

# DIABETES

Real People, Real Stories, Real Answers

## *Lifestyle*

### The Youth issue

- Dating with diabetes
- Nick Jonas rocks!
- Elite athletes
- Kids centrefold

### Cover Story

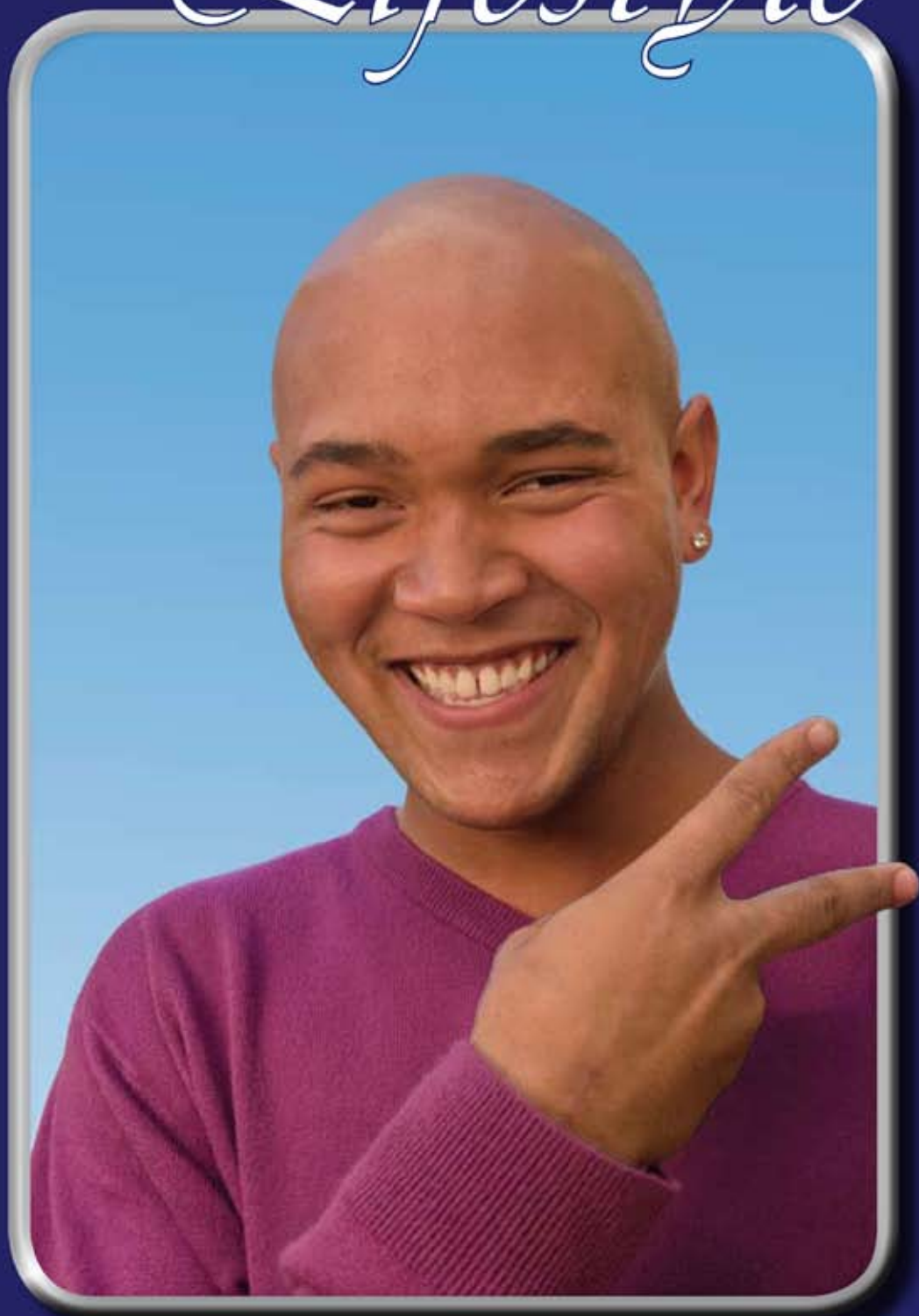
- Eish people!  
Giant wisdom from  
Jayson Pillay

### Doing the RIGHT thing

### Nutrition basics

### Nutrition and a limited budget

### Competitive ball sports challenges



Issue 2: 2011



*The Official Community Journal of the Centre for Diabetes and Endocrinology*

Distributed free via selected pharmacies and medical aid schemes

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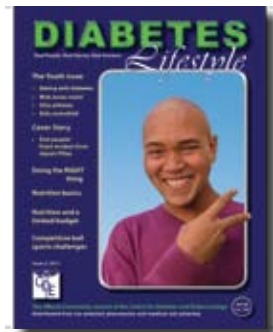


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by Michael Brown

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Published for the  
Centre for Diabetes and Endocrinology by

DevAd Publishing cc  
P O Box 377, Strubens Valley, 1735  
Telephone - 011 475-1536  
devad@polka.co.za

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## Diabetes Lifestyle...

### Real People, Real Stories, Real Answers

We apologise for the delay in getting our fifth issue to print, but we believe the content will make the wait worthwhile - you will still get two more issues before the end of this year. As an organisation, the CDE has been working hard to increase our nationwide coverage and the quality of our service providers and care. Late in July, the CDE hosted its 13<sup>th</sup> Annual Postgraduate Forum, the largest diabetes-specific meeting in South Africa. This event provides education for clinicians from over 290 affiliated CDE Centres of Excellence nationwide;

over 500 contracted general practitioners, other diabetes interested clinicians, as well as representatives of the Pharmaceutical Industry and Medical Funders who are interested in the provision of quality practical diabetes care solutions. As usual, a number of our service providers received awards, recognising their commitment to clinical excellence. For the second year, a formal Graduation Ceremony celebrated a number of South African doctors on completing two years of postgraduate diabetes training through a premier international university. Through this partnership and with the financial assistance of very generous diabetes industry sponsors, the CDE is helping to build the capacity of South African healthcare providers to manage the epidemic of diabetes we face, especially in the context of national moves to provide good health care to all South Africans.

When most think of a child who has diabetes, some unfortunate images may pop into their minds. Rather, think blessed, cute, talented, good-looking, sporty, future world leaders... I am amazed at the quality of young people with diabetes I have met and of their editorial contributions to this our "Youth Issue". We trust that their images and stories will dispel all misconceptions.

Our cover story tells of a 'giant' of a young man, Jayson Pillay. Forget his 1.97 m tall frame - Jayson also has a giant intelligence, personality, wit and sense of leadership. His tale should serve as an inspiration to those who read it. Not only does Jayson say that he has been 'blessed by diabetes', but so do many of the other young people in this issue. Continuing our youth focus, Matt and Shaylen role-model how diabetes cannot block their elite sporting and other leadership achievements, we talk about dating and diabetes and our new 'Centrefold' feature shows some cool kids with diabetes and their interests, passions and hopes across the years before 'legal adulthood'. Finally, and in the context of rising childhood overweight, obesity and type 2 diabetes, we have two valuable articles, one on raising kids that are more active by becoming parents that are more active and the other on nutrition basics for young people with type 1 diabetes.

Of course, we have a number of great articles of general interest - the 'insulin sliding scale' and why it should be consigned to the wastebasket of non-evidence based medicine, coping with healthy eating and diabetes on a limited budget, competitive ball sports and diabetes, keeping in contact with your diabetes team and why diabetes is on the rise.

On World Diabetes Day (November 14) CDE plans to recognise those people who have lived with diabetes for many years. We will present 'Diabetes Milestone Awards', bronze, silver and gold medals to any South Africans who have lived with diabetes for 50, 60 and 75 years respectively. Their stories can provide inspiration to those who follow. If you will be diagnosed 50 or more years ago as at 14 November 2011, please contact me for an application form.

Thanks again to our contributors and our design team. Please support our loyal advertisers, but remember to chat to your diabetes team for individualised advice before starting any new product.

Yours in diabetes care

*Michael Brown*  
**Editor**

Michael@cdecentre.co.za



# Are you looking at every part of diabetes?



Diabetes | A whole new perspective

**You might be missing GLP-1.** It's a natural hormone that helps regulate glucose metabolism. It also slows gastric emptying, promotes satiety, and plays a significant role in beta-cell function.<sup>1</sup> Its multiple actions throughout the body are critical in diabetes.

**Unfortunately, your patients might be missing GLP-1, too.** Many people with type 2 diabetes may have impaired GLP-1 secretion and impaired beta-cell response to GLP-1.<sup>2,3</sup> This could contribute to the pathogenesis of the disease.<sup>1</sup>

Looking at the whole problem is the most important part of understanding it. That's why Novo Nordisk is dedicated to ongoing research and development in the management of diabetes.

**References:** 1. Zander M, et al. Effect of 6-week course of glucagon-like peptide 1 on glycaemic control, insulin sensitivity, and  $\beta$ -cell function in type 2 diabetes: a parallel-group study. *Lancet*. 2002;359:824-830. 2. Toft-Nielsen M-B, et al. Determinants of the Impaired Secretion of Glucagon-Like Peptide-1 in Type 2 Diabetic Patients. *J Clin Endocrinol Metab*. 2001;86(8):3717-3723. 3. Kjems LL, et al. The Influence of GLP-1 on Glucose-Stimulated Insulin Secretion. Effects on  $\beta$ -Cell Sensitivity in Type 2 and Nondiabetic Subjects. *Diabetes*. 2003;52:380-386.

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# Eish people!



Jayson Pillay

## I have been blessed with diabetes

**L**et me start off by introducing myself. My name is Jayson Pillay. To my friends I am more affectionately known as Jay.

I am 18 years old and have had diabetes for 7 years. And what an awesome 7 years it has been! I was diagnosed on the 5<sup>th</sup> of July 2004 (yes I do still remember the day... I even remember the last thing I ate before I went into ICU ;->) and it was absolutely horrible at first. I'm sure you awesome people out there can understand what it was like.

The first night that I was there I had to stand butt naked in front of a really pretty nurse. I wouldn't dare look at her. I spent the next two weeks in Intensive Care after that. Not because my heart stopped from embarrassment but because my sugar was so bloody high! They 'dripped' me full of something to help with my dehydration and I had this thing which bit into my thumb to measure my heart rate. I like to look at things from a positive perspective but it became more and more difficult with each contraption that was latched onto my 11 year old body. The ultimate bummer was when this really gentle looking lady came to me early... very, very, very early one morning and said that she had to take some blood. The word "blood" rolled off her tongue and I was instantly terrified. She saw my reaction and gave me a sympathetic smile. Ha! Sympathy! Whatever... She harpooned me for the next half hour. Oh my soul. That sucked BIG TIME!

After a week or so, after my glucose levels began to stabilize, a diabetes educator was sent to me to tell me about diabetes. Diabetes? At the time I couldn't even pronounce the word diabetes. I remember being told that diabetes wasn't curable and that it would never go away. Never! I would have to start eating different foods and changing my lifestyle. The educator told me about my pancreas and insulin and hormones. Where were all these crazy words coming from? I thought she was speaking a completely different language.

She smiled at me and told me that the pancreas was situated in the stomach. In the stomach? Then surely all I had to do was take an antacid and whatever this pancreas thing was doing would be sorted out. It was only later on that I realized the pancreas was a completely different part of my body...

I was then moved to the paediatric ward. I spent the next two days in a bed smaller than my oversized 11 year old body could fit onto. My feet literally dangled off the edge of this minute little bed. This was turning into more and more of a nightmare each day. I was finally discharged from hospital after spending two days in that tiny bed. I couldn't remember what you would call it if you are given permission to leave hospital, so when I got back to school I told all my friends that I was 'expelled' from hospital. Hardcore! I got home and had to take my first insulin injection ever. I was so scared. I kept running through the process that the doctor showed me before I was 'expelled' from hospital. Make a sausage with your stomach, put the needle in gently and push the thing at the back of the injection slowly. An entire hour later I managed to give myself my first ever insulin injection. And it didn't hurt at all. Not one tiny bit. I felt this overwhelming feeling of satisfaction and independence afterwards.

My holiday was over and I had to go back to school. I had to tell all my friends and teachers that I was now officially a 'person with diabetes'. People felt sorry for me and every time I took an injection at school my friends thought I was a druggie. I just laughed at them and smiled. I still use that laugh and smile tactic to this very day. If I'm testing my sugar at a restaurant and someone looks at me with an awkward eye I just laugh and smile. And the reaction is always the same. They give me a confused smile and quickly look away. I find it very amusing.

My CDE diabetes Centre has to be the most awesome place in the world for someone newly diagnosed with diabetes. I have met life changing people and the coolest doctor and diabetes educator in the world - David Segal and Hester Davel. These two angels have made living with diabetes worthwhile. I am so thankful for having them in my life and for the positivity and support that they have given me with managing my diabetes. Words could not describe

how much I honour, respect and love them for what they have done for me. A true blessing is what they are. Much love to you guys!

High school came along and I had to do the diabetes education thing all over again. But after I got that out of the way I was your average high school kid, getting into trouble and doing all the crazy stuff one does in high school. And, like all good high school stories there was a girl involved...


I met this special girl in my first year of high school. At first I was scared that she was going to think I'm weird because I had diabetes. But my charm and debonair style took control and I put my diabetes aside for once. I finally scraped together the courage to ask her if she wanted to be my valentine. She said yes, obviously, and we became the best of friends. After a while I decided to tell her about my diabetes. I showed her my tester and injections and explained diabetes to her better than I had ever explained it to anyone ever before. She accepted it completely and we continued with our friendship the same as before. I went to another school and had to leave her behind for a while. But luckily I went back to my old school at the beginning of Grade 11 and we started dating.



that I have been honoured to meet some of the most amazing, awesome kids in the world since I became a youth leader. I have experienced so many wonderful moments on the diabetes youth camps over the past four years - the memories will stay with me forever! I have also gained so many brothers and sisters over the years that I have a whole 'diabetes family' aside from my family at home.

I believe that I have been blessed with diabetes. It has made my life an incredible journey thus far and continues to present me with more and more learning and growth opportunities every day. I have embraced being a person with diabetes. I couldn't have asked for anything more special in the universe. Of course it can be a pain in the bum at times, but if you roll with the punches and try to make the best of it, it becomes easier and easier to deal with everyday. If there is one thing I want to be remembered as, it would be as the guy that took diabetes and turned it into the most fun, exciting, greatest experience ever.

Peace and Love... Jay :-)

PS: Share your experience of diabetes with others on the Youth With Diabetes (YWD) webpage, please send your story to [JMasta7@gmail.com](mailto:JMasta7@gmail.com) 

I recently asked Kimlon how she feels about having a boyfriend with diabetes and she told me that it felt perfectly normal. The only thing that bothers her is when my glucose is low or high. Then she stresses like crazy. But because she knows about my diabetes, I'm comfortable talking about it and doing all the normal things that someone with diabetes does, around her. The best thing I have done for my relationship is just being open about diabetes. And so far it is working out just fine.

I attended my first diabetes camp in the summer after I was diagnosed. I was the shy guy who didn't talk to anyone. But because I saw other young people who went through the same thing that I was going through and who could empathize with me, I felt a sense of belonging. I've attended many diabetes camps after that. Eventually I was approached to become a Diabetes Youth Leader, so that I could help other young people with diabetes. I grasped the opportunity with both hands. I can proudly say

### **Sugar Free** by Jayson Pillay

Toss away the sweet array of mayonnaise and butter,  
Add a sprinkle of delight and place it on cucumber,  
Replace the taste (with confidence) of candy canes and condiments,  
Give a try to Low GI, if you do it, so will I  
And, to our doctors we will not lie because our sugars won't be sky high!  
Have a cool drink, make it lite,  
In love with Protein? Have a bite!  
These are 'free', don't complicate or contemplate carbohydrate,  
But, if a mealtime comes around, make sure that insulin can be found,  
Live it large and let life be,  
Test my sugar and you will see that I am sweet,  
Yet sugar free...

# For what we are about to receive...



*Dr. Larry Distiller  
Specialist Physician / Endocrinologist  
CDE, Houghton*

## **The Dreaded, Horrible, Beastly, Unthinking... “Sliding Scale”**

Many people on insulin therapy administer their insulin by means of a “sliding scale”. This is sometimes advised by their doctors, but more commonly people with long-standing diabetes develop this technique themselves. A “sliding scale” means that the people will give varying amounts of insulin at the time of injection dependent upon their prevailing blood glucose level. This is either done with the short-acting insulin before each meal, if one is on a multiple injection (basal-bolus) regimen, or before breakfast and supper if one is on two injections of biphasic (or premixed) insulin per day. Superficially, this seems a reasonable thing to do. After all, if your blood glucose is low before a meal, surely you should give less insulin, and if it is high, does this not mean you need more insulin? In so doing, the insulin doses become highly variable, from almost nothing (if the blood glucose level is quite low) to quite large doses (if the glucose is high). In other words, the dose of insulin slides up and down the scale dependant on the blood glucose measured at the time of the injection.

In actual fact, using a sliding scale in an attempt to control your blood glucose is not only a pointless exercise, but is often dangerous, promoting not only the likelihood of severe hypoglycaemia, but also very wide swings in blood glucose with very high readings intermittently (increased blood glucose variability). This occurs because the blood glucose level that is measured before a meal is an indication of what has happened between the last injection and meal and the present. It is largely dependent on the balance between

the previous injection and the subsequent intake of food, and particularly starch (carbohydrate). The insulin injection you are about to give is to control your blood glucose for the meal you are about to eat. That is, any blood glucose measurement that you do is telling you about the past. It is telling you whether you balanced your insulin and foods correctly at the last injection. The injection you are about to give is for the future. You cannot treat “history”...

## **Getting to grips with a sliding scale**

When using a sliding scale, you will give less insulin before a meal if you glucose is low and the result will usually be a high glucose before the next meal. You will then give a bigger dose before the next meal and the result will be a major drop in blood glucose after that meal. As a result, your blood glucose will swing widely and control of your blood glucose will become impossible. This is demonstrated in Figure 1. This is not normal or physiological and will result in long-term poor control of your diabetes.

Figure 1 shows the negative effects of the ‘sliding scale’ method on blood glucose control. Note the increased variability of readings between high and low extremes. The latest specialist diabetes literature is uniform in its criticism of the futility of this approach.

If it is understood that insulin is given to control the blood glucose for the next meal (rather than the last meal) then it makes sense to administer enough insulin to cover what you are about to eat. To do this correctly, it is important to have some idea of the carbohydrate content of the meal. Your diabetes team should be able to discuss this with you and teach you at least the basic principles of “carb-counting” (being able to assess how much carbohydrate there is in a meal or snack). You can then assess how much insulin you might need for what you are about to eat, NOT based on what has happened since the last meal.

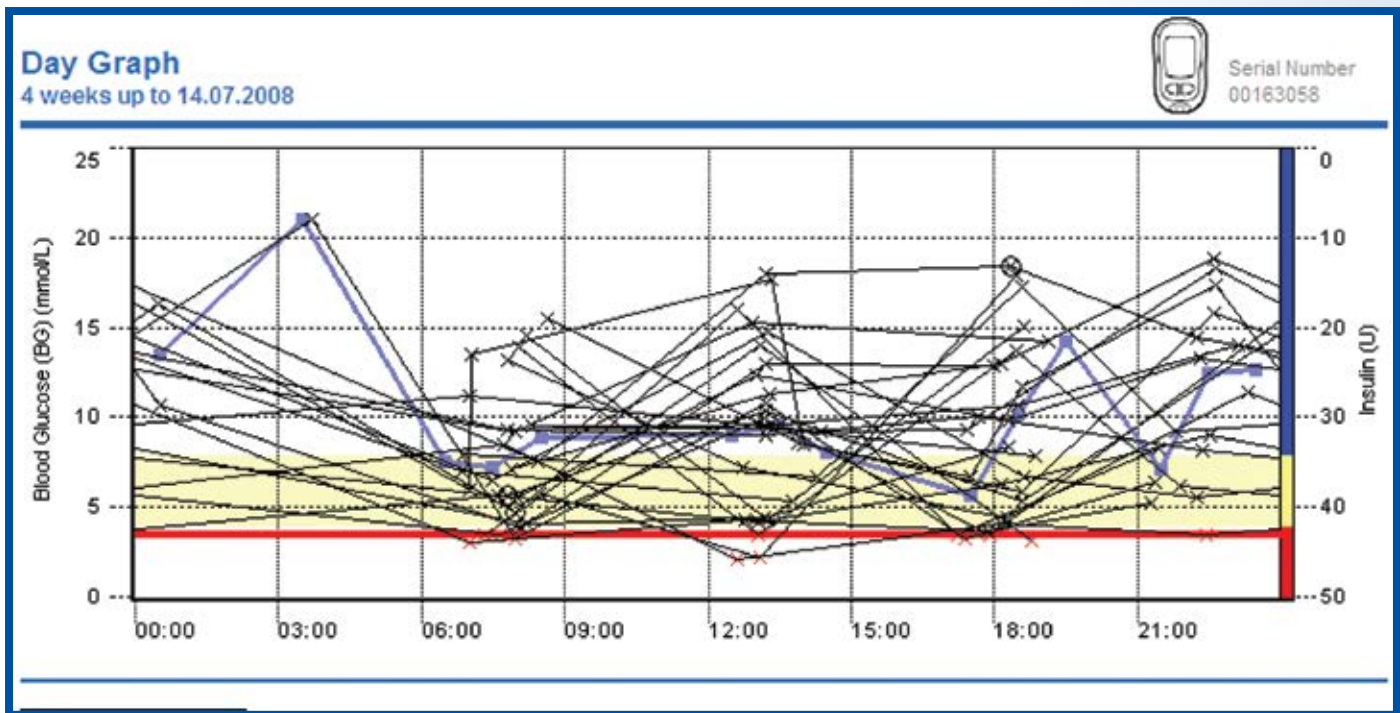


Figure 1

### So what do I do with low or high blood glucose readings?

If you find your blood glucose is low before a meal, it is NOT correct to take less insulin. You should rather correct the 'low' with some quickly absorbed carbohydrate like regular coke or fruit juice, wait 10-15 minutes for the low glucose to correct, and then give yourself your normal insulin dose based on what you will be eating (not based on the pre-meal test). If your blood glucose is high before a meal, you should give yourself the dose of insulin you assess you will need for that meal and then add a small amount to this to correct the high level back into the normal range (a so called "corrective dose").

### So what is the difference between a sliding scale and a corrective dose?

A sliding scale approach, as explained above, relies on giving different doses of insulin dependent on your current blood glucose. This approach ignores the balance between insulin doses and 'life', including food intake as well as numerous other influences such as the effects of exercise, stress and some medications. A corrective dose consists of giving yourself the correct amount of insulin for the coming meal and then adding to that a small extra amount to "correct" the high blood glucose level back into your target range. This approach also takes into account

your particular sensitivity to insulin (how many mmol/l one unit of insulin will drop your blood glucose - this may vary depending on the time of day). Thus, these are two very different approaches.

### So why bother to test?

The purpose in testing is not so much to help you determine how much insulin you need to take, but rather to tell you whether the amount of insulin you took at the last injection was correctly balanced with your last meal and with all the other possible 'life' influences. Therefore a high glucose level before a meal might mean you did not take enough insulin before the last meal. The next time you eat that sort of food with that carbohydrate content you may need take more insulin. Similarly, a low glucose level may indicate you took too much insulin before the last meal - the next time you eat that sort of food with that carbohydrate content you may need to take less insulin.

By taking your insulin in anticipation of what you are about to eat, and by adjusting this dose based on the carbohydrate content of the meal you are about to eat, you should be able to maintain a more stable blood glucose level without undue highs or lows. Insulin works! If you take too much it will work too well and bring your glucose level too low. If you take too little it will not work enough and your glucose level will go too high. It's simple, really. 📺

## “He snores and I’m exhausted”

Does your partner...

- Gasp or stop breathing during sleep?
- Feel tired upon awakening?
- Wake up with headaches?
- Feel sleepy during the day?
- Have memory lapses or low concentration levels?
- Experience a low sex drive?
- Have high blood pressure?
- Have congestive heart failure?
- Have diabetes?
- Suffered a stroke or heart attack?
- Fall asleep as a passenger in a motor vehicle or as the driver of the vehicle?

## Yes to any of these questions?

You should encourage your partner to see his doctor to discuss the symptoms and identify if they may be related to Sleep Apnoea. Sleep Apnoea is a common sleep disorder that affects 1 in 5 people. People with Sleep Apnoea stop breathing while they sleep, sometimes hundreds of times per night. If you suffer from high blood pressure, diabetes, heart trouble, or are overweight, treating Sleep Apnoea can improve all these conditions in addition to making you feel better.

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at:**

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- **Kempton Park** - Unit 1, 40 Monument Road
- **Boksburg** - 8 Albrecht Street (behind Sunward Park Hospital)

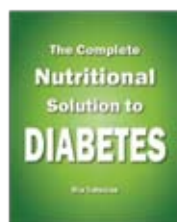
**Contact:**

**Sr. Lynne Kruger**

**on**

**082 330-2031**

## THE COMPLETE NUTRITIONAL SOLUTION to DIABETES by RIA CATSICAS RD (SA)



Uncontrolled diabetes can lead to serious health problems but understanding this complex condition makes it easier to manage. Good nutrition as part of a healthy lifestyle together with medication is the key to managing your glucose levels. The Complete Nutrition Solution to Diabetes will show you how to achieve this. Suitable for anyone with Type 1 and 2 diabetes or pre diabetes (metabolic syndrome), it covers topics such as the role of carbohydrates, protein and fats, the glycaemic index, artificial sweeteners and how to incorporate whole grains into your diet. Weight loss and the importance of regular physical activity are discussed and a chapter is dedicated to the

special needs of children and adolescents with diabetes. Guidelines for healthy eating include suggestions for weekly meal plans, as well as over 40 easy to prepare recipes suitable for the whole family.



The book is available from bookstores nationwide (can be ordered from stores when out of stock)  
The Diabetes Association of SA

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# SOLAL Functional SuperFoods

## A new concept in food

Poor health starts with what you put into your mouth. Modern diets are short of omega 3 fats, contain too much sugar and fat, not enough fibre, and are lacking in the antioxidants found in brightly coloured fruits and vegetables.

**Introducing a new concept in food: SOLAL Functional SuperFoods.** If you remove sugar and the heart-damaging saturated fats from food, and instead make them with omega 3, 6 and 9 fats, and sugar-free sweeteners... then add additional fibre, vitamins, minerals, probiotics and antioxidants... you get snacks and food treats, known as Functional SuperFoods.

**SOLAL Functional SuperFoods are snacks and food treats made without sugar.** They contain naturally sweet fibre. None of our Functional SuperFoods contains aspartame, cyclamate, acesulfame K or saccharine. They are enriched with vitamins, minerals, antioxidants, fibre, probiotics and omega 3 fats.

**SOLAL Nougats** (Almond, cashew & macadamia nuts; Goji berries & almonds; and Goji berries, pumpkin, sesame, sunflower & poppy seeds)  
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### SOLAL Balsamic Reduction

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### SOLAL Sugar-free Syrups (Caramel, Hazelnut and Vanilla)

Contain no sugar or fat. Only 18 calories per serving. Enriched with chromium polynicotinate and vitamin D<sub>3</sub>.



**SOLAL Mueslis** (Goji berries & seeds; Spicy apricot, seeds & almond flakes; Tangerine chocolate, seeds & almond flakes; Goji berries, seeds & almonds; and Apple, seeds, cashews & almonds)  
Contain no added sugar, are high in fibre, full of complex carbohydrates, omega 3 and 6 fats. They are enriched with whey protein chips, probiotics, grape seed extract, lutein, lycopene, zeaxanthin and astaxanthin.



### SOLAL Belgian Chocolate Truffles and Praline Bars (Milk or Dark chocolate)

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SOLAL Vitamin Biscuits are made with coconut oil and contain no added sugar. They are enriched with 10 vitamins and soluble fibre.



### SOLAL High Protein Water Mix (Pineapple and Orange)

An innovative way to incorporate protein into a refreshing sugar-free cold drink, enriched with probiotics and branched-chain amino acids. It is ideal for children, vegetarians and people who dislike thick protein shakes.



### SOLAL Whey Protein Mousse (Almond, Caramel, Chocolate, Custard, Strawberry and Vanilla)

Is fat-free, has no added sugar, and is high in protein. Contains fibre, and is enriched with probiotics and 12 vitamins.



### SOLAL Invisible Fibre

A fibre supplement that dissolves completely, with no taste, grittiness or thickening.



### SOLAL Naturally Sweet

Naturally Sweet is an alternative to sugar and aspartame. It is made from sucralose and plant fibre.



Refer to our website for nutritional information and recipes.

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# Doing the RIGHT thing...



Peter Black  
CEO  
CDE Diabetes Management  
Programme

## **“Talk is cheap”, so it is said. Yes indeed**

We hear this type of message or theme all the time: politicians promise to do the right thing (sometimes they unwittingly promise to fix problems of their own making!), conservationists talk endlessly about saving our planet, governments point fingers at other governments and neighbours are often quick to point out problems in other families on their street.

The very real fact of the matter is that humans do not naturally “Do the Right Thing”.

It is for this very reason, that we have so many rules that govern our lives, and penalties for not following the rules. The news is often filled with stories of people doing the wrong thing; hardly ever about people doing the right thing. The Ten Commandments and other religious teachings from long ago all seem to guide us on how to “do the right thing” within our communities. It sometime seems that these ancient wisdoms are not foremost in people’s minds.

In medicine, like in most things, very definite rules and ethical guidelines apply – the Hippocratic Oath that we hear about so often, and other physician oaths, talk about maintaining the highest levels of conscience, dignity, respect and service, and doing the best that is possible for the patient. Thankfully, I believe that in much of medicine, high standards of ethics do exist.

However, in days gone by, doing the right thing in terms of medicine was probably a lot easier than it is now.

## **Money complicates things**

Today medicine is big business. The unlimited demand for ever better treatments, ever better life expectancy and ever better quality of life feeds a huge industry, in which

there are huge opportunities to make large amounts of money. As a result, medicine and medical treatments are generally very expensive.

I can guarantee you that if something as basic as bread could keep your cholesterol levels low, whilst at the same time stop you from aging so fast, and cure your arthritis, it would not cost only R 12 a loaf. We would only be able to get it from a pharmacy, after seeing a doctor every six months, and most importantly, it would be too expensive for most people to buy.

And if you take it to a logical conclusion: Would your medical aid pay for it? And this is often the end point of the big problem of money being involved so deeply in medicine. Who will pay for it at the end of the day?

The fact that we need medical aids and medical insurers to pay for our healthcare has created many dilemmas – primarily about what gets paid for and what doesn’t.

And this could mean that in some instances, it becomes impossible to “do the right thing”. This is simply because healthcare is so expensive.

## **In diabetes, what does “doing the right thing” mean?**

Well, the theory to do the right thing in diabetes care is well known. In summary, the following are important principles:

- Educate the person with diabetes (as well as his / her family) about the condition;
- Give the patient with diabetes access to a well equipped team of healthcare professionals;
- Empower the person with diabetes by providing blood glucose self monitoring that they understand;
- Follow “best-practice” clinical guidelines to optimise health results.

What becomes clear from these points is the importance of the person with diabetes, and their direct involvement in

their ongoing management of their diabetes. The treatment of high blood pressure is relatively simple: patient sees doctor, doctor prescribes medicine, medicine is taken, doctor checks periodically to see how effective medicine is, doctor makes changes to medicine if necessary.

However in diabetes, it is vastly more complicated than that. It should never be as simple as “take this pill, and see me in 6 months”. Whilst some doctors unfortunately do take this approach, it is simply not good enough to ignore what is considered “best practice” in diabetes care.

A best practice programme of diabetes care must include all of the important principles mentioned above.

### **The fly in the ointment**


As usual, the fly in the ointment is money. The CDE Diabetes Management Programme is a “best practice” programme of care, available to many beneficiaries of some medical aid schemes.

However, the problem is that many medical aid schemes struggle to come to terms with the importance of providing best care to their members. It is often deemed “too expensive” to pay for a team approach. It is often deemed

too expensive to pay for consultations with diabetes nurse educators. It is often deemed too expensive to allow for sufficient testing strips for blood glucose self monitoring. Many schemes take the approach to rather pay for complications of poor diabetes control, than pay for a good programme of care.

As a result, best practice programmes like the CDE diabetes management programme are not included by quite a number of medical aid schemes in their basket of services. They rather elect to pay for other diabetes “services”, which come nowhere close to “doing the right thing”.

If you would like to understand more about how the CDE does the right thing, please visit the CDE website:

[www.cdecentre.co.za](http://www.cdecentre.co.za) 



## **COOKING DEMONSTRATION and PRESENTATION on HEALTHY EATING**

**Presented by Ria Catsicas, Dietician and author of the “Complete Nutrition Solution to Diabetes”**

**DATE:** Saturday 17<sup>th</sup> September 2011  
**TIME:** 09h00 to 12h00  
**VENUE:** Good Food Studio at the Pick n Pay on the corner of Republic and William Nicol roads, Sandton  
**COST:** R300 per person which includes the book “Complete Nutrition Solution to Diabetes” and a “goodie bag” of products and ingredients.

**Bookings:** Phone: Sandy 011 023 8051/2  
**Email:** [info@nutritionalsolutions.co.za](mailto:info@nutritionalsolutions.co.za)



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*Are you concerned about your diabetes?*



In today's society there is an alarming increase in diabetes, both in the young and adults, regardless of background, race or age.

Many people with diabetes are not aware of the best approach to their diabetes care.

[www.cdecentre.co.za](http://www.cdecentre.co.za)

# Living well with diabetes

## What is the Diabetes Management Programme (DMP) run by the CDE?

The DMP is a multi-specialist approach to the management of diabetes. The CDE, in partnership with many medical aid schemes, provides a comprehensive and holistic approach to the care of the patient with diabetes, according to internationally accepted standards of care. The CDE also trains and accredits many healthcare professionals in the principles and practice of good diabetes care.

## What can I, as a person with diabetes, receive from the CDE Diabetes Management Programme?

- Consultations with a specialist or accredited diabetes doctor.
- Comprehensive diabetes education with a registered diabetes nurse educator.
- Foot care by a podiatrist
- Eye screening by an ophthalmologist
- Dietary advice by a dietician
- 24 hour emergency hotline
- All diabetes medications, a blood glucose meter and test strips.

In addition, the CDE covers all hospitalisations for acute diabetes admissions. All of these benefits are provided at no added cost to you, as long as you are a member of one of the medical aid schemes contracted in.



*... life can be sweet!*

To find out more, or for your nearest branch, please contact the DMP membership department on  
011-712-6000 or e-mail [members@cdecentre.co.za](mailto:members@cdecentre.co.za)



# Keeping in contact with your diabetes team



Michael Brown

**One practitioner cannot effectively manage diabetes on his or her own. A Team approach is the most effective way to guide self-management**

To address all of the many issues related to diabetes effectively, the Core CDE Diabetes Care Team includes an endocrinologist or diabetes doctor, a diabetes specialist nurse / educator, a dietician, a podiatrist, an ophthalmologist and patient representative organisations like Diabetes South Africa (DSA) or Youth With Diabetes (YWD).

Psychologists, Pharmacists and Biokineticists are also valuable members of the wider Team. Two vital members have not been mentioned so far – YOU, the leader of the Team and YOUR FAMILY.

**You can maximise your chances of staying on the road to health by maintaining regular contact with your CDE Diabetes Care Team.**

**“Contact” with your Diabetes Team can be grouped as follows:**

## **Routine, Regular Contact**

- Team consultations (Doctor, educator, dietician, podiatrist and ophthalmologist etc);
- Phone, fax and e-mail contact (blood glucose readings, queries) with your Diabetes Educator (Team Coordinator) or dietician.

## **Diabetes Teams work in a preventative manner**

Emergency care is not the norm in good diabetes care. Consultations are usually by prior appointment. Ensure that you know when your team may not be available for routine care (e.g. weekends and public holidays).

If the Diabetes Team Member you are trying to contact is in a consultation when you phone, please leave a message

and your contact numbers. Your Diabetes Team Members care about your health and will make every effort to return your call as soon as possible.

Ensure that you always know the current physical address, telephone and fax numbers and e-mail address/s of your caregivers as well as the office or consultation hours as stipulated by your Team. This should be easy if you maintain regular contact.

## **Emergency Contact**

“A twenty-four hour telephonic “Hotline” will be provided where patients may have easy telephonic access to staff of the Centre in order to deal with any acute problems. It is suggested that each Centre have one cellular telephone, the number to be given to patients in this scheme. Responsibility for staffing this telephone can be decided by the Doctors of the Centre, but it is reasonable for the Diabetes Educators and Nursing Sisters at the various Centres to take turns in operating this telephone line”.

*Adapted from Paragraph 6 of the “ CDE Guaranteed Minimum Care Guidelines for Centres participating in the ‘per capita’ Preferred Provider Network, for Management of Patients with Diabetes Mellitus”*

The telephonic “Hotlines” operated by CDE Centres nationwide, have extended the reach of the “medical home” and brought 24-hour access to emergency diabetes care and advice to CDE patients in their communities across South Africa. Many hospitalisations for acute complications of diabetes have thereby been prevented. You and your family may also have reduced diabetes related anxieties knowing that help is a call away.

It is important to understand that the success of a 24-hour diabetes “Hotline” service depends on a number of factors such as:

- Competent, insightful, friendly and yet firm practitioners providing the service;
- An educated patient and / or family member / friend prepared for the call with all the necessary readings and devices at hand (E.g. blood glucose meter and strips, Glucagon HypoKit (if on Insulin), Urine Ketone Strips (Type 1 diabetes));
- An understanding of what constitutes a “Hotline problem” or “emergency” versus a routine query (remember the little boy who cried wolf...)
- Always-available medical back-up;

Most of the “emergencies” we encounter are routine for the experienced diabetes practitioner (home ketone management, hypoglycaemic coma, missed medication doses), but every now and then a curved ball comes our way. CDE “Hotline” practitioners are trained to be constantly vigilant to the possibility of the “wolf lurking in sheep’s clothing” that can rapidly bring disaster to a patient.

**If you receive your diabetes care from a CDE Centre of Excellence, please ensure that you write down and memorise the “Hotline” number for your Centre. Tell your friends, family and colleagues about it too.**

**To maximise the care you receive in an emergency, please note the following important points:**

- Your CDE Centre “Hotline” is a 24-hour service for diabetes **EMERGENCIES ONLY** (if you are feeling worried or scared or need treatment of ketones, hypoglycaemia etc.). Please don’t block this line for routine Team contact;
- Good self-care will usually prevent diabetes emergencies. However, phone sooner rather than later to prevent a reversible situation from becoming irreversible at home. The “Hotline” is provided to prevent hospitalisation and sickness;
- The Hotline is usually a cell phone that may be carried on a rotational basis by suitable members of your diabetes team whilst at work and at home (after hours). Currently, there is no “control room” - the operator will be unable to transfer calls or help with booking of appointments;
- You may only make use of a CDE “Hotline” number if you are a current, registered CDE patient. For medico-legal reasons, please do not give this number to people who are not CDE patients;
- Please do NOT send an “SMS” to your “Hotline” number – we have experienced delivery delays up to

24 hours because of network faults;

- If your CDE Centre “Hotline” is engaged with another emergency call, please leave a clear, concise message on the voicemail, together with your telephone number. If your “Hotline” operator does not respond within 10 minutes, please phone back (they may not have received your message notification from the cellular network);
- To assist you with common diabetes emergencies over the phone, prepare for the call if possible:
  - please make sure that you have at hand:
    - A blood glucose meter and strips
    - A Glucagon HypoKit (if on Insulin)
    - Urine ketone Strips (Type 1 diabetes only) and that you and your family have been educated on how to use them correctly;
  - You or the caller will need to be able to tell us your:
    - Name, age and type of diabetes
    - Current blood glucose reading (last 5 minutes)
    - Urine ketone reading (Type 1 diabetes only)
    - Type/s and dosage/s of your insulin
    - Problem (brief summary)
- Listen carefully to all advice given and follow it exactly (if the advice worries you in any way, tell the “Hotline” practitioner rather than ignoring it);
- If requested, please phone back exactly at the time specified (usually 60 minutes) – do not delay this step for your safety;
- Continue to phone back as requested, until the practitioner on call advises you that it is safe to stop (even if you feel better).

We look forward to being there for you! 🏠

**“One of the true tests of leadership is the ability to recognize a problem before it becomes an emergency” - Arnold H Glasgow.**



# My Centre for Diabetes - there to help



*Lesley Hutchins*


## **I have been with my Centre for Diabetes for over 5 years**

I have type 2 diabetes and have been treated with tablets until recently. I visit my diabetes Centre every 6 months for my general check-up but have never really used all the facilities that they have to offer. That is until January this year when I was diagnosed with breast cancer and my life changed dramatically.

To ensure that my blood glucose levels were controlled during the chemotherapy phase of my treatment, my doctor at the Centre recommended that I start Insulin injections. This was quite a dramatic change. But, with the support and reassurance of the doctors and diabetes educators, the change was made easy with them either being a telephone call or an e-mail away. They guided me all the way on the dosage that I required.

After my first chemo session, my blood glucose level went to the extremely high level of 23 mmol/l - this scared me out of my wits. I found my diabetes card and phoned my Centre's 24-hour Emergency Hotline. A calm and patient voice answered on the other end of the line. I was guided and educated through what I needed to do next, including the dosages that I needed to take to counter these high levels. To ensure that I had managed to control my blood glucose levels, my lady at the other end of the phone asked me to phone every two hours through the night to ensure that I was managing and that I was safe. What a comfort knowing that there is someone at the other end of the line waiting to help.

The other thing that I have found is that the Centre has taken an interest while I've been on chemo, checking up on me on a regular basis to make sure that things are going well. All I can say is what service...

What I have learned over the last couple of months is that your Diabetes Centre is there for you. It depends on you how much you want to utilise what they have to offer. They are there to help... 



*My*

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# YOUTH CAN CONQUER ALL!



Keegan Hall is 22 years old and has had type 1 diabetes for the past 6 years. He is currently a student at the University of Johannesburg studying marketing and corporate communication. This is his story:

"I was diagnosed with diabetes in May of 2005 when I was drinking and urinating excessively. My mother consulted her friend whose son had diabetes. She said that I should have my blood glucose checked. The result of my blood glucose test was 29.1. My family and I had no idea what 29.1 meant. We soon realized that my condition was serious and needed immediate medical attention. I went to my General Practitioner and he started me on a regimen of insulin and made sure I could test my blood glucose and inject myself. It took 5 and a half hours from the time I tested my blood to when I left the hospital."

"When we were told that I had been diagnosed with diabetes, the look on my mother's face was one of shock and unease. I felt my heart sink to my feet because I had never really heard much about this condition. My sister, who is 2 years younger than me, did not take it well and was very confused. My dad has been very supportive of all the changes that have taken place in our family, as we were going through other hardships as well."

**"My diabetes has not always been controlled. The first 2 years of my life with diabetes were the hardest. I did not see any need to test, inject or to control my diet. I ate what I liked and lived a lifestyle no person should lead – with diabetes or not."**

"In my second year of having diabetes, I had an HbA<sub>1c</sub> of 14 %. My doctor suggested going to attend one of the diabetes camps held for those who feel like they are alone. Well, as soon as I left his rooms, I told my mother that there was no way that I was going to waste my time and my weekend with people I did not know. My mother used everything in her power to try and convince me to attend this camp. She even went so far as offering me a new cell phone if I went. Being a teenager, I accepted!"

"So, the Friday came and we gathered at the doctor's rooms where we boarded a bus and headed for our destination. On our way, the bus broke down. I thought I was definitely not meant to be there and that we would return home. Instead we got another bus and our trip continued."

"When the Sunday came and the camp was over, I could not believe the amazing time I had had."

**"Having diabetes and being around a group of people who knew what I was going through and how I could improve my situation, changed my perception of having the condition."**



## Have you checked

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"When I got home I wanted to know when the next camp was because I wanted to go on as many as I could. I went on two more camps and came to the realization that I would like to become a DYL - a diabetes youth leader - and due to the fact that I had formed close relationships, this was possible."

"After the first camp and due to a more positive attitude, it started to show in my diabetes care and health. My blood glucose improved and so did my HbA<sub>1c</sub>, which went from 14 % to 10 % in the first 3 months. My doctor made a deal with me that he would put me on an insulin pump if I could get my HbA<sub>1c</sub> below 8 %. This was my goal and I achieved it"

"With the pump I now had my diabetes under complete control with my HbA<sub>1c</sub> being 6.2 %. I am currently maintaining this!"

"In 2008 I was approached by the then International Diabetes Federation (IDF) Ambassador for South Africa, Martin Salkow, to join his non-profit organization, Youth with Diabetes. 2008 turned out to be a great eye opener when we went to Botswana to run a camp.

"I realized how fortunate we are to be in a country where we have all the medication, research and medical facilities to treat diabetes."

"I realized how fortunate we are to be in a country where we have all the medication, research and medical facilities to treat diabetes."

The level of diabetes care in Botswana was not what I had come to accept as optimal, with children only receiving 50 testing strips a month to work with. One wonders how they are supposed to control their diabetes if there are inadequate resources and medical supplies."

"In Botswana I met an 11 year old boy called Tiro who had type 1 diabetes and Down syndrome. His sister, Mercy, took care of him and accompanied him on the camp. I thought to myself that all things considered, I did not have it so bad. At least I am able to control my diabetes and do not have to worry about other aspects of my health that could affect how I live."

"When it comes to diabetes in South Africa, I believe the one way we can reduce complications and improve the care of people with diabetes, is through education. As previously mentioned, in the beginning I didn't know anything about diabetes or what I should expect when I was told I had it. If we can get people to adopt the right attitude toward diabetes they will have better control and live a happy, normal life. This is the most important aspect to improve regarding attitudes to diabetes in my country. I have adapted the attitude of the condition to not being "diabetes" but rather "live-abetes".

"I am currently doing an internship at Diabetes South Africa in the marketing department. This is a great way for me to gain the experience I need to further my passion for diabetes and help those who need the help and care to control their diabetes."

"I was recently accepted as the International Diabetes Federation Ambassador for South Africa and I am attending the IDF congress in Dubai in December 2011 to present the issues that the youth of South Africa face on a day to day basis."

**"Diabetes is known as the silent killer and is killing more and more people every year, but I like the words of Howza, a South African Kwaito singer, who said: "I want to be louder than the silent killer."**

"Yes, having diabetes is not the easiest thing in a person's life to handle but think of it this way: at least we are able to control it and live a relatively normal life."

**I WANT TO BE LOUDER  
THAN THE SILENT KILLER**

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# your sugar, Sugar?

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# Raising more active kids by becoming more active parents



Tanya Bellon,  
Biokineticist,  
CDE, Houghton

## Why is exercise important for my kids as well as for me?

1. Exercise helps kids **build self-esteem and confidence!** When a kid feels good about him or herself, he or she is more likely to repeat this behaviour and convert it into a good habit. Children generally follow the example of their parents. If mothers and fathers set a good exercise example, half the battle for kids has been won;
2. Exercise helps kids as well as parents **avoid or manage their anxiety and stress!** Exercise is known to release the “feel good hormones” known as endorphins;
3. Exercise has a very **social aspect** to it, allowing children to meet and make friends as well as interact with their family members positively;
4. Exercise teaches kids to **be more active**, instead of just sitting around watching TV and whining. Children will follow by example. Parents - get off the sofa and into the garden!
5. Exercise helps kids and adults with their **coordination and balance!** This can help with sports performance and reduce the risk of falls;
6. Exercise helps parents with **weight control** by increasing their overall metabolism, which helps burn more calories. It helps the kids by instilling a good behaviour of long-term weight management;
7. Exercise helps kids **avoid diseases** like **diabetes**. Type 2 diabetes is becoming more prevalent in younger kids and teenagers due to an increase in obesity;
8. Exercise helps kids build **healthy hearts!** Exercise reduces risk of heart disease as well as circulatory problems by improving cholesterol, blood pressure and overall fitness. *Overweight kids as young as six years old show some of the early signs of heart disease.*
9. Exercise helps **build strong bones** by increasing bone density. This reduces the risk of developing osteoporosis later on in life;
10. Exercise helps kids and parents **build strong muscles!**
11. Exercise helps to set and reach **goals!**

## Safe Ways for Kids with Type 1 diabetes to Exercise

Parents with a child, who has type 1 diabetes or who has recently been diagnosed with type 1 diabetes, must encourage their child to get involved in playing sports and participating in physical activity like any other kid. This will boost their self-esteem and encourage them to make friends. Remember you may have to adjust your insulin doses or take a snack before, during and after exercise as necessary.

Educate yourself (the parent) as well as your child on various aspects of exercise to prevent hypos and other problems on the sports field:

- Understand how physical activity affects blood glucose - exercise usually lowers their glucose level;
- The different types of exercise and their intensity – is it high, moderate or low in intensity?
- What exercise-appropriate snack should be provided before, during and / or after exercise (depending on glucose readings) to prevent hypos from occurring (e.g. a sandwich). Advise your child to carry extra glucose tablets or Coke as a backup;
- Reducing insulin prior to a sporting event by 30-40 % may be necessary – your diabetes team will assist you with this;
- Sometimes it is a good idea **not** to exercise – when your blood glucose reading is above 14 mmol/l, test for ketones and seek treatment guidance from your diabetes team. They will tell you when it is safe to resume exercise.

## The Benefits of Exercise for People with Diabetes

- Physical activity will lower blood glucose (unless you exercise far above your fitness level);
- Exercise assists the body to use insulin more effectively;
- Exercise helps with weight control as well as keeping you looking good and feeling energetic.

## Hot tips to being a more active family!

### How to introduce exercise into daily family life

- Daily exercise means starting a healthy new habit;
- Habits take some time to establish. Be consistent by being active at least 3 times per week for 30-40 minutes at a time for a month;
- Choose an activity that everyone can do and likes for example walking, cycling, kicking or throwing a ball etc.;

### How to improve your child's and your sleep

- Studies have shown that exercise performed 2 hours prior to bedtime improves sleep.

### Making exercise a family affair!

- Explore your surrounding areas as a family:
- Walk or cycle to the corner café or park.
- Walk to your neighbours and introduce yourselves.
- Instead of driving to a fast food outlet, rather take a picnic to a park where as a family you can play with a ball or ride bikes.

### Making exercise fun! Let's get active by being creative!

#### Create your own obstacle course:

Skipping with rope; hopping; dancing to music; marching; star jumps; hopscotch; balancing, human wheel- barrow.

#### Games you can play:

Piggy in the middle, beanbag and sack races, soccer, cricket and swimming (when warmer).

#### Fun Activities:

Gardening, walks around the neighbourhood, bike rides, take dogs for a walk.


### Stretching – Play Simon Says!

Touch toes (hamstrings stretch); Pull one leg behind (quadriceps stretch); Hands behind back (chest stretch) Take one arm across body and resist with other arm (shoulder stretch)

### Equipment Required:

Ball – piggy in the middle or soccer; Chalk - to draw hopscotch on driveway; Radio - dance to music; Comfortable shoes - to go walking around the neighbourhood; Skipping rope or a piece of rope; Bicycle and helmets - to cycle around neighbourhood.

### Safety Tips

- Teach your children the rules of the road;
- Wear protective clothing - use a helmet when on a bicycle;
- Dress your children in reflective clothing if you are going to walk outside of your property at dusk or later.
- Make sure you carry a snack e.g. glucose tablets or coke when exercising with a child or adult with diabetes. 

“Now I can go to school and play sports without worrying about packing and planning snacks.”



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# Coping with a limited budget



**Hannette Fourie**

*Senior District Dietician and Acting Assistant Manager of the Nutrition Department, Motheo District Office, Bloemfontein*

## Giving more than just textbook guidelines...

The majority of the patients with diabetes that we counsel have a very limited income. This makes it very difficult to give guidelines on food and lifestyle changes. As dietitians, we cannot give nutrition guidelines out of the text books without getting into the patients shoes, household and budget and making the guidelines we give as practical and feasible as possible.

The main sources of income in my patients are from child grants, pensions and cleaning or gardening jobs. Sometimes only one person in the family is earning an income or the household is looking after additional members like the grandchildren without financial assistance.

An easy and effective intervention to assist our clients with diabetes in the rural areas is the vegetable garden. The seeds cost R 9.99 per packet. If more than one type of vegetable is planted, the packets can last for two to four planting sessions. Ensure that the seeds are planted in such a manner that vegetables are always available. The vegetables from the garden can be used for the household and also sold for a small additional income.

## A space the size of a door...

This may sound highly improbable, if not impossible, but in reality with just a 2 x 1 m patch of ground, you can produce a fair amount of vegetables like spinach, carrots, cabbage, beans, peas and tomatoes. With four of these 'plots' you will ensure a constant supply of fresh greens for the table.

### Planting

Sow seeds carefully – not too thickly – and cover them with a little fine, dry soil. Press the soil down gently but firmly. Don't cover seed with mulch. When your plants are about 5 cm tall, push a little mulch gently around them.

This method allows for plants to grow closer together than normally possible. However, you will still need to keep an eye on their spacing. As a general rule the plants can touch one another, but not crowd together. Thin out where necessary.

Water the ground carefully using a light spray or a watering can with a fine nose. Keep the soil moist until the seedlings have established themselves. In hot, windy weather you may need to water twice a day. Once the seedlings have taken, water when necessary. Because of the layer of mulch, watering is dramatically reduced.

## A year-round harvest

Four weeks after the first bed is planted, prepare and plant a second bed in the same way. Do this until you have four door-sized beds. This is called succession planting and will give you fresh vegetables all year round.

Never leave empty spaces in a bed. Replant each empty row with seeds or seedlings as soon as you have harvested a crop. It is important to practice crop rotation to minimize pests and disease. Grow 'anti-pest' plants like chillies, garlic, marigolds and herbs around the bed to further discourage any unwanted visitors.

## Top Tips

- Do not stand on the soil in the beds. This will compact it, squash out air and prevent root development;
- Make sure the soil is always covered with mulch;
- It is unnecessary to dig or turn the soil; the earthworms will do this for you.

## Compost

Feeding your soil is vital but you do not need to spend money on unnecessary and costly fertilisers. Compost is nature's best food for soil. A compost heap provides a dual function of dealing with organic waste and providing you with cheap soil food. The following are some of the varied ingredients you can use:

- Soil;
- Cow dung;
- News papers;
- vegetable or fruit peels, leaves and egg shells;
- Wood ash (not coal ash) in small quantities;
- Garden cuttings including old grass, leaves, twigs.

## Reducing your costs

Unfortunately even with a limited income, some of our clients with diabetes use alcohol and smoke cigarettes. They sometimes do not realize what financial impact this has. As part of our consultation, we explain the costs to them using the following examples:

### The cost of smoking and drinking

- One packet of cheap cigarettes (20) cost R 16.00. Thus if you smoke 10 cigarettes per day it will cost you R 240.00 per month;
- One beer (quart) costs R 10.00. If you drink three beers per week, it will cost you R 120.00 per month;
- One bottle of wine may cost R 20.00. If you drink one bottle of this wine per week it will cost you R 80.00 per month;
- One container of snuff costs R 4.00. If you use one container of snuff every three days this will cost you R 40.00 per month;

- One packet of pipe tobacco costs R 8.00. Using one packet per week, will cost you R 32.00 per month.

People usually do not only smoke or drink however. For example:

- If you smoke cigarettes and drink beer as stated it will cost R 360.00 per month or
- if you use snuff and drink wine as stated it will cost you R 120.00 per month.

### Smart Food Shopping

A handy tool to assist a person with their food purchases is a shopping list with size and price. We use this to assist our clients in deciding on the items to be bought with a budget in mind. Below is a short extract of such a shopping list. The prices need to be updated regularly.

Food item	Price	Quantity	Subtotal
Whole chicken 1.8 kg	R 45,50		
Mince 300 g	R 19,00		
Pork goulash 500 g	R 30,00		
Wors 500 g	R 23,50		
Whole wheat macaroni 500 g	R 10,00		
Brown rice 1 kg	R 14,00		
Spaghetti 500 g	R 10,00		
White rice 1 kg	R 12,00		
Tinned foods :			
Meatballs 410 g	R 13,00		
Beans and Viennas 410 g	R 14,00		
Corned beef 410 g	R 12,00		
Pilchards 410 g	R 9,00		
Tuna Small tin	R 10,00		
Braai relish 410 g	R 7,00		
Chacalaka 410 g	R 11,00		
Mixed vegetables 410 g	R 8,00		
Creamed sweet corn	R 6,50		
Butter beans 410 g	R 8,50		
Sugar beans 410 g	R 12,00		
Red kidney beans 410 g	R 12,00		
Split peas 500 g	R 8,00		
Soup mix 500 g	R 8,00		
Red speckled beans 500 g	R 12,00		
Lentils 500 g	R 9,00		
Sugar beans 500 g	R 9,00		
Samp and beans 500 g	R 6,00		
Samp 1 kg	R 11,00		
Stampkoring 500 g	R 6,00		
Packet of instant soup 55 g	R 2,50		
Soya mince 200 g	R 7,00		
Beef stock 200 g	R 7,00		
TOTAL			R _____

## Shopping list budgeting

Providing our clients with a few easy and cheap recipes helps them to make healthy and suitable meals for the whole family. We do not want them to feel estranged from the rest of their family and feel that they have to have 'different' food. Two examples are included below.

### Jelly

Ingredients:

1 Packet Cool-Aid Sweet  
12.5ml gelatine  
50 ml cold water  
200 ml boiling water  
200 ml cold water

Method:

Soak gelatine in cold water. Dissolve the gelatine and cold drink powder in boiling water. Add 200 ml cold water to the hot mixture. Mix well and allow it to set in the fridge. Amount: Gives 4 portions of 125 ml each.


### Pancakes

Ingredients:

300 ml flour  
12 ml baking powder  
12 drops liquid sweetener  
1 egg  
300 ml skimmed milk  
30ml oil

Method:

Sift dry ingredients together. Beat the egg and stir the milk and oil in. Stir the liquid mixture into the dry ingredients until a moist dough is formed. Use 45 ml dough per pancake. Amount: Gives approximately 10 pancakes and 1 pancake = 1 bread exchange.

As a dietician working in the community, it is my responsibility to assist the people as far as I can. This means giving more than just nutrition education and a meal plan. We need to think out of the box and be a little creative in helping our clients. We do not work with only with health conditions but with people who have different needs and different circumstances. Help the person and you will treat the condition. 



## Zodwa's Story

Zodwa came to see me with newly diagnosed type 2 diabetes. She had not been started on any medication. Zodwa was 40 years old, clinically obese and inactive. She was divorced, lived alone and really battled to live on a meager income from irregular day jobs. She was literate, which made my task of explaining her condition to her a lot easier. Of course I had to check, as with any patient, that she had understood what I had said.

Vital to me, is to obtain a dietary history as well as a 24-hour meal recall. With this I can start the process of nutritional therapy.

Zodwa's dietary history and 24-hour recall indicated that she did not include sufficient fruit and vegetables in her meal plan. Irregular and unplanned meals lead to uneven carbohydrate intake. Most of her carbohydrate intake was from mielie meal porridge. Protein was consumed every other day and fruit and vegetables only once a week. She smoked 10 cigarettes per day.

Basic diabetes guidelines were given to Zodwa and changes to her eating pattern were suggested in terms of quantities and timing. I gave her some in-season vegetable seeds and guidelines on how to start and keep a vegetable garden (including how to make a compost heap). She was also advised to stop smoking.

As Zodwa was newly diagnosed, I did not give her too much information at her first visit. She agreed to a follow-up consultation in two weeks. Zodwa was requested to keep a food diary for one week and bring it to her next consultation.

At her follow-up consultation, Zodwa had lost 2 kg. That was great news! She said that she started working on a vegetable garden. She had also cut down on her sugar intake as advised. Her food diary showed that she had made some changes to her meal plan. The challenges she faced were discussed and further adjustments suggested and explained.

We decided together that another 4 kg in weight loss was achievable. Zodwa seemed motivated to work in her garden regularly and to walk to her friends and to the shops when possible. She said that she would always take the stairs as well. I suggested that she started a 'walking club' where she and some of her friends take a brisk 30-minute walk in the afternoons at least 3 days a week. Zodwa seemed to think this was a good idea.

Using current prices, we together compiled a shopping list that reflected Zodwa's food preferences and available budget. Healthy food preparation methods were also discussed. As she likes to bake, I provided her with some inexpensive recipes suitable for her diabetes and weight loss goals.

Zodwa had not stopped smoking – we discussed the cost of smoking as well as what she could buy with that money monthly. That seemed to motivate her to stop smoking. We planned to meet again four weeks later.

As a community dietician, I find that a holistic approach may take a little longer, but the results are always better and more sustainable than handing out a 'diet sheet'. I think that Zodwa feels that I have listened to her and seems to be enjoying the journey we are taking together. I can't wait to see her progress when she sees me again!

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Because health matters



# Fighting back!



These beautiful young people were all born with dreams.

And when diabetes threatened to smash them, they all said, "No!"

My Name is LEBOHANG  
I have had diabetes for 8 months  
My last HbA<sub>1c</sub> Reading was 8 %  
My Favourite is listening and is dancing to music She loves playing  
My Hobbies are playing with my  
doll Lebo and she's the only one who's  
not allowed to have diabetes  
Diabetes has taught me as her parents  
to live a healthy life. Sometimes  
we worried about the highs and  
lows, but we positive that we  
can beat this  
Finally, I Thank God for giving  
us such a beautiful & intelligent young  
girl

2 years



My Name is Nombali  
I have had diabetes for 2 Years  
My last HbA<sub>1c</sub> Reading was 8.5 %  
My Favourite thing is  
'doing homework and school  
My Hobbies are reading, doing  
puzzles and riding a bike  
Diabetes has taught me to be responsib  
and eat healthy. I take my  
readings four times a day  
and take my Insulin  
every day.  
Finally, I feel happy and  
healthy

8 years



My Name is Zaahir Rauf  
I have had diabetes for 2 years  
My last HbA<sub>1c</sub> Reading was 8.9 %  
My Favourite toy is  
a Ferrari toy car  
My Hobbies are painting, drawing and  
swimming  
Diabetes has taught us to eat healthy  
food and to eat less sweets.  
It has also taught me to  
be more active  
Finally, I learnt to test my  
own sugar level

6 years



My Name is Jean-Minique White  
I have had diabetes for four years  
My last HbA<sub>1c</sub> Reading was 7.4 %  
My Favourite pet is my dog Blacky. He is a long-haired  
Dachshund. My favourite animal is a horse.  
My Hobbies are netball, modern dancing, playing  
the piano and art. I love rhythmic gymnastics most of all,  
and I sing in the school choir.  
Diabetes has taught me that having diabetes is not  
the end of the world. I have just as much fun as  
people without diabetes. I can actually live a healthier  
life. Having diabetes makes me thankful for what I have, and  
do. I am healthy and I enjoy life.  
Finally, I wish that all the kids with cancer and serious  
illnesses can get better and be as healthy and happy as I am.

9 years



My Name is Naydirah Seedat  
 I have had diabetes for 3 years  
 My last HbA<sub>1c</sub> Reading was 7.6 %  
 My Favourite Food is  
Drawns and chips.  
 My Hobbies are Table Tennis, Swimming and  
soccer.  
 Diabetes has taught me Responsibility as well  
 as continuously watching what i need to eat.  
 It also taught me which foods are healthy and  
which are not.  
 Finally, You can still enjoy and do everything  
while having diabetes! ♥



15 years

My Name is Bruce Seeth  
 I have had diabetes for one year and 10 months  
 My last HbA<sub>1c</sub> Reading was 7.1 %  
 My Favourite activities are  
tennis, chess, watching movies and playing  
on my PSP and Playstation 2.  
 My Hobbies are reading and building and  
making things with my hands  
 Diabetes has taught me me self discipline  
and self perseverance I am more independent  
and it has given me a greater self awareness  
My sense and faith in God has been  
strengthened through this condition  
 Finally, it has been a rough journey  
learning to manage my diabetes but it has  
become easier with the help of my parents and  
my diabetes team. Sister Master has helped me  
see the lighter side to this condition and her  
diabetes camps are a blast



17 years

My Name is Courtney Clough  
 I have had diabetes for 17 years  
 My last HbA<sub>1c</sub> Reading was 6.4 %  
 My Favourite Colour is pink is  
 My Hobbies are Hockey, Swimming, laughing,  
having fun with my friends and listening to music  
 Diabetes has taught me that I can do anything  
that I set my mind and heart to, Its not a  
dissability but rather a blessing in disguise. Its  
our job as the youth to create awareness and inform  
them about our life style choices.  
 Finally, Diabetes has moulded me into the person I  
am today, It is as easy as breathing, A true blessing in disguise.



11 years



13 years

My Name is Michael Ströh  
 I have had diabetes for three years  
 My last HbA<sub>1c</sub> Reading was 7.6 %  
 My Favourite activities are  
tennis, chess, jujutsu and paintball  
 My Hobbies are origami, reading,  
inventing and experiments with my scientific  
set  
 Diabetes has taught me to eat healthy food  
and more self-control. I now watch  
what I eat and I control my levels  
with exercise. I live each day to the  
full. Diabetes has taught me that I am in  
control  
 Finally, I can do anything if I set my  
mind to, and my brother is now also a diabetic  
and we are closer than ever



# The “best” is only a limitation...



*Matt Ramphela*


**When I was first diagnosed with diabetes, I thought that so many doors had been closed in my life**

**B**ut, I would soon discover that the opposite was true. The very next year I was elected Head boy of my primary school and a Diabetes Youth Leader. Things were looking up and they would continue to get better. When I went to high school, I took all the opportunities that I was offered - that made the world of difference. I did not let diabetes stop me from achieving my dreams and goals; I have earned three national medals and five provincial medals for rowing and weight lifting. This was possible through hard work, exercise and the responsibility of looking after myself.

The independence that diabetes has given me made it possible to leave my family, my school and my continent to go to Canada as an exchange student for three months. It was there that I tried to make a positive difference, as much as I possibly could. I made the first rugby team, the school had the best rugby season ever and I was lucky enough to be a part of it. By the end of my stay, I was House Captain, I had earned rugby colours and I had made friendships that I am certain will last the rest of my life. Leaving was very difficult, but I was also excited to take on South Africa with what I had learnt overseas.



When I returned home, I became a leader of my school, and then a leader of the world... I was selected to attend the Global Young Leaders Conference in Washington and New York. I participated as much as I could and took as many leadership opportunities as I could in the various simulations.

Most importantly, I made it my goal to make a positive impression on those who I met. I have been alive for less than 18 years and I have done so much already, this was only possible because I did not let my vices get the better of me. Be the better every day of your life, because “the best” is only a limitation... 



# Go and make your dreams come true



Shaylen Pillay




**1<sup>st</sup> June 2009 was a turning point in my life. I was 15 years old and diagnosed with type 1 diabetes**

Once diagnosed, I thought it was the end of my cricketing career. All the symptoms were there - weight loss, continuous thirst and frequent urination, but we ignored the symptoms always finding excuses. While in hospital, I was taught how to inject myself and take my blood glucose readings. Test, inject, eat are three words I will remember for the rest of my life. It was not easy at first but I had full support of my family and friends. Having diabetes has turned my whole life around - I am more aware of how my body works. My lifestyle is healthier than ever before and I am playing the best cricket ever. I was recently selected to play Under 19 cricket for South Africa and tour England – that made me happy!

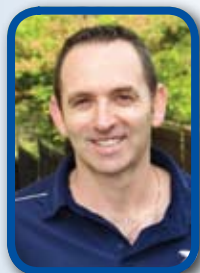


Having diabetes is not a disability but instead an eye-opener to a healthy life. I have also grown very responsible in taking care of myself, especially my eating habits. My mom stocks only low GI products, which helps maintain my stable blood glucose levels. A day never goes by without my dad asking about my sugar level. I am passionate about exercise and this holds me in good stead with controlling my diabetes.

Diabetes also does not hold me back from having a normal teenage life. I have a fantastic counsellor at the CDE, Hester Davel. Her friendly and caring personality also boost my self-esteem. My advice to young people with diabetes is to go out there and make your dreams come true - be the best you can ever be. Diabetes paves the way to a healthier you and always remember TEST, INJECT AND EAT... 



# Competitive ball sports and diabetes - The challenges



Andrew Heilbrunn and  
Arshaad Hoosen  
Biokinetics Department,  
CDE, Houghton

## Functionality is the key to training for sport

Cricket and Rugby have come a long way from the Neanderthal days where a few mates pitched up on match day, gave it a good bash and shared a few drinks after the match. Sport is now sophisticated - players rely on skill, speed, brute force, interaction with team-mates and an army of coaches. Preparation for sport is now functional, simulating the game with periods of maximal exertion, mixed with periods of less effort. Sportsmen are modern day gladiators.

Functionality is the key to training for sport. Three phases are generally considered in preparation, **off-season**, **pre-season** and **in-season**. During the **off-season**, athletes are afforded time to recover from injury, re-establish an endurance fitness base and improve strength. During the **pre-season**, the intensity of training increases, working toward power and speed. Toward the end of this phase, interval type training is emphasized which mimics alternating periods of high and low intensity effort. Skills vital to the game are worked on; techniques are improved and strategy developed. **In-season** training focuses on maintenance of form and peaking for competition.

In terms of our metabolism, it is important to understand the energy sources (Fats, Carbohydrates and Protein) and the energy systems involved. During the off-season we train aerobically, enhancing energy delivery primarily from fat which is a relatively slow process. As we increase training speed, we demand faster energy, which comes from carbohydrate.

High intensity exercise also stimulates our hormonal system which prepares our body for exercise. Two hormones of

particular interest to people with diabetes are cortisol and adrenaline. Cortisol and adrenaline together help to increase blood pressure and heart rate. More importantly they may increase levels of blood glucose during and sometimes after sport.

## How can the sportsman with diabetes adapt to these hormonal responses?

It is vital to have a good understanding of:

- The type of insulin injected and thus when it peaks and when it troughs;
- The blood glucose lowering (insulin) or blood glucose raising (adrenaline) effects of playing high intensity sport;
- the prevention, detection and management of hypoglycaemia;
- Food and supplement requirements before during and after activity.

**High intensity sport**, which is carried out in short bursts with rest intervals, like cricket and rugby, produce a lesser fall in glucose compared with continuous moderate intensity exercise. This may be due to adrenaline released during these activities.

Sportsmen with diabetes should adjust their insulin dosage pre- and post-exercise to:

- Create a stable blood glucose level for optimum exercise performance;
- Prevent hypoglycaemia during and after activity.

## Hypoglycaemia

Exercise performed late in the day (i.e. after school or work) may lead to hypoglycaemia which may be unnoticed during sleep in the majority of individuals. In active children and sporty adolescents the incidence of hypoglycaemia on exercise nights may be as high as 26 %. Therefore it is important to make adjustments to insulin and to take a snack (e.g. Milo), before going to bed. Remember that exercise has a 24-hour after effect. In other words, if you have participated in high intensity sport, your blood glucose levels can still drop for 24 hours after exercise.

## What strategies should we employ to prevent hypoglycaemia during and post exercise?

Speak to your Diabetes Educator or Dietician to get advice on what extra carbohydrate intake and insulin adjustments you should make in order to avoid hypoglycaemia during and after exercise. Each person's response is different and to a large extent depends on the amount of insulin circulating at the time of exercise and the intensity of the sport. Therefore it is essential to keep a sport / blood glucose / food diary to see what blood glucose patterns you develop. Keep glucose or regular coke nearby at all times during sport or have sips of fruit juice (e.g. apple) at regular intervals if your blood glucose levels tend to drop with sport.

### Adjustments to prevent post exercise hypoglycaemia

The key to good glycaemic control is strategic carbohydrate replenishment and insulin lowering post exercise. If one has exercised at a high intensity for more than 45 minutes, it is imperative to take the necessary snacks before going to bed and / or to decrease the insulin dosage strategically over the next 24 hours.

### Additional factors, which may influence blood glucose levels, are:

- Injection site (some injection sites like the arm may lead to a rapid absorption of insulin which may lead to hypoglycaemia);
- Hydration levels (try to drink 400-800 ml of water per hour to prevent dehydration);
- Heat / cold (people generally have more hypoglycaemic episodes in hot environments);
- Previous hypoglycaemic episodes (one of the best predictors of a future hypoglycaemic episode are previous hypoglycaemic episodes);
- Previous exercise duration and intensity and previous carbohydrate replenishment;
- Mode of exercise. (long distance running will generally drop the glucose quicker than sprinting).

## Hyperglycaemia

Current research suggests that higher intensity resistance or interval type exercises, like ball sports may initially raise blood glucose levels due to an adrenal response. Blood glucose levels then decrease for several hours post exercise. If your blood glucose levels rise significantly to above 15 mmol/l during cricket or rugby it may be a good idea to inject a small dose of short acting insulin before you exercise (Please discuss with your diabetes team!).

### The patient with type 1 diabetes should pay attention to their precise blood glucose level prior to exercise:

- If your blood glucose levels are 6 mmol/l or lower before exercise, you should take a substantial snack before exercising (E.g. peanut butter sandwich);
- If your blood glucose levels are between 7 and 10 mmol/l, only take a small snack (E.g. banana);
- If your blood glucose levels are greater than 15 mmol/l, check for ketones in your blood or urine. If there are no ketones, exercise should be safe and would probably be beneficial;
- If ketones are present, do not exercise. Exercise will probably exacerbate the ketotic state. Contact your diabetes team to help you eliminate the ketones first before continuing with exercise (this can be done telephonically between a specialised diabetes team and a well-educated patient).

Exercise is one of the cornerstones of diabetes treatment. With the correct approach to diabetes management i.e. eating correctly, taking the correct snacks, adjusting your insulin strategically, getting fit progressively and making sure you have the correct footwear, there is no reason why people with diabetes should not excel in any sport of their choice. 🏏



# Youth With Diabetes



Youth With Diabetes (YWD) is a non profit organisation created specifically to help kids, teens and young adults living with diabetes. We are unique in that we are run by teens who themselves have diabetes. The organisation also has a senior management committee made up of talented professionals who are involved with diabetes in some way.

Our objectives include education for youth living with diabetes, raising public awareness levels about diabetes, establishing support groups and promoting a general healthy lifestyle to prevent diabetes.

YWD's slogan "Life can be sweet" embodies our enthusiastic and positive attitude toward this condition. Our logo was especially designed to represent a lollipop, to dispel the common misconceptions about diabetes and to emphasize our slogan.

Our most impressive ongoing project is our weekend camps. Over the past 5 years, we have held camps in Johannesburg, Bloemfontein, George, Port Elizabeth, East London and even Botswana.

The main aim of these camps is to show children that other young people also have diabetes, and therefore eliminate their feelings of isolation and difference. We also educate the campers on better diabetes management with many fun activities in between.

For these camps, we train teenagers as Diabetes Youth Leaders. YWD has extensively trained these dynamic leaders in all aspects of diabetes management, as well as counselling and leadership. These teens then facilitate the camps with the help of specialised diabetes doctors and nurses in their respective regions. They are also fully empowered to initiate their own community projects under the guidance of YWD.

To find out more about our camps or to become a leader, please visit our website or Facebook group.

## "Life CAN be Sweet"

**Gareth Murray: Operations Manager**

My name is Gareth Murray, I have lived happily with this blessing that is diabetes, for 11 years now and it has developed me into the person that I am. Don't get me wrong, I didn't always view it as a blessing - before this perception it was a horrible curse.

I love art, food and I am an avid musician, directing a lot of my energy towards my guitar. What I dislike is uncertainty and people who make false promises.

I am currently the operations manager of YWD, I never thought I would end up here, but when life throws you a lemon, make lemonade... I went on my first diabetes camp in 2011 with nothing but the clothes on my back and an hour long conversation on the phone beforehand to convince me to go.

My vision for YWD is to see it grow into a well-known and astute organisation with a full team of individuals committing their life every day as a team, in order to professionally further all aspects of the care and services offered to youth living with diabetes



youthwithdiabetes.com



Join the  
**Youth With Diabetes YWD**  
Facebook Group  
and visit our website



As a 20 year old Medical Sciences student at Tuks who loves to learn random skills, bake and party, the last thing you would expect is that I have had type 1 diabetes for 7 years. After all, diabetes is supposed to be a limiting chronic condition right? ... Wrong!

I pride myself on breaking free from conformities. Yes, nerds can be cool and have fun. Yes people with diabetes have every opportunity in the world. It's all about your attitude. I am open to new experiences and ideas, but at the same time I am dedicated and goal-driven. I enjoy balance.



I have been a part of YWD from its creation. I've watched the enormous amount of passion, time and effort put into this organisation and seen the exponential growth that has been made. I can now proudly say that I chair the Youth Committee. My role is to be a leader and make decisions, but at the same I learn from every new experience.

I could never over-exaggerate the positive influence YWD has had on my perception of diabetes and on life in general. I actually plan to become a medical researcher specialising in diabetes.

I also plan to help YWD spread across the world. We are a new, energetic, powerful organisation that will soon influence the global view on diabetes. We are going to be the change that is needed to put diabetes on the lips of every medical professional, teacher and the general public.



Brad Mostert: the IT Guy

I am young and outgoing and have diabetes - but I don't let my condition slow me down. I am a qualified rescue scuba diver, I have backpacked the world, and, on occasion, I am a complete party-animal. My outlook is that it is not about saying I can't - nor is it about being reckless. It is about having the best possible control of my blood glucose, surrounding myself with the right people and making the right plans in order to safely achieve my dreams despite (and in some cases with the benefit of) my diabetes.

I am an avid member of Youth With Diabetes in the hope that I can inspire other young people. We are not sick, we just have additional considerations.

Jonathan Ombeni: YWD Poet



It's been 19 years now, with some hard times and some good times along the way. Diabetes is my enemy. In order to win this war, I have been trained and I have been armed. I have to show no fear. I am still at war with diabetes and yet to me it's getting weaker and weaker everyday. I look back and realize how far I've come, and decide that it's not time to quit.

I am not scared of my diabetes anymore; it has had its chance to dominate me, not today and not ever. Looking at my HbA<sub>1c</sub> of 7.9 % for the past four years, I may say I'm winning.

My role in YWD isn't that huge but it's very important to me. I have been a youth leader for four years now. My role in YWD is to help those who seek my help. I love what I do. With no doubt, YWD is growing rapidly in such a way that as a person with diabetes, you will soon look at this organization as a kingdom. Viva YWD!



# Nick Jonas on diabetes

**Nick Jonas seems to have everything a guy could want: thousands of adoring fans, a skyrocketing career, and a cool family. Nick also has diabetes**

Nick first started feeling ill while on tour in November 2005. He was losing weight, acting moody, and feeling thirsty all the time. A blood test showed that he had diabetes and he spent several days in the hospital. Though he is healthy and feeling great now, back then he worried he might die.

"I had an emotional breakdown since I really had no idea what diabetes was all about. I wondered, 'why me?' Then I asked myself, 'why not me?' and realised that I might be able to help other kids with diabetes."

In 2007, the Jonas Brothers performed at a Diabetes Research Institute fundraiser in New York City. During the show, Nick asked audience members to raise their hands if they had diabetes. Then he raised his hand, too, revealing for the first time publicly that he has type 1 diabetes.

At the concert, Nick encouraged other kids with diabetes to be positive, adding that he earned the nickname "Mr. Positive" because of his attitude about his condition.

Nick says – "In the beginning I had wild mood swings and couldn't drink enough water. But now I'm able to check my blood glucose before we go onstage, so I can manage it by using my Omni Pod [the device he wears that delivers insulin]. I perform with several theater groups and choruses and for pageants, and I don't feel well when my glucose is too high or too low. It is hard to focus and do my best. I do get tired, but our days are pretty jam-packed. Again, it's a question of regularly checking and managing my blood glucose".

## Helping others with diabetes


Nick began writing "A Little Bit Longer," his song about tribulations of any sort, at age 13, on the day he was diagnosed with type 1 diabetes.

"Got the news today, doctor said I had to stay, a little bit longer and I'll be fine... Waitin' on a cure, but none of them are sure, a little bit longer and I'll be fine... So I wait 'til kingdom come, all the highs and lows are gone, a little bit longer and I'll be fine..."

Since August 2008, Nick has been a diabetes ambassador with Bayer Diabetes Care, to help young people manage their diabetes and support them in giving back to their community. In June 2009, he met President Obama (and both the Obama daughters) when he went to Washington DC to testify before the Senate Homeland Security and Government Affairs Committee, along with Sugar Ray Leonard and Mary Tyler Moore.

Nick definitely sees himself as doing more advocacy in the future, perhaps even on a larger scale. As he says, "I still have diabetes and I'm probably going to have it for a while, unless there is a cure one day. You know, it's something that I'm passionate about, and I want to speak out about it. I've seen the effects it has on young people. They feel alone with their everyday struggles with diabetes, and they just want to have that assurance that they can live out their dreams with diabetes."

Nick also has good advice on how to handle yourself in order to make those dreams come true. For one thing, he stays physically active. He says, "I play a lot of sports, that's the main thing. Baseball is a big one. I think if I wasn't doing what I am today, I would be playing baseball. Ping pong on the road also keeps you somewhat active."

His diabetes self-care has come a long way in the five years that he has had diabetes. "It's about learning how to be prepared for it," he says. "Every day is different, so you have to be prepared for every situation, and have the right tools, and keep the right people around you who know what to do in emergency situations." 

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# Super snacks

If you go more than four or five hours between meals, a mid-morning or bedtime snack might be just what the doctor ordered to help you keep your blood glucose stable

Snacking is also important *if* you're taking medication that could cause a blood-glucose low between meals.

Snacking has a bad reputation mostly because it's associated with unhealthy food choices that are high in fat and calories. But contrary to popular belief, snacking isn't all about doughnuts and potato chips. It is possible for people with diabetes to have snacks without sabotaging their diabetes meal plan.

## WHY SNACK?

Managing diabetes involves balance. You want to keep your blood glucose levels as close to normal as possible. This means you don't want to have too many high or low blood glucose readings. One way to maintain this balance is to eat at regular intervals on a daily basis. Most people with diabetes should aim to have their meals every 4-6 hours, with 1-2 snacks per day (depending on your medication regimen). One of these snacks could possibly be at bedtime to prevent low blood glucose while sleeping.

In addition to helping you manage blood glucose levels, snacks can boost your energy level between

meals and help keep you going throughout the day. It's important to discuss with your doctor or a registered dietician what snacking approach is right for you.

## SNACKS FOR DIABETES

Choose snacks for diabetes that are high in fibre, moderate in protein and carbohydrates, and low in calories. You can do this by reading food labels, keeping fresh fruits and vegetables on hand, and thinking ahead about your daily meals.

Snacks can also be mini-versions of your favourite breakfast, lunch, and dinner meals. Be creative and incorporate healthy snacks into your daily meal plan for better blood glucose control.



For a healthy and convenient snack, try Jungle Lite Energy bars. Delicious and low GI with no added sugar, Jungle Lite bars come in Citrus, Nuts, and Cranberry and they are ideal for keeping your blood glucose levels stable between meals.

Regardless of how many snacks your meal plan includes, portion sizes are the key to controlling your blood glucose and avoiding weight gain. So, resist those trips to the vending machine – plan ahead and pack a healthy snack like Jungle Energy Bar!



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# Did You Know

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If you didn't then you'll be pleased to know that these delicious bars are the perfect in-between snacks when you're craving that something sweet, but don't want to jeopardise your blood sugar levels.



For more information about how to

**LOOK GOOD. FEEL GOOD. EAT GOOD.**

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# Dating with diabetes



Rosemary Flynn  
Clinical Psychologist,  
CDE, Houghton

## Having diabetes can add a bit more anxiety to the dating game

**D**ating can be a mixture of excitement and anxiety for most teens, especially if it is a first date with a special guy or girl.

Someone thought you were special enough to single you out for a date. That feels really good. You have high expectations. And of course you want to fall madly in love. Then you start to have doubts - you wonder if they will really like you when they get to know you. Will they like the way you look? What if you can't talk or if you make a fool of yourself somehow?

When there is a special event, like a dance at school or elsewhere, the anxiety can begin even before you are asked on a date - you wonder if you will be asked, or will you have enough confidence to ask someone to go with you to the dance?

Having diabetes can add a bit more anxiety to the dating game. Or not! How comfortable are you about others knowing you have diabetes? How much self-confidence do you have? What is your attitude towards your diabetes? A lot also depends on how you deal with your diabetes every day. For example, do you know how to work out the right amount of insulin for the meals you might have when you go out to eat? The answers to these questions can have a great impact on how well your date goes.

A varsity student - I will call her Jane - was in love with the guy of her dreams. When they got together, it was as if her life suddenly had meaning. When they had been dating for about three months, she developed type 1 diabetes. Jane was shattered. When it came to the man in her life, she was sure he could not deal with her having diabetes - he would surely break up with her. The truth was at that time Jane could not deal with her diabetes. She told him about her diagnosis and because he did not know much

about the condition, he said "No problem - what do you have to do?" Jane explained about the injections and testing and waited for him to react negatively. He said very little, but he assumed she would sort it out herself. Jane interpreted this as 'he can't deal with this'. She was sure he would leave her very soon. Her anxiety levels went so high that she was struggling to control her diabetes and her fear of losing her boyfriend escalated. Fortunately she was in a position to speak to a psychologist about her feelings. The psychologist suggested that Jane ask her boyfriend what he was feeling rather than just assume the worst. He reassured her that he loved her - the person she was. If she couldn't handle her diabetes, he would help her the best way he could. Jane had a way to go to learn about her diabetes, but she had the support of her boyfriend to make it a lot easier.

Generally speaking, if you are at peace with your diabetes, others react very little to the fact that you have the condition. They may ask a few questions initially and then as they see that it is not an issue for you, it becomes less of an issue for them. That does not mean that you can put your diabetes care on the back burner - it just means that if you answer their questions confidently, they will see that you have it in hand and feel less worried, threatened or squeamish. In fact, whatever you feel about your diabetes will be projected on to them and they will feel that too. For example, if you get panicky about having low blood glucose, so will your date. Sometimes your date will surprise you by remaining positive even if you are anxious.

Nomsa also shared her experience with me: "It was extremely difficult. He was the one person I was afraid to tell about my diabetes. See, I always had a crush on the guy. I thought that if I told him, it would make me less appealing. It wasn't until a month before we started dating that I told him about my diabetes. I was surprised when he told me that his grandmother had it. He was willing to learn all about it! My mom invited him over and taught him all the signs of high and low blood sugar, how to work my insulin pump, and how to check my blood sugar.

Every time we went out, he would make sure I checked my blood sugar and followed my meal plan - which was really bad when I wanted to cheat! He even got me sugar-free white chocolate for Valentine's Day. He would attend and help with all the diabetes walks and fundraisers. It was great. I really appreciate him for that. It also helped that I had someone to talk to when I was stressed about my diabetes. It helps to talk to someone other than your family members. Sometimes it's even easier."


Should your date react to your diabetes negatively, and you cannot convince him or her that you are managing fine, perhaps it is better that you don't spend more time with that person. If you do, he or she will have a negative impact on you in the long run - you don't need that negative energy in your life.

### Some tips about dating with diabetes

Just because you have diabetes does not mean cannot attract attention from another person and that you cannot have a successful relationship in which you give and receive love. Make the handling of your injections, testing and eating as calm and easy as possible on your date. Your partner will then feel confident that you are in control of your diabetes and he or she has no need to worry.

Focus on all the normal things that make for a special date - look good, smell good and create a romantic atmosphere with music or flowers for example. Appealing to the senses will mean much more to the date than the fact that you have diabetes. Keep a snack and a sweet drink handy, know your warning signs of a low coming on and deal with any low effectively. Check your blood glucose before you go out and have a cell phone on you to call someone if you run into a problem.

While alcohol should be avoided by all teens, this is especially true for teens living with diabetes. Alcohol increases the risk for extremely low blood glucose values. Drugs may also have serious interactions with your diabetes in addition to all their other known dangers. In today's world, most teens will be exposed to both alcohol and drugs. You need to plan what you will do when these are presented to you.

Keep your breath 'kissably' sweet. Very high glucose levels maintained over several days can affect your breath, especially if your body begins using fat rather than glucose as its energy source and ketones are generated. Keep your blood glucose level within your target range to reduce or eliminate this problem. 

*Making life sweet again!*



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# Rekindling my love for reading



Paul Baker

**“Paul, what would you like for your birthday?”  
Not the first time my wife has asked me this  
question, but this time I have an answer**

“I would like a Kindle”. The Kindle is an electronic book reader. I have been eyeing the e-book readers for a while, but little did I know how this gift would change my life.

“*Think not less of yourself, but less about yourself.*” This is a quote from George E. Vaillant, a psychiatrist and a professor at Harvard Medical School and one of my newly found favourite authors. He was involved in a 72 year long ‘Grant Study’ that tracked the lives of 268 men. The aim of the study was to study adult development. What they found touches on the meaning of life: What makes us happy? The answer lies in the quote...

I didn’t actually lose my love for reading, nor have I ever stopped reading, but lately my reading has slowed to two pages a night before falling asleep. Some books take more than a year to read this way. I remember in my youth occasionally getting stuck into a book and not quite making it out of bed until the late afternoon. Those times are hard to relate to now. When raising a young family, time is a luxury now normally reserved for sleeping.

When the kids get older, time is still short and I guess reading didn’t really make it to the top of the list. Not until now that is.

You can read the Kindle in direct sunlight. It’s a small library disguised as a light thin hard covered book. It

keeps your place, and looks up any words you don’t understand in a dictionary. You can even compile a list of extracts from the books you read. It takes 20 seconds to deliver a book wirelessly - try beating that SA Post Office! Most of all, because it is small and light and full of books, I tend to keep it close. Because of that, I am reading more. I Love it. Let me explain that quote from George Vaillant.

In our journey to discover who we are and what we are to become in life, we need to focus on ourselves. We develop our skills, our logic, and the neocortical part of our brain (that part of the brain that makes humans different from all other animals). Unfortunately, this part of our brain is also the origin of negative emotions, like anger, fear and vengeance. These emotions are all about ‘me’. Happiness comes from the positive emotions like compassion, forgiveness, love, hope, joy, faith, trust, awe, and gratitude. Positive emotions are all about ‘others’ and originate in another part of our brain called the limbic system. Mammals have limbic systems, reptiles don’t. To be happy we need to look past ourselves, past the reptile in us, and care for others. This may be harder for a person with diabetes than most because we have so much with which to concern ourselves. Did you know that 25 % of people with type 1 diabetes, and 11% of people with type 2 diabetes suffer from clinical depression? Ouch!

In my endeavour to read a bit of everything, I came across a book called ‘Psychology in diabetes care’. It is rather strange reading about yourself from a third person patient perspective, but it revealed a few insights. It turns out the part that all that have diabetes understand very well, is how bad diabetes can be for us. We are all unique in the way we deal with diabetes. Diabetes affects everything and everything affects diabetes. Despite our differences however, there are many similarities. I have tried to summarise some of the ideas from “Psychology in diabetes care.”

If you have diabetes, there is a lot to be anxious or even fearful about. Hypos can be pretty scary. What about needles? Are you scared of taking insulin? Not being wary, anxious or even afraid of diabetes related complications would be stupid. Are you scared of the impact diabetes has on your social, work and family life? Yes, people living with diabetes have a lot to deal with, and there is no break or reprieve.

It gets worse if you are not coping with your diabetes management or don't believe in the efficacy of your treatment. You may feel guilty; blame yourself; feel isolated; struggle to cope physically and socially; fear complications; and generally feel helpless. Some people respond with denial, aggression, frustration and neglect their diabetes care. Others overreact with extreme concern.


*"Life's challenges are not supposed to paralyse you; they're supposed to help you discover who you are."*  
A quote from Bernice Johnson Reagon, a musician, composer, singer and non-violent activist in the Black Civil Rights Movement i.e. someone who has lived through it all. Have you noticed that the community of people with diabetes contain some of the most successful people, remarkable athletes, and generally amazing people? It is worth getting it right.

Did you know that 9.5 % of the non-diabetic adult population suffer from clinical depression? That means that only 1.5 % more of people with type 2 diabetes and 'only' 15.5% more of people with type 1 diabetes are likely to suffer from clinical depression at some point in their lives. Considering the very real issues that people with diabetes face on a daily basis, that is not bad going. But, if you are

like me and want to beat the odds, this is what the psychologists recommend that people with diabetes should do to stay mentally healthy:

- Improve your diabetes management. Physical health and mental health are linked. Getting control of diabetes is empowering. Concentrate on your meal planning, self-monitoring, and problem solving ability;
- Understand the reasons for your negative emotions; anger, irritation, anxiety;
- Manage your stress. Identify sources of stress, and learn ways to manage them;
- Build your support network. "Remember everybody slips; your goal is to keep a lapse from becoming a collapse." When you lapse, use your support network - your family, friends, medical staff and especially other group members;
- Build your emotional strength through love, faith and humour;
- Focus on the positive. There is always something positive.

Your diabetes team are trained to help you through this, so use them.

George Vaillant teaches all about the power of positive emotions. He also explains why we should look forward to growing older. It turns out that our brains continue to develop, as we get older. We may become more forgetful, but our limbic system continues to grow and with it our capacity to love and care for others. The older we get, the easier it is for us to lead a happy and fulfilling life... The easier it is to live with compassion, forgiveness, love, hope, joy, faith, trust, awe and gratitude. 

DI-1 + base  
**di•a•be•tes** (dī'ə-b)  
ders marked by exce  
one of the t

# Ways to Survive a Holiday Eating Frenzy

It's that time of year again - the holidays are here! And with their arrival comes a virtual onslaught of sugary, high-calorie temptation. December time can feel like the start of a horse race. The starter pistol fires, and off we go, racing through an obstacle course of snacks, side dishes, gravies, sauces, pies, biscuits, cakes and alcohol. Rounding the bend into Christmas, it can feel like the very air is filled with sugar and calories. Everywhere we turn, someone is holding a tray of freshly-baked treats, and asking us, "Want one? Take two, they're small."

End-of-year functions, holiday parties and family gatherings will always be a major part of the holiday season and can present a special challenge when it comes to eating healthy – especially for people who are trying to control their diabetes. There are, however, ways to keep your blood glucose levels out of the stratosphere and stay on your eating plan over the festive season. And this doesn't mean that you'll have to completely sacrifice all of your favourite foods!

- **Plan ahead** - Having diabetes should not prevent you from going anywhere you want to go. Planning ahead and thinking carefully about how you will manage your diabetes in different circumstances will make your trip more successful and enjoyable.

- **Eating out** - There is no need to deny yourself the pleasure of eating out just because you have diabetes. Make healthy choices, control your portions and keep fat and sugar content to a minimum when possible.

- **Be the master of your mouth** - Nothing can go into our mouths unless we put it there. We really do have control and don't have to eat everything that's handed to us.

- **Choose when to indulge** - Choose two or three occasions to indulge and the rest of the time, make healthy choices and continue with your good diabetes control and weight loss goals and strategies.

- **Focus on the fun, not the food** - Take the focus away from eating and celebrate the people in your life at this time of year. Use the season to spend quality time catching up with loved ones and enjoying fun activities together.

- **Dodge the family guilt and be assertive** – You don't have to say yes to everyone that offers you food and drinks. If it will affect your sugar level or sabotage your attempts at weight loss, then don't let yourself be bullied into eating or drinking something that you really don't want.

- **Leave what you don't want** – Don't feel obliged to clear your plate, even though it may seem like an insult not to. It's simple - when you feel full, stop eating.

- **Keep your eye on the prize** - Remind yourself daily why you want to make healthy choices - enjoy the holidays without regret! Check your blood glucose levels more often to make sure you're staying in your target range.

- **Drink alcohol in moderation** – Besides affecting your blood glucose levels, don't forget that alcohol is fattening too. Control the amount of alcohol you consume over the holiday period and, in the same way as food, don't over-indulge regularly.

- **Step up the exercise** - It will help burn off those indulgences, keep your blood glucose levels under control, keep you focused on your goals, and give you a welcome break from being surrounded by tempting treats.

- **Last but not least, consider taking DIABION every day** – People with diabetes have high oxidative stress loads which exacerbates the development and progression of diabetes and its complications. This combined with the festive season - which brings with it poor food choices, imbalanced diets, irregular eating, smoking and alcohol - sufficient quantities of healthy nutrients from food may certainly not be obtained! Therefore, taking **DIABION** (specifically formulated for people with diabetes) everyday will ensure that you get adequate antioxidants, vitamins and minerals to help combat oxidative stress, prevent long-term diabetic complications and improve quality of life.

## • Each **DIABION** Capsule contains:

Vitamin A 3300 I.U.	Vitamin B6 5 mg
Vitamin B1 5 mg	Vitamin B12 5 µg
Vitamin C 100 mg	Vitamin E 100 mg
Chromium 50 µg	Folic Acid 400 µg
Magnesium 87,5 mg	Selenium 70 µg
Zinc 15 mg	

Diabion is suitable for adults and children over 12 years. Do not take Diabion if you are allergic to any of the components.

It is very important that you tell your healthcare providers about the supplements that you are taking so that they can ensure the safety of their use.

Being health-conscious and looking after your diabetes doesn't mean that you can't enjoy the holiday season. It simply means striking a balance and continuing to be vigilant and prepared for the festivities.



# Calling all people with Diabetes



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## Each capsule contains:

Vitamin A	3300 I.U.	Vitamin E	100 mg
Vitamin B <sub>1</sub>	5 mg	Chromium	50 µg
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Vitamin B <sub>12</sub>	5 µg	Magnesium	87.5 mg
Vitamin C	100 mg	Selenium	70 µg
		Zinc	15 mg

Recommended for persons 12 years and older  
Take one capsule in the morning after breakfast

## The supplement specially formulated for people with diabetes

- Contains a combination of vitamins and minerals tailored for people with diabetes
- Recommend DIABION to your patients with diabetes
- Does NOT contain iron and copper. These may cause complications in people with diabetes<sup>1</sup>

## Essential support for diabetes from the experts

Reference: 1. Wang T, Guo Z. Haemoglobin Copper in medicine-homeostasis, chelation therapy and antitumor drug design. Curr Med Chem 2006;13(5):525-537.

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# Nutrition basics for children and adolescents with type 1 diabetes



Ria Catsicas RD (SA)  
in Private Practice

**Good parenting has a critical role to play in teaching children the necessary social skills so they can develop into balanced adults with healthy lifestyles**

**T**hese skills include good manners, respect, eating healthily and the discipline to succeed at school.

As a parent, who has a child diagnosed with type 1 diabetes it is crucial that you accomplish the following:

- Help your child to reach normal growth and developmental milestones;
- Ensure your child achieves safe, near-normal blood glucose levels on a daily basis. Optimal blood glucose control will help to minimise or prevent possible long-term complications of diabetes, such as eye disease, obesity, heart disease and high blood pressure. Targeting factors leading to excessive blood glucose variability will assist in the reduction of short-term complications, such as hyper- or hypoglycaemia in addition.

Six elements contribute equally in achieving optimal glycaemic control:

- A desire to be healthy;
- Self-discipline;
- A flexible, tailored insulin regimen;
- Monitoring blood glucose levels and trends and knowing how to make informed decisions based on the readings;
- Appropriate nutrition;
- Regular physical activity.

## Appropriate nutrition

The nutritional requirements for children and adolescents with type 1 diabetes are no different from children

without diabetes. A healthy eating plan should provide your child with adequate energy and provide all the essential nutrients that he or she requires for optimal development and growth and the maintenance of a healthy body weight.

It is important to note that a child with diabetes should consume the same foods that the rest of the family eats. The whole family should eat healthily - parents should create a healthy environment by providing and encouraging healthy food choices for children with or without diabetes. All children feel and perform better when appropriately nourished.

*The challenge for children with type 1 diabetes is to calculate and inject their insulin to match their daily food intake in order to achieve and maintain optimal glycaemic control.*

## Quantity of carbohydrates

Although numerous factors affect glycaemic control, the quantity and type of carbohydrates we consume has been identified as a primary cause of after-meal glucose response

Foods containing carbohydrate include all fruits, vegetables, grains and starches as well as milk and milk products. Counting the amount of carbohydrates that your child plans to consume in their meals and snacks is called carbohydrate counting. Using carbohydrate counting to achieve glycaemic control allows you to match insulin dosage with the quantity of carbohydrate that your child will consume in her meals and snacks. It offers flexibility with regard to the timing, size and composition of meals and will give your child a better sense of control.

The American Diabetes Association identifies three levels of carbohydrate counting. Working with your dietician and health care provider, you can choose the appropriate level that best suits your child's lifestyle.

**Level 1:** This introduces the basic concept of how much carbohydrate is in a single portion of any carbohydrate food. The dietician will calculate a total amount of carbohydrate and how it should be distributed throughout the day to suit your child's daily routines and insulin treatment plan. On diagnosis, your child will start with level 1. This also applies if your child tests and injects only twice a day. The daily consumption of carbohydrates remains within the quantities suggested by the eating plan and offers less flexibility;



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\* Nativa Diabetic Complex combines an array of natural occurring substances (like Gymnema Sylvestre, Cinnamon and Chromium) to support your body to manage fluctuating blood glucose levels. In addition, it assists you to curb the secondary complications (for example, cell-, nerve- and eye degeneration) associated with the condition.

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*\* People suffering from chronic conditions, are advised to take supplements under the supervision of their healthcare practitioner.*

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**Level 2:** This level requires more frequent testing and your child will begin to recognise the patterns of blood glucose response to carbohydrate intake. You and your child will be able start adjusting the amount of insulin needed at each meal and varying the intake of carbohydrate and exercise levels to achieve the desired blood glucose levels;

**Level 3:** At the third level, your child will develop his or her personal insulin-carbohydrate ratio. This is appropriate if your child uses multiple injections and tests his or her blood glucose levels a minimum of four times per day. Using their personal ratio you and your child determine the dosages of short-acting insulin necessary depending on the quantity of carbohydrate present in the meal, the blood glucose level before the meal, as well as any anticipated activity.

### The type of carbohydrate


It is recommended that your family and your child mostly consumes wholegrain and unprocessed carbohydrates (health / seed breads, hi fibre cereals, brown / wild rice, corn, sweet potatoes and fresh fruit and vegetables). This not only necessitates the use of less insulin, but most importantly provides valuable fibre and nutrients such as vitamins, minerals and phyto nutrients compared with processed and refined carbohydrates.

Examples of refined products made from white flour and with a high sugar content are low-fibre high-sugar breakfast cereals, white bread, chocolate spreads, chocolates, sweets, pies, all bakery items, take-out foods and potato crisps (see menu snacks)

### The type of protein foods and fats

Choosing lean proteins (chicken and beef with the fat removed), fatty fish and healthy fats such as vegetable oils, avocado pear and nuts has proved to assist with mental development and weight control as well as optimal glycaemic control. These foods should enjoy preference to foods high in saturated fats such as processed meats (sausages / polony / viennas), deep fried foods, fast foods, pizzas, salty crackers etc.

### Conclusion

Teaching your child healthy food choices is an act of balance and compromise. Food has both social and pleasure value. As we balance insulin to the carbohydrate content of the meal, we should balance the frequency and quantity of enjoying unhealthy foods to the context of social events. 

### Snack substitutes

Snack	Portion	CHO g	Sugar g	Fat g	Fibre g	Energy Kj
Cookies	30 g (4)	24	14 (3 tsp)	7	0	676
Energy bar	40 g	22	12 (2 tsp)	7	2	739
Sweets	25 g pkt	18	14 (3 tsp)	0	0	316
Chocolate	50 g (1 bar)	30	27 (5 tsp)	15	0	1120
Potato crisps	30 g pkt	24	0	12	0	766

### Healthier alternatives

Snack	Portion	CHO g	Sugar g	Fat g	Fibre g	Energy Kj
Dried fruit	30 g (3-4 pieces)	21	0	0	2.4	381
Fruit bar	32 g (1 bar)	20	0	0	2.6	405
Oven baked pretzels	30 g (1 handful)	24	0	3	1.5	583
Biltong (no fat)	30 g (1 handful)	0.7	0	2	0	346
Popcorn	30 g (1 handful)	15	0	7	2.7	636

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doesn’t make me different.  
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# Why is diabetes on the rise?



*Dr David Segal*  
*Paediatric endocrinologist*  
*CDE, Parktown*

**The global obesity epidemic, or should we call it a pandemic, finds 60 percent of the American adult population overweight or obese**

In South Africa we have limited statistics, but those that we have find 50 percent of our adults to be overweight or obese. Obesity has a close relationship with the development of type 2 diabetes and more recently links have been made to type 1 diabetes too. Type 1 diabetes (previously known as juvenile onset diabetes) has always been the predominant presentation in childhood. However the contagion of obesity spreading to the youth now gives African American teenagers presenting for the first time with diabetes an equal likelihood of having type 1 or type 2 diabetes. Type 2 diabetes in the young is still predominantly restricted to ethnic minorities in the USA and in susceptible populations around the world. The trend towards younger and younger presentation of both types of diabetes is seen across the globe in all populations.

Type 1 diabetes and type 2 diabetes are both disorders of blood glucose. The hormone or chemical messenger for lowering blood glucose is insulin. Type 1 is classically thought to be related to insulin deficiency due to destruction of the insulin producing beta cells in the pancreas. Type 2 diabetes is thought to be related to insulin resistance and subsequent failure of the beta cells. The mechanisms behind type 1 diabetes and type 2 diabetes may well be more similar than previously realized. They may in fact be the same disorder presenting against different genetic backgrounds and requiring differing degrees of “environmental” pressure to reach “tipping point”.

What could this environmental pressure be? Obesity? Inflammation? Food choices? Or perhaps more likely a

combination of toxic insults accumulated along the road to obesity, rather than obesity per se.

## **Our friends - gut bacteria**

The greatest interaction between the human body and the environment occurs within the gastrointestinal tract. Through evolution, the human gastrointestinal tract has co-opted the aid of 100 trillion organisms (gut flora). This ‘microbiome’ helps to digest food, make vitamins and detoxify dangerous chemicals. The gut flora inherited from our mothers during the birthing process evolves to become a relatively stable colony by early childhood. The make-up of this microbiome is influenced by the continual interaction of our immune system with our gut organisms as the symbiotic relationship evolves and also through our food choices.

An unbalanced pool of gut flora can mechanistically be associated with the development of diabetes through a number of possible means all of which have scientific support:

1. The gut flora may leak across the gut lining and come into contact with our gut associated lymphoid tissue (GALT), our first line of defence. Here they can cause inflammation which can spill over into the rest of the body;
2. Small proteins such as cow’s milk proteins, viral and bacterial proteins can leak across the damaged gut lining and interact with an immune system that genetically may be primed to respond in such a way that diabetes may develop;
3. The gut bacteria are capable of harvesting extra calories from the food we eat, and in so doing lead to the development of obesity.


## Our bodies bear the brunt

The ongoing bombardment of our bodies with high fat, high carbohydrate meals is almost certainly increasing the risk of developing diabetes via a number of mechanisms:

1. The higher than normal intake of fat and carbohydrate (particularly high GI carbohydrates) raises the blood fat and glucose levels above the "normal" range but still below the level at which diabetes would be defined. These elevations trigger an inflammatory response, snack after snack and meal after meal;
2. These repeated elevations in blood glucose may cause the insulin-producing beta cells to 'stick their heads above the target line' more often than they should. This may lead to beta cell injury and cell death in an individual that is genetically primed to develop diabetes;
3. The extra calories consumed in this fashion are stored as fat. As the fat cells enlarge they too start to produce chemicals that reduce our sensitivity to insulin and causing insulin resistance. They are also pro-inflammatory;
4. The over distended fat cell eventually dies. During the mop up process, the immune system moves in to clean up the mess. Eventually so many fat cells are dying that the fat tissue becomes permanently populated with these immune cells that also release pro-inflammatory and anti-insulin chemicals on a daily basis.

Both type 1 and type 2 diabetes are presenting in younger and younger children. No doubt our toxic "environment" and food choices are fuelling the process.

## Stemming the tide

To stem the tide, we need to be feeding our children healthier foods, salads, veggies and grains. We need to cultivate a mindset from a young age that can help our children survive in this toxic food jungle. Essential survival traits for our current world include self-discipline, moderation and the ability to make healthier food choices on a long term basis, regular exercise, regular teeth brushing and flossing and the maintenance of a healthy weight. The grim reality is that individuals, families and communities need to adopt these strategies or be doomed to a life at risk for the development of chronic diseases such diabetes, heart disease, asthma, allergies and cancer. 

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For a comprehensive list of the over 290 CDE Centres nationwide, please see the CDE web site, [www.cdecentre.co.za](http://www.cdecentre.co.za)

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**Dr Kahanovitz**

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South Coast Mall, Shelly Beach  
Telephone: 039 315-0343

**Phalaborwa Diabetes Clinic**

Diabetes education and weight loss  
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**Dr J Reyneke**

Parkland Clinic, Springs  
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**Vaal Diabetes Centre**

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**Dr Wayne May**

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Claremont, Cape Town  
Telephone: 021 674-6414

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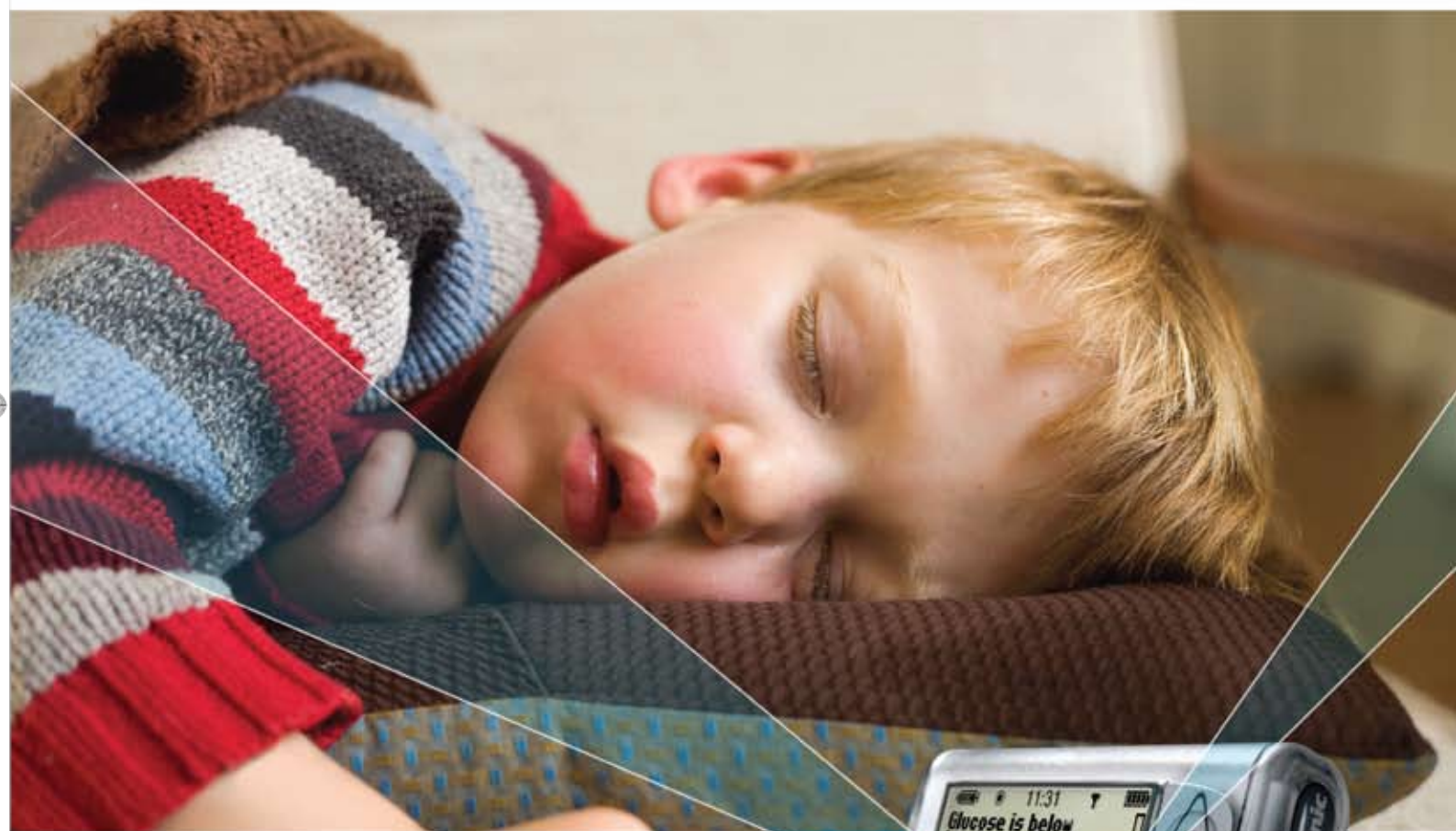
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