe, wear gloves and a beanie.

**4. Hydration**

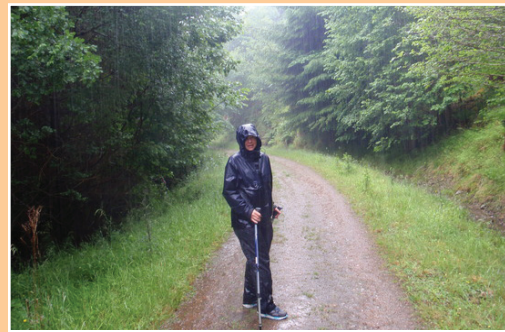
This is important in any kind of weather, but in cold weather you are inclined not to drink enough fluids. Be sure to hydrate!

**5. Warm-up**

As always ensure that you warm up properly. If possible, start your warm-ups indoors and move outside just before you start breaking a sweat.

**6. Pay attention to weather conditions**

Take weather predictions into account and dress accordingly. Be sure not to get wet and insulate yourself against penetrating winds.

**7. Feet**

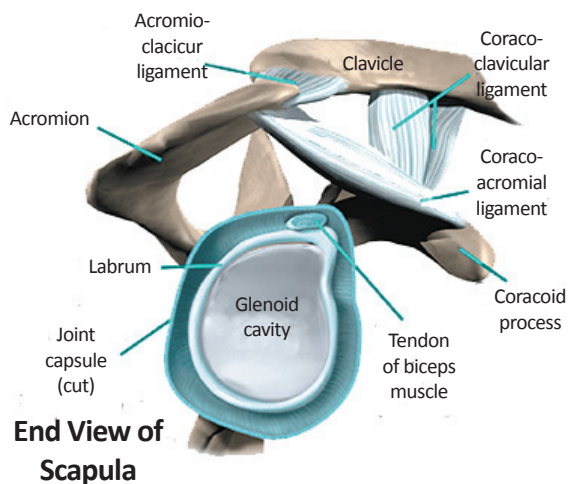
Do not over-layer your feet, because this will cause them to sweat and become cold. Choose shoes with a low amount of mesh and use wicking socks. These socks are made of a blend of spandex, nylon, and polyester that keeps moisture away from the skin.

So if you are training outside during winter, cover up and make sure you have a dry change of clothes handy. And for those of you who think winter is made for snuggling and soup: man up and face the cold! 🌈

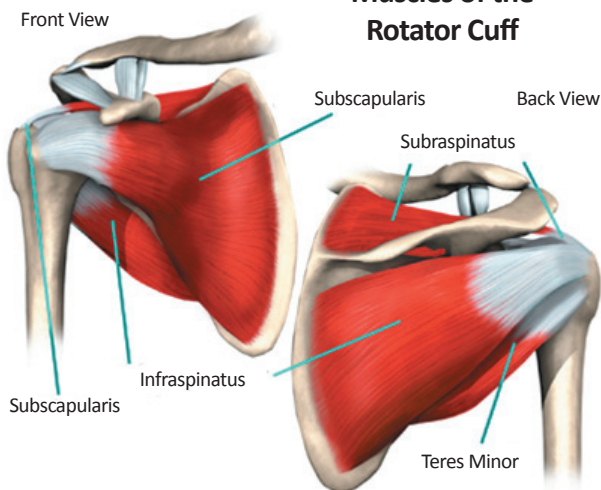
# Common shoulder injuries in triathletes

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

## Anatomy of the shoulder



## Muscles of the Rotator Cuff



## Common causes of shoulder injuries:

- Overuse: repetitive overhead activities
- Abnormal shoulder biomechanics: strong movers, weak stabilizers
- Direct trauma
- Bad posture
- Bad flexibility

## Most common shoulder injuries:

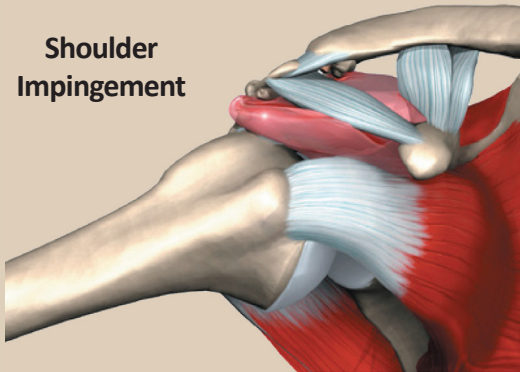
- Rotator cuff strain or inflammation of rotator cuff tendon, leading to impingement
- Instability: easy dislocation or subluxation
- Tears of the labrum of the glenoid
- Referred pain from the neck or thoracic spine
- Sprains of the acromioclavicular joint
- Collar bone fractures
- Biceps tendon inflammation



Shoulder impingement:

- Common in overhead activities like throwing and pitching
- Also very common in swimmers and tri-athletes: freestyle and butterfly
- Swimmers develop excessive strength in the internal rotators (pectoral muscles)
- This reduces the space underneath the end of the collarbone and the head of the shoulder and result in impingement and chronic swelling of the tendons
- This leads to a vicious cycle of swelling and even more impingement due to swelling of the tendons and can lead to small rupture in the tendons

**Shoulder Impingement**



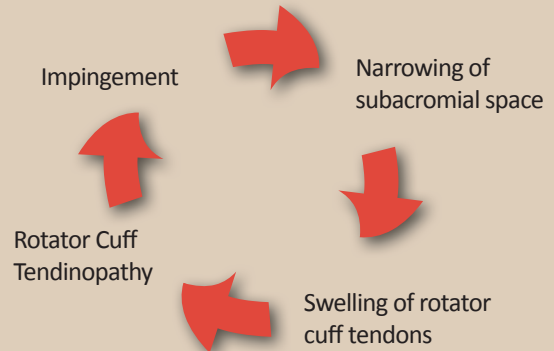
Clinical features of athletes with impingement syndrome

- Athlete complains of pain with overhead activity but no pain with activities below 90 degrees of flexion
- Painful to sleep on affected side
- Painful with palpation over anterior part of shoulder
- Painful with resisted abduction, horizontal flexion and internal rotation: Empty can test (see picture below)



Rotator Cuff Tendinopathy

Primary	Secondary
Overuse Faulty Biomechanics	Overload due to abnormal mechanics or impingement



Basic Dry Land Exercises

Front Support

- Keep back in a line
- Do not lift your bum
- Progression: Lift one leg without dropping the hips or rotating



Back Support

- Open chest up
- Sternum (breast bone) to the ceiling
- Progression: Lift one leg without dropping the hips or rotating



### Elastic Band Exercises

#### Shoulder External Rotation

- Sit up straight – lengthen your spine
- Keep elbows in at your sides
- Palms up
- Pull elastic out



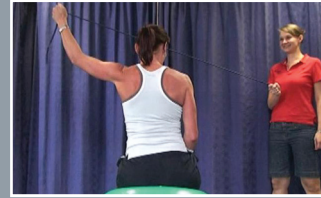
#### Shoulder Abduction

- Sit up straight with band behind you and arms at your sides
- Pull the arms outwards and slightly back against resistance of band



#### Single Arm Elevation 1

- Sit up straight
- Lift arm in a diagonal across body from opposite hip up against resistance
- Keep body still



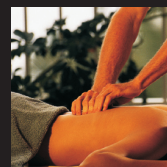
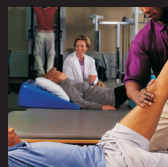
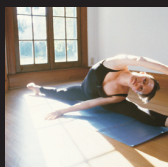
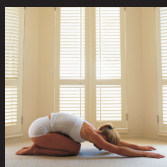
#### Single Arm Elevation 2

- Sit up straight
- Pull arm down diagonally towards same hip
- Keep body still



# High Performance Centre Physiotherapists

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General sports physiotherapy practice which also offer:

#### Biomechanical Analysis

- Functional movement analysis to identify :  
muscle length- and strength imbalances  
movement impairments  
areas at risk for injury
- Correction of the above and injury prevention
- Pre-season preparation
- Stretching programmes
- Strengthening programmes
- Identification of incorrect muscle recruitment patterns with correction

#### Massage

Includes sports, pre-event, recovery, lymph & pregnancy  
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- Whole body exercise which challenge people on all movement ability
- Improves posture
  - Strengthens stabilisers
  - Improves flexibility
  - Breathing technique
  - Improves circulation
  - Skill-based conditioning
  - Relaxation

#### Osteopath on site (Monday & Wednesday AM)

Spinal alignment and postural correction

## Pre-Season Special !!!

**Biomechanical Analysis R350 (Includes evaluation and 2 week exercise programme)**

# Tiredness in sport



*Text: Dr Org Strauss, hpc*

**P**ersistent tiredness, often accompanied by a feeling of lethargy and impaired sporting performance presents commonly among sports men and women. These symptoms might be the primary reason for a visit to your medical practitioner or maybe an additional complaint of a sportsperson presenting with an injury, commonly an overuse injury.

There are many possible causes of tiredness in sportspeople like, overtraining syndrome, viral illness, inadequate nutritional intake, depletion of iron stores, insufficient sleep, chronic fatigue syndrome, dehydration, allergic disorders, asthma, magnesium/zinc/vitamin B deficiencies, jet lag, anemia, medication use, hypothyroidism and psychological stress, to name a few.

Athletes in heavy training are constantly tired but can easily differentiate between normal healthy tiredness and abnormal tiredness. Abnormal tiredness are accompanied by a deterioration of training and competition performance and the condition is not easily reversed. Healthy tiredness can be reversed with rest for a day or two.

Questions that you should ask yourself to distinguish between normal or abnormal tiredness are the following:

- Do I fall asleep during the day?
- Is there a constant feeling of fatigue or does the tiredness only occur during or after exercise?
- Is the tiredness constant or intermittent? The later may indicate a venue where a certain allergy occurs or dehydration in humid weather etc.
- How long has the tiredness been present and was it related to a certain event like a viral illness or

overseas trip?

- Are there associated symptoms like a sore throat or coughing and chest tightness after exercise which may indicate disease or exercised induced asthma?

Guidelines for professional and other sports people to avoid overtraining and tiredness are to keep a proper training diary and do proper planning and periodization of training programmes. This will help the athlete to get adequate rest between hard training sessions. This diary should also include comments on amount of sleep, social events and other commitments such as sponsor functions etc.

Psychological factors such as fear of mayor impending competition, concern about poor training performance and fear of failure should also be considered and taken into consideration by the athlete. Anxiety and depression may play a role and could be treated in athletes.

A nutritional diary can contribute a lot, this will help the athlete control and monitor his fluid intake as well as intake of proteiens, carbohydrates, fatty acids and other important micro nutrients.

If unsure it is always wise to consult your medical practitioner and have him exclude medical causes of tiredness. This will be done through the taking of a proper medical history, physical examination, blood tests and special investigations like xrays, MRI scans etc. Once an athlete has developed chronic fatigue syndrome or overtraining syndrome, the athlete might take months to recover. The important principle to remember in all sport is that rest is as important as training itself because the body needs enough time to recover.

Happy training! 🌈

# Attending a Sport School

Text: Hettie de Villiers

**T**he dilemma faced by young semi-professional football players wishing to complete their school education with good results, but at the same time wanting to train and play well and hard enough to catch the eye of the national coach or scout, was highlighted in an article named ***Sport or school? Dreams and Dilemmas for talented young Danish football players*** (European Physical Education Review:2009. Vol 15:1).

Although the paper explores how 15-19 year old Danish football players experience the difficult task of balancing the two central forces that govern their young lives – school and sport, the study is equally applicable to all sports codes at a high performance level – including the ten codes offered at TuksSport High School. High performance learner athletes, like the young footballers mentioned in the study, are conflicted in their dreams and ambitions to become professional athletes while trying to maintain marks that are good enough to ensure entrance to a university.

According to the article, one of the choices the young footballers face on a daily basis is deciding how much time should be spent on homework as opposed to football. In reality it is more a case of how much they *can actually* focus on their work. Not only do players have to attend school and training sessions (often twice a day), but a significant part of the day is spent on being transported from training to school and back to training, leaving very little time for players and athletes to do their homework (p127).

Teachers and coaches want the same from the learner athletes – commitment, dedication, and good results – and both parties expect more from those who are the most talented. The combined expectations and

demands of the coaches, teachers and parents creates a pressure-pot from which the learner athletes often do not escape unscathed.

Christensen and Sørensen's explored the levels of and conditions which led to stress in a group of 25 young football players in Denmark.

Participants for this study were selected from two groups - those that formed part of the official talent development programme of *Team Denmark*, and those players, who although equally talented, did not form part of the talent group.

The institution *Team Denmark* is responsible for the national development of Elite Sport in Denmark, and young elite athletes belonging to this programme attend *Team Denmark schools* or schools with *Team Denmark* classes. The vision of *Team Denmark* is "to make Denmark the best place in the world for an athlete to be". To achieve this, the institution, in association with its partners, aims to create the best possible conditions for the athletes – including in schools.

As mentioned earlier, the main focus of the article was to highlight areas of stress brought about by the conflicting demands of school and sport, and not on the type and extent of support offered by *Team*



– having your cake (or shake) and eating it



Denmark. However, the article clearly reveals that the young footballers that were fortunate enough to be in a *Team Denmark* school had an advantage over those that attended ordinary schools.

The authors concluded that “if footballers do not belong to this category [being part of the supportive system of *Team Denmark*], pursuing a football career at the same time as working for their academic qualifications may cost them dear and cause them serious problems” which may result in the following consequences:

- A significantly lower set of exam results
- High stress levels related to time pressure and a feeling of being torn between two options
- Dropping out of school
- Mental breakdown (p.125).

The above conclusions validate the existence of sport schools all over the world. High performance athletes need a different kind of support to that offered by mainstream schools, and sport schools are more able to accommodate the needs of high performance or elite athletes than traditional or mainstream schools. Participants in the Christensen & Sørensen study made special mention of the difficulties experienced without help from *Team Denmark* classes and/ coordinators. Below are some comments made by participants: “At my school there is nothing. There is no *Team Denmark* co-ordinator. There is no one to help you. Unfortunately.”

“At my school there is a *Team Denmark* co-ordinator, and that’s how I get my absences approved when I’m off with the National Team. But otherwise you don’t get much help.” (p.121).

There is no doubt that young high performance athletes of all sports codes prefer being on the sports field to being in the classroom. They do what they are really good at and at the same time earn recognition and fame. But doing more of what they love most, leaves less time for doing what they *have* to – schoolwork. Young South African football players who are still at school, but who are talented enough to play in senior leagues and even national teams, often miss school to train with the senior teams.

The youngsters find it extremely difficult to catch up on work missed during their absence – as do other athletes that often compete internationally. On returning from an international competition or tournament, players and other athletes often experience an emotional plummet when faced with the reality of catching up a back-log of homework and studies. Being part of a system that is geared towards assisting athletes to keep up with their studies is often the only thing that stands between dropping out or staying in school. According to the article *Team Denmark* schools “appreciate that there is considerable pressure on football talents’ everyday lives and arrangements have often been made with *Team*

*Denmark* for compensation lessons for the football talents.”

A sport school such as TuksSport High not only shows the same understanding of these pressures but also shares the following characteristics with schools and classes supported by *Team Denmark*:

- A shortened school day to allow athletes to keep up with their training.
- Teachers who have an understanding of the demanding nature of high performance sport and the effect that globalisation of sport has on competition schedules
- A more flexible system (*Team Denmark* allows and encourages athletes to extend their schooling by a year in order to achieve high marks and still remain competitive)
- Teachers /co-ordinators grant extension for the submission of assignments and reschedule formal assessments (tests or examinations).

Below are comments made by three high performance learners at TuksSport High when asked whether being at this school made it easier to balance school and sport:

**Natasha de Vos** (Grade 12, World Youth Olympics swimmer) “Although I was happy in my old school, school work was always my responsibility only. There was no support when I returned from galas. Since being here I experience far less stress during galas and competitions, knowing that on my return I can count on teachers to help me.”

**Robyn Moodaley** (Grade 10, Senior National player – Women’s Football). “Being in this school has made a big difference to me. I know I have to let teachers know before I go away on a tournament and they prepare work for me to do while I’m away. Sometimes when I return, I’m even ahead of the class!”

**Lebo Ngubeni** (Grade 10, u/20 National Squad member – Football) “ My soccer has improved very much since I came to Tuks. The coaches give me time to do my schoolwork if I ask them, and the teachers help me if I am behind. My old school was also a good school, but they never gave me extra classes to help me catch up. And the teachers did not understand why I missed so much school.”

We might not be a national institution, but the collective vision of TuksSport High and the High Performance Centre is identical to that of *Team Denmark* – in spirit if not in word. We aim to make this the place for a South African athlete to be 🏆

(Mette Krogh Christensen and Jan Kahr Sørensen. European Physical Education Review 2009: 15:115)

# TuksSport

## TuksRugby

Lucas Strachan Shield in the bag after 6<sup>th</sup> consecutive 1<sup>st</sup> round win.

UP-Tuks 1 retained the Lucas Strachan Shield on Saturday 25 June when they outplayed TUT in the last Carlton Cup first round match of the season.

UP-Tuks' emphatic 50-24 win against arch rivals TUT secured top spot on the log. UP-Tuks were the only team to finish unbeaten and the only to take maximum points from every one of their six matches. One cannot argue with a 100% success rate (30/30 on the log).

Coach Blikkies Groenewald said that he was very proud of the guys, even though it was not a faultless performance, but one that showed class and commitment to also retain the Carlton Cup. It was also the first time in three matches that the team managed to beat TUT and for that to coincide with their first 50 of the season went down very well.



Left: Mr Louis Nel - President : BBRU and Wesley Dunlop, Captain Tuks 1 with the Lucas Strachan trophy.

## Tuks Students for World Student Games : Beijing 2011

22 Tuks athletes and 7 officials were selected to represent the South African student team (USSA) at the World Student Games from 12 - 25 August in Beijing, China. With the exception of the Olympic Games, these games are the largest multi-sports event in the world and takes place bi-annually.



### Left to Right – back:

Louis Fourie (coach gymnastics), Jenifer Buskes (taekwondo), Kobus van der Walt (Director : TuksSport), Francois Coetzee (golf), Michael Seme (coach athletics), Wenda Theron (athletics), Elizna Naudé (coach athletics), Willie de Beer (athletics), Caster Semenya (athletics), Llewellyn van Leeuwen (coach golf), Sibongile Maswanganye (manager)

### Left to right – front:

Cherise Jones (athletics), Chantel Swan (gymnastics), Gina Switala (golf), Nicole Garcia (golf), Oliver Mayhem (fencing)

## TuksGymnastics took gold at USSA

TuksGymnastics were hosts for the 2011 USSA Gymnastics Championships from 29 June – 3 July. Five universities participated.

Tuks took gold overall.

Results:

1. Tuks
2. Maties
3. PUK
4. Wits
5. UCT



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## Tuks Football : Robyn rules the roost!

Tuks USSA team captain, Robyn Swartz, captained the USSA u21 team to victory at the 2011 SAB u21 National Championships which took place in Johannesburg in June.

The team's road to victory started with a 4-1 win over KZN, followed by a 4-2 win over Western Cape. Northern Cape was next and received a 6-0 drubbing from the USSA team. The team then lost their 4<sup>th</sup> match 1-0 to Gauteng. It was tough going against Mpumalanga, but the USSA team managed a 5-2 victory after 30 minutes of extra time. The match against Gauteng in the final was once again tough and with USSA scoring the equaliser at the death, the game went straight into penalties which the USSA team managed to win 3-2. The other Tukkies in the side was Mosa Sesela.



## TuksRugby : Stand up for the Champions

TuksRugby's women 7's team won the "Torneo International Rugby A 7" in Reunion on Saturday 25 June by beating the French national team 12-10 in the final.

It was the first time ever that Tuks, the only club team that participated, beat the national women 7's team of France. Tuks also beat France in the knock-out round (24-7) and took another French team – the French Marines to task in the semi-finals (14-0). In the other group matches Tuks beat Caledonia (41-0) and Reunion 36-0. Coach Riaan van der Merwe was over the moon, understandably so. "the girls showed a lot of heart and they were rewarded for giving their all. I am very proud of them", he said.



### Tuks Women's Rugby Reunion 2011

**Left to right back:** Mpumi Maseko, Natascha Louw, Ilse van Staden, Mogethi Maleka, Cindy Cant (capt), Janine Botha, Ingrid Botha

**Left to right front:** Riaan van der Merwe (coach), Yolanda Meiring, Marlien Cronje, Pulani Motloung

## TuksSquash wins USSA gold again...

USSA 2011 will go down as the coldest event ever in the past 10 years!

One has come to expect the cold as squash courts have never really been the friendliest places to be in July – but Grahamstown set a new record. The weather might have been cold but the squash was hot. As the youngest team around, Tuks faced stiff opposition with many universities using the services of "mature" and experienced students just to stay competitive.

Cheyna Tucker, Senade Haupt and Menanto Stoltz secured their USSA Top 6 slots and with a tour to the USA on the cards the stakes were high.

Final results:

### A League

1. University of Pretoria A
2. University of Johannesburg
3. University of North West
4. Nelson Mandela Metropolitan University
5. University of Stellenbosch A
6. University of Cape Town
7. Rhodes University A
8. University of Witwatersrand

Tuks also took honours in the B League and won USSA for the 7<sup>th</sup> consecutive year. Yeah Tuks!!



**Left to right front:** Cheyna Tucker, Amy Viljoen, Menanto Stoltz, Senade Haupt, Cristen Delmar.

**Left to right back:** Athan Page, Michael Chennels, Ashleigh Ditchfield, Jaco Ekkerd, Shaun Mackenzie, Liz Mackenzie (coach), Craig Stephens, Wayne Kershaw, Jason Kershaw.



## Tuks Men Win USSA Again!

TukHockey's men's team won the University Sport South Africa (USSA) championships again. This makes it 2 gold medals in three years for this team. What might have made the victory even sweeter was that it was once against arch-rivals UJ. UJ have been beaten finals for three years now and people are asking when will the hoodoo end? The Tuks team by comparison are unbeaten for the last three years having only missed out on making the final in 2009 when they lost on penalty strokes.

The very experienced Tuks team went to USSA as clear favourites to win the title at the newly laid Greenfields Turf at the University of KwaZulu Natal, Pietermaritzburg campus. Although the team was unbeaten in the tournament they had to use all their nous to win the final that went down to the wire.

It was a tightly contested final as the chances that were created by both teams were squandered - the pressure of the situation appeared to be too much. Tuks eventually went ahead on the 48<sup>th</sup> minute as Matthew Guise-Brown buried his 6<sup>th</sup> goal of the tournament via a short corner flick. This earned him the Golden Stick Award for the top scorer at the auspicious event. Tuks were made to pay for not finishing the game off when they had the opportunities as UJ Skipper Miguel de Graca scored a superb field goal in the last minute of play.

Extra time saw both teams slightly more defensive but the throngs of spectators appreciated the added tension. The scores ended even and the two teams had to quickly organise their penalty takers. A new FIH regulation means strokes are not taken but a penalty shoot out decides the winner. Ben Mbana in

goals for Tuks was almost invincible and saved four of the five UJ attempts! This made it easy for the field players to do their jobs and Tuks won 4 – 1 in the shootouts.

Tuks Skipper Francois Pretorius, who is finishing his Engineering degree this year, said, "The team and entire support staff need to take credit for a great week. For most of us it is the end of an era but what a great run and a superb way to finish."

In the last three USSA tournaments the Tuks men's team has scored 48 goals and only conceded 8 and not lost once in their 15 matches. This has resulted in two gold medals and an era of continued domination. Long may it continue.



In no particular : Francois Pretorius, Nicholas Gonsalves, Jonathan Robinson, Rhett Halkett, Berne Burger, Benjamin Raymond, Paul Makwinja, Kyle Rhodes, Michael Sykes, Keagan Robinson, Chris Cloete, Ben Mbana, Malcolm Ratz, Troy Marais, Matthew Guise-Brown, Mark Holliday and Coaches: David Viney & Craig Fulton, Manager: Martyn Van Zyl, Video : Phumulani Mnculwane, Team Sport Scientist: Charlene Jonsson

## TuksNetball : World's best player a Tukkie!

A once in a lifetime honour befell Tuks' SA Protea player Erin Burger on Sunday 10 July when she was named "Player of the Tournament" at the World Netball Championships in Singapore.

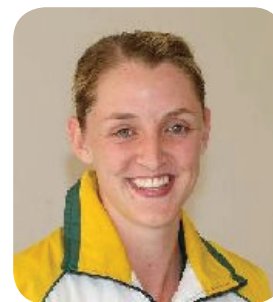
"We are absolutely over the moon with the news. It's huge, very huge! By being voted as best player, Erin ensured a hat trick destined for only a handful of netball players. Her success in Singapore follows that of the SA Championships and Africa Championships where she was also voted best player. We are so very proud of her", commented a jubilant Jenny van Dyk, manager of TuksNetball. Kobus van der Walt, Director of TuksSport commented that Erin has done the University of

Pretoria proud with her remarkable achievement.

Burger was one of 5 Tuks players representing the Proteas at the World Championships, won by Australia.



TuksNetball:  
Erin Burger



# INSIDE NEWS



Grant Hudson, Mike Scott, Jacques Nel (Manager), Teagan Moore (Capt), Jason Smith.

## Young golfers win championships

These four promising golfers from TuksSport High School won the Gauteng North School's championship and the National Championships recently.



## They like to throw their weight around

Four pupils from TuksSport High School competed at the Judo National Rankings in Johannesburg recently. From left are Geonay Whitebooi, who walked away with the gold in the u.40kg, u.17 girls' category, Sinothando Mva came second in the u.52kg, u.19 girls' group and Desiree Blake third in the u.57kg u.17 girls. On the right is Christiaan Boshoff. He won the u.46kg u.17 boys' category. They all competed in the South African Championship that was held in Cape Town at the end of July.

Record: July 2011



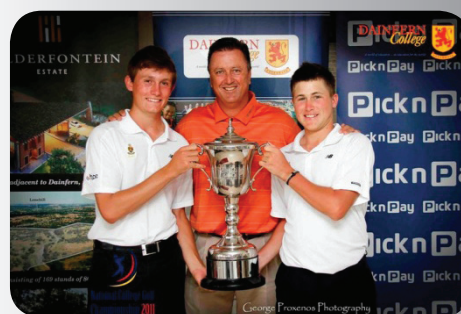
Gololang Makoka has just returned from Korea where he represented SA at the Korea Open International Taekwondo Championships and he got a gold medal in the -72kg category.



Boipelo Motwedi played in the Boland Junior Squash Open Championships, that was held in Paarl over the weekend. She won the girls section which included u16 and u19 players.



Congratulations to Chezwin Timm, who took a Gold medal in the TRAMPOLINE MALE JUNIOR category and Silver in the DOUBLE MINI MALE JUNIOR category.



As first time participants in this prestigious event hosted by Dainfern College, I can say with great pride that TuksB was crowned as champions with a total of 449 and four shots in front of team mates TuksA who were runners up on a total of 453.

## TuksRowing Results

### World Cup 2 Hamburg

#### Womens Pair

Lee Persse (Tuks) Naydene Smith (VLC) 2nd Silver medal

#### Men's Pair

Lawrence Brittain (Tuks) Ramon Di Clemente (Old Eds)

Sponsored 3rd Bronze

#### Lightweight Men's Four

Tony Paladin (Old Eds) John Smith (tuks) Matthew Brittain (Tuks) James Thompson (Tuks sponsored) 8th

#### Womens Single

Hayley Arthur (Old Eds) 12th

### World Cup 3 Lucerne

#### Womens Pair

Lee Persse (Tuks) Naydene Smith (VLC) 5th

#### Men's Pair

Lawrence Brittain (Tuks) Ramon Di Clemente (Old Eds)

Sponsored 10th

Tony Paladin (Old Eds) John Smith (tuks) Matthew

Brittain (Tuks) James Thompson (Tuks sponsored) 6th

#### Womens Single

Hayley Arthur (Old Eds) 14th

#### Men's Four

Shaun Keeling (Tuks) David Hunt (Tuks) Joe Muller

(UCT) Peter Lambert (Tuks Sponsored) 14th

### World Under 23 Rowing Championships Amsterdam

(Finished this weekend)

#### Men's Pair

Lawrence Brittain (Tuks) David Hunt (Tuks) 2nd Silver

Broke the world record in the race



## Triathlon



Wian Sullwald, from TuksSport High School came first in the 16 - 19 yr category in the 2011 Maputo ATU Triathlon African Championships on 3 July 2011. He took a third place in the Holten ETU Triathlon Jnr European Cup held on 9 July 2011 and finished 10th in Echtermach ETU Jnr European Cup in Luxemburg.

## Athletics



Albert Janki, TuksSport High learner won a Silver Medal in the Boys Triple Jump final on 9 July with an excellent jump of 19.95 (his personal best standing at 15.50).

Both Duwayne Boer (Long Jump – 7.20) and Sabelo Ndlovu (Triplejump – 14.91) did extremely well by qualifying for their respective finals.

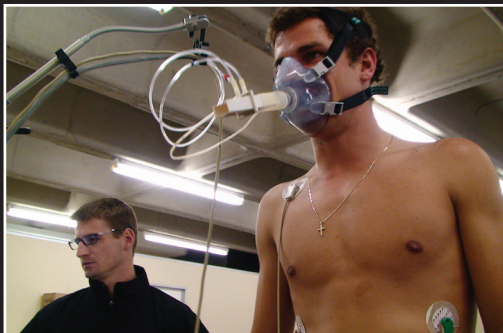
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*Text: Lester Mills*

**T**hanks to those kind people in charge of the University of Pretoria High Performance Centre, I have had the privilege of being able to spend some time at the hpc gym. Talk about a great opportunity to “star watch” while attempting some low level exercise on one of the treadmills or exercise bikes.

It’s not uncommon here to rub shoulders with top international swimmers like Cameron van der Burgh, Roland Schoeman or world champion athletes like LJ van Zyl, Caster Semenya and loads of top rowers, soccer, rugby and cricket players based at the hpc. This, not to mention a number of international athletes who base themselves there from time to time.

The hpc is a true hive of sporting activity. Being a bit of a nosy sports journalist myself, I’ve even taken the liberty to chat with an odd sports star while, of course, not trying to distracting them from the business of building muscle.

I can happily report that not once has anyone been rude, aloof or uncooperative.

It seems then, that while the sporting world sees big stars who demand and value their privacy, behind the scenes they are actually fairly ordinary people. Yes, people who have worked hard to achieve success in the most competitive environments possible, but still ordinary people.

Maybe it’s that “ordinariness” in sport stars which continually reminds them of their own particular roots and the need to give back to their communities or specific disciplines.

At the hpc there are people like former cricket stars now turned coaches Anton Ferreria, Ray Jennings and Chris van Noordwyk, committed to looking after our future cricket stars. Yes, these guys get paid for what they do, but I am willing to bet they put in hours way beyond their briefs. What about some of the present sports stars themselves. Semenya, for arguments sake, has an academy specifically formed to identify and nurture athletic talent in rural South Africa.

Former SA women’s 100m champion Geraldine Pillay – a school teacher by trade – is performing wonders with junior athletes in this region.

Others don’t hesitate to give up time to coach or give advice. There is definitely a passion there for what they do and a willingness to see others become just as passionate. Former Comrades Marathon winner and Iron Man champion Nick Bester recently summed up his willingness to give back to his sport of running as follows:

“Over the years, running has allowed me to fulfil my dreams, so giving back in terms of coaching and donating

equipment is about the least I can do,” said Bester. Apart from being instrumental in nurturing road running talent in this country as manager of the Nedbank Running Club, Bester as another interesting work and that is to promote running within the confines of Pretoria Central Prison.

Some time ago an inmate contacted Bester with the idea of starting a “running club” in the prison.

From donating new and secondhand running shoes to the cause, his efforts have escalated to coaching, providing supplements to runners and recently, with the aid of other sponsors, seeing to it that this running club been provided treadmills to exercise on.

From running around a 400m route within the prison walls, runners have now graduated to being able to simulate running classic races the the City to City and Two Oceans ultra marathons.

The prisoners themselves say this is a wonderful way of keeping fit, passing time, feeling a sense of achievement and most importantly as a tool for rehabilitation.

For his efforts, Bester does not look for or want any recognition, for him its about giving back.

Certainly a fantastic practical lesson for former and present sporting greats.

How about taking things a step further yourselves. Identify a project away from the normal with a specific aim of helping those less fortunate. I can almost guarantee this kind of effort will, in the long run, be far more rewarding to you than vice-versa.

Indeed, lets not just read and agree with a sentiment like the Nelson Mandela Foundation has of giving 67 minutes of your time to a good cause, but actually do something concrete about it.

It’s a challenge to all of us 🏳️‍🌈

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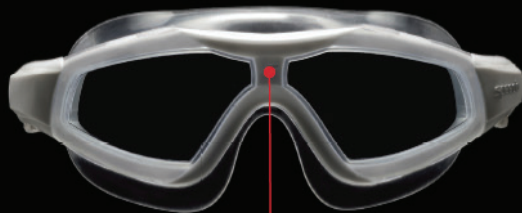
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