

# THE REAL MEAL REVOLUTION

CHANGING THE WORLD, ONE MEAL AT A TIME

PROF TIM NOAKES  
SALLY-ANN CREED  
JONNO PROUDFOOT  
DAVID GRIER



“Thank you for believing in yourself enough to have the guts to go out to the wider medical community, refute some of your previous work and believe so much in your new research that you are prepared to take the criticism that is bound to be thrown at you. **I have struggled with weight issues since I was a 10-year-old.** I have literally tried every diet known to man. The problem with all these diets was I was always constantly hungry despite eating huge platefuls of food, a problem I have not encountered with this way of eating. To say it has been a success is an understatement. I have managed to get to my slimmest ever in my entire adult life and have been able to maintain it so far.” HEATHER LOCK

“**Life-changing event!** On the high carb diet I upped the running and nothing happened. So I dropped my calorie intake down to 1 500 calories per day and ran more but after two months I'd put on a kilogram and felt permanently tired. That is about **when I saw your article and everything changed.**” JOHN MARTIN

“I have never had as much energy as I have now and can easily see any length of a gym session through without the need to supplement with food before I go. **I feel I am finally in control of my body.** I am no longer nearly as hungry as I was – so much so that I actually have to remind myself to eat. **My life and conscious thought of food are forever changed.** Not only mine, but also a few others who managed to see my changes and have made even more impact in their own and their families' lives. Truly a gift that keeps giving. Again, I am indebted to your work.” PIETER LE ROUX

“I am 56 years old and lost 11kg in a little over two months switching to low carb high fat. Now I'm thin, muscular, and full of energy without effort. I am actually in the best shape I have been since high school and I don't even exercise significantly.” DR MICHAEL MYERS

“Thank you very much for your low carb crusade. **I am healthier and feel better than I have for 20 years, and it may even have saved my life.**” DR ANTHONY MOSHAL

“It has become very clear to me what was making me tired these last many years: the carbohydrates I've been eating all this time! **My energy level is UP!**” STEPHEN MOGAMI MPHOMANE

"In the past I tried a low fat diet, which proved impossible to maintain. I lasted a year on this diet and as I was perpetually hungry, so I gave it up. Eating fat has made me thin. Certainly what I have been eating for the past year is really making me healthy in that it has reversed several chronic ailments and I currently need no medication. There is no incentive for me to leave this agreeable diet. The population is becoming steadily more obese, diabetic and hypertensive despite the popularisation of the low fat diet and incentives to eat certain (low fat) foods." PROFESSOR JONNY MYERS

"Thank you for saving my life... If a scientist can't change his opinion when confronted with new evidence, then he can't call himself a scientist."  
NEIL ALAN EBERHARD

"I have just completed the London Marathon in 03:28:08 without carbohydrate loading, gels and a diet of less than 50gms per day. At 67 years of age it is my overall best for age marathon, and my best time for over 10 years. I believe that under three hours is more than possible for a man of my age and I have Ed Whitlock's over-70 marathon record in my sights." TIMOTHY KIRK

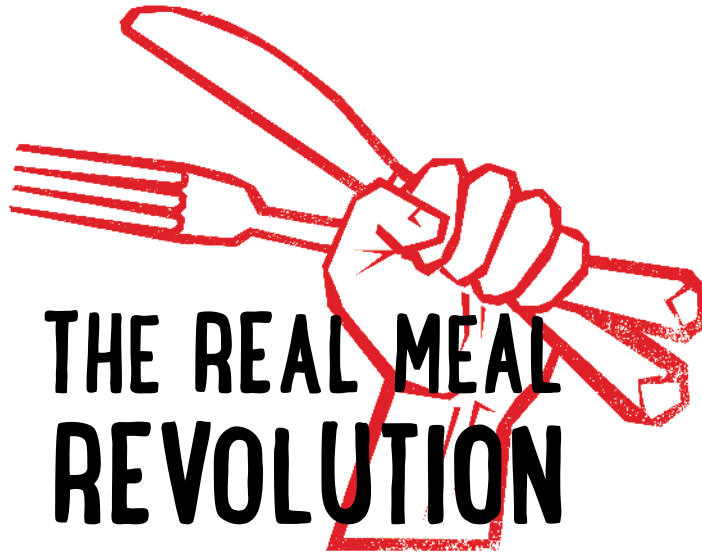
"Started my day with double cream Greek yoghurt, coconut oil and berries for breakfast. Water and two sachets of UCAN and a Kiri cream cheese at half way was all I had for the entire run. Finished feeling strong and took 1hr30min off last year's Comrades finishing time (9hr56min). LCHF all the way! No dips, no surges, no gastrointestinal issues, no drips, no trip in the ambulance. I am so chuffed! Thank you TIM NOAKES for educating me!" SHELLEY LIEBENBERG

"I noticed increasing muscular discomfort in early 2012, which got so severe it threatened my physical independence. I then developed frozen shoulders and multiple site tendonitis. When even steroid injections weren't effective, I tried LCHF eating. Four months later I achieved a handicap win at a 10km run, and three months after that, I completed a marathon in 4hr12min. I wonder how many patients I've treated with pills and platitudes when I should have been enquiring about their diet?" DR KERRY ALLERTON





**QUIVERTREE  
PUBLICATIONS**



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## FOREWORD

Throughout my playing career I was always looking at ways to improve my competitive edge.

I began by emphasising my physical fitness and was one of the first to incorporate weight training into my workout routine at a time when most golfers thought I was crazy to do so. I made sure I was as fit and strong as I could be, so that when it came to the back nine of a Major on the Sunday, I knew I could remain alert.

In addition to focusing on my fitness, I also began to concentrate on the mental side of golf. I believe the mind is a critical factor in competition and can be an extremely strong differentiator.

But one of the most significant changes I made was to my nutrition.

I began to pay attention to my diet as a strong indicator of my athletic success. I saw the benefits of correct nutrition, not only in my physical being, but also in my mental state and how it allowed me to concentrate for longer and be sharper on the golf course.

Early in my career I was chided for being a “fitness fanatic”. I was told there was no place or need in golf for the kind of athleticism I brought to the game. Yet, today you cannot go to a single tournament on the PGA Tour without finding a mobile gym, and the leading players work out religiously and are very cognisant of their diets.

Since I have stopped playing, I have made it my mission to educate as many people as possible about correct diet and the dangers of obesity. I have travelled the world and I have seen the debilitating effects of obesity. People are dying because they are eating incorrectly, and like it is a last supper. Children are becoming obese and sick because they are not focusing on the proper foods and are consuming processed junk that has become the norm in today's society.

So when Tim Noakes said he was busy with a “food revolution”, I knew exactly what he meant.

Tim is a man I greatly admire. I have always followed his work, and I believe his effort to educate people about correct nutrition is critically important in this age. Tim is a pioneer and a man who is not afraid to challenge convention. And now he has started the food revolution, armed with the rigorous testing, analysis and research that Tim usually employs in all of his work.

The world of food and nutrition is changing. People have access to more information. They are more empowered than any generation before us to make informed choices about what they eat. And they no longer accept blindly what they're told or what's on the label.

If the biggest change you can make in your life is what you put into your body, then start today.

Make no mistake, this is a food revolution, and you have no better guide on this journey than Tim Noakes.

A handwritten signature in black ink that reads "Gary". The signature is written in a cursive, flowing style with a prominent loop at the end.

GARY PLAYER

We dedicate this book to each of you who - dissatisfied with average health, surplus weight and dipping energy levels - decided to take charge of your bodies and make a change. Understanding that conventional wisdom on nutrition fell flat, you opened your minds, cast aside your preconceptions and began testing the facts for yourselves. By sharing your stories and the lessons in this book you are setting in motion a groundswell movement towards a true revolution in the way we eat.

<http://realmealrevolution.com>

You may not feel particularly unhealthy, but we'd wager that you've become accustomed to having average health, telling yourself that weight gain and worsening athletic ability is an inevitable part of age and life. Like a car with a characteristic rattle that eventually causes the engine to fall apart, you see feeling sluggish, bloated, constipated or ravenously hungry (despite eating "well") as just part of who and how you are.

What if you could turn it all around? Lose weight, regain the ridiculous energy levels of your youth and prevent against serious killers like obesity and diabetes? How about if you could do that while still eating really well? You know... all the good stuff packed with flavour - juicy steak, eggs pretty much any way you like them, roast chicken, heavenly bacon and more?

What if you could not only eat tasty, filling food (thereby not feeling starved or restricted), but get an end result where you feel stronger, fitter and more energised than ever before, even bettering the sporting ability of what you thought was your youthful prime?

Yes? Then welcome to *The Real Meal Revolution*, a lifestyle designed to change your weight, your health and your life. This is not a newfangled diet involving bizarre strategies and supplements that you'll never be able to stick to. Rather, it's a return to your dietary roots, bringing you back to the way humans are meant to eat and returning your body and mind back to the trim, happy, energised state our ancestors experienced thousands of years ago. They didn't get fat or suffer from obesity, diabetes or other lifestyle illnesses.

Neither should you.

# Vive la Revolution!

“THERE ARE NO MEAL TIMES.  
NO PORTION SIZES.  
NO KILOJOULE RESTRICTION.  
LET YOUR BODY TELL YOU  
HOW MUCH TO EAT.  
THE ONLY THING YOU COUNT  
IS THE GRAMS OF SUGAR OR  
CARBOHYDRATES. I LOOK IN  
THE FRIDGE AND  
I CHOOSE THE FOOD.”

Prof Tim Noakes

## WHAT IT'S ALL ABOUT

Part myth-busting scientific thriller, part mouth-watering cookbook, the goal of *The Real Meal Revolution* is to change your life by teaching you how to take charge of your weight and your health through the way you eat. Like our eating patterns, when it comes to reading, some people like a tasting menu, others prefer to get to the meat of the matter and still others like to digest the full smorgasbord of information, which is why we have divided this book into three sections for you to dip into and out of at will.

It's important to note that this is not a crash diet, not a get-thin-quickly programme – but a sustainable, long-term lifestyle which will lead to steady weight loss and increasing health benefits.

For **STARTERS** you will get an overview to:

- Understand what it is humans are actually designed to eat and learn that far from being a new low-carb, high-fat (LCHF) diet, this was the original human eating plan long before anyone ever got fat.
  - Discover how our original, ancestral eating plan got hijacked.
  - Digest what the consequences of that hijacking were to our health as a species.
  - Get to grips with how good fat got a bad rap.

For **MAINS** we get practical and:

- Learn – from Sally-Ann Creeds nutritional tips and the basics of stocking a fridge to shopping for Banting – how to set yourself up to transition from the high-carb, low-fat (HCLF) way you probably eat now, to Banting, which will help you lose weight and feel great.
- Discover how easy it is to cook the Banting way from loads of mouth-watering recipes designed by chef-athletes David Grier and Jonno Proudfoot.

For **DESSERT:**

- Settle in for the fascinating story behind the Banting movement as South Africa's foremost sports and exercise scientist Tim Noakes delves into the history and science behind human nutritional evolution and the three major historical catastrophes that conspired to lead us to the overweight, sickly state many of us find ourselves in today.
- Realise through South African case studies and the authors' success stories how the tide is changing as we get smart about what's really good for us.

Dig in.

## MEET THE TEAM

A scientist, a nutritionist, and two chef-athletes – the crack squad behind *The Real Meal Revolution* have walked or in some cases run the hard yards through the gauntlets of nutritional science and self-experimentation. The revelatory stance and the mouth-watering recipes in this book are the result of their experience combined with overwhelming scientific evidence.

### THE SCIENTIST – PROFESSOR TIM NOAKES

Tim is a highly respected South African Professor of Exercise and Sports Science at the University of Cape Town. He has run more than 70 marathons and ultra-marathons and is the author of the books *The Lore of Running*, *Challenging Beliefs* and *Waterlogged*. After publishing his latest book, Tim entered the dietary sphere challenging the science behind obesity, coronary heart disease and heart attacks. Tim has dedicated his later life to opening people's eyes to the myth of low-fat eating and the nutritional and environmental crisis it has now left us in.

"Working on this book, the goal is to remove the blinkers of accepted nutritional wisdom by unleashing the scientific evidence showing that the introduction of low-fat eating after 1977 is the direct cause of the twin epidemics of obesity and diabetes that began in 1980. We present the scientific evidence showing why low-fat eating is unhealthy for those suffering from insulin/carbohydrate resistance and how high-fat diets have the unique capacity to reverse all known coronary risk factors, especially in those with the most marked insulin/carbohydrate resistance. But it's not all science. Working with Sally's nutritionist knowledge and the foodie skills of Jonno and David we will show you how to apply eating the LCHF/Banting way practically in your own life through your fridge, your shopping trolley and your stove. All the ingredients are here for you to make major improvements in your weight, your health and your life."

### THE NUTRITIONIST – SALLY-ANN CREED

Sally-Ann spent most of her life sick with chronic asthma, sinusitis and panic disorder, undergoing many operations on her sinuses, and spending 13 long years as a "victim" of panic disorder and agoraphobia. Through an adjustment in her diet, she regained her health and qualified as a Nutritional Therapist (Post Graduate Diploma in Clinical Nutrition, Australia). Her goal is to help others experience the same results. Having found that food and supplements could dramatically change her life, giving her the quality of life she'd always dreamed about, she decided to study so that she could help others. Her story is relayed in her best-selling book *Let Food Be Your Medicine* – an easy to understand guide to healthy living.

"*The Real Meal Revolution's* timing couldn't be more perfect. The entire world is looking at the Paleo/Banting movement now with dozens of Hollywood celebrities adopting this way of eating with massive success. The low-carb, high-fat lifestyle is arguably the most contemporary dietary lifestyle since Atkins. Although technically not "new" Banting has been updated by current scientific knowledge giving us the best possible opportunity to revolutionise our own health. I personally changed from a low-fat, high-carb diet 16 years ago to a high-fat low-carb diet – it completely changed my life and I've never looked back: I have perfect blood levels of all the important readings, and am enjoying the best health of my life. I encourage anyone stuck in a health or obesity rut to give this a try – it may change your life too!"

## THE ADVENTURER - DAVID GRIER

Over the past 30 years David has been involved in the restaurant and hospitality industry in South Africa, owning a string of successful fine dining restaurants. After all those years in the kitchen, one day someone left the kitchen door open and he bolted to follow his dream of becoming an extreme adventurer. Since this journey began he has run The Great Wall Of China (4 200km in 93 days), run the entire coastline of South Africa (3 300 km in 80 days), paddled from Africa to Madagascar (500km in 12 days), run the Island of Madagascar south to north (2 700km in 67 days) and run the entire length of India (4 008 km in 93 days). Each of these missions was embarked on in aid of David's charity, the Miles for Smiles Foundation. Funds are raised to provide corrective surgery for children born with cleft lips and palates. To date, funds raised through David's missions have given over 1 000 children the God-given right to a smile. Throughout all of David's athletic escapades, he has followed a strict, low-carb, high-fat eating plan.

"As a chef one learns the basics, but then it is up to you to take what you've learned to the next level. You need to be passionate, innovative and creative about what you are working with, but the downside for me was that the hours and the strain on the body began to add up. I managed to achieve many goals in cooking and reached the top, but in the process I ended up becoming unhealthy and overweight (110kg). I began to really look at my life and tried to change my lifestyle, but no matter how hard I tried with exercise and conventional nutrition, the results were not great. Slowly, I began experimenting with LCHF/Banting eating. Being in the kitchen, with all the temptation bubbling around me it was really hard initially to stay focused on the correct path, but then it all clicked. The results speak for themselves. To make LCHF/Banting eating work for you, you just need to be passionate, creative and most importantly, you need to want to change!"

## THE CHEF - JONNO PROUDFOOT

After training and working in a five-times rated Top 10 restaurant in his early career, Jonno moved through a variety of food and wine establishments before finding his passion in Paleo and LCHF cookery. Since the birth of his interest in performance food and nutrition he has co-hosted 52 episodes of award-winning children's cooking show, *What's Your Flava*. He has also appeared as a guest chef to *cook without carbs* on the *Expresso Show* on numerous occasions.

"The low-carb lifestyle first got my attention when my girlfriend lost 19kg in less than six months after battling with her weight for many years. The term 'happy wife, happy life' became instantly significant as she looked and felt better all the time. Having had an interest in diet and nutrition, specifically sports nutrition for many years, this grabbed my attention. Seeing real results in someone after watching people struggle with weight issues my whole life immediately swayed my ways and I began Banting. The impact on my life has been significant. My physical performance has exploded. I can swim harder and longer than ever before and I no longer feel bloated and uncomfortable, before, during or after training. Eliminating my carb intake and increasing my fat has substantially reduced my appetite. Even with constant lapses in willpower, I managed to drop three notches in my belt over my first month of Banting. My concentration and focus have sharpened significantly especially after lunch when, in the past, I used to feel groggy and exhausted from a carb-rich lunch."

# GLOSSARY

## MEET THE TERMS:

**LCHF** = Low-carb, High-fat [preferred term: **BANTING**]

The nutritional lifestyle we advocate for *The Real Meal Revolution*. To be known henceforth as “friend”.

**BANTING** = THE DIET NAMED AFTER WILLIAM BANTING.

The morbidly obese undertaker who was the first guinea pig of the LCHF diet, reducing his weight so drastically that his approach became known as the Banting diet. Both a verb and a noun, e.g. “Why aren’t you eating any potato bake?” “I’m done with carbs, I’m Banting. I’ve dropped 20kg in a month and added 40kg to my benchpress.”

**HCLF** = High-carb, Low-fat

The diet you have probably been following due to tragically unchallenged misinformation out of the USA in the 1970s. To be known henceforth as “foe”.

**IR** = INSULIN RESISTANT

The state the majority of humans find themselves in, caused by a reduced capacity to metabolise ingested carbohydrates, safely and efficiently.

**T1DM** = TYPE-1 DIABETES MELLITUS

An auto-immune disease and the less common form of diabetes, occurring mainly in younger people, usually children. The immune system attacks pancreatic cells, either destroying them completely or damaging them badly enough that they’re prevented from producing enough insulin. Can be genetic.

**T2DM** = TYPE-2 DIABETES MELLITUS

A nutritional and lifestyle disease associated with insulin resistance.

**KETOGENIC DIET** = A diet consisting of 25 to 50g of carbohydrates per day.

**APPESTAT**= An area of the brain that controls appetite.

**KETOSIS** = When the body switches to a very high fat-burning state, using ketone bodies (energy molecules in the blood, converted from fat by the liver) as “fuel” for the brain. Achieved by depriving the body of carbohydrates to reduce insulin in the body. Also seen as the euphoric state you reach when you rid your body of carbohydrates and your body begins using fat as fuel, reducing your appetite considerably.

**CARB-FREE**= Ridiculously low in carbs.

**BON APPETIT** = BANTING FOR “ENJOY YOUR FOOD”.

## SMARTER, FITTER, FATTER

*What do TV science and weather guru Simon Gear and a primitive human who lived 195 000 years ago have in common? Other than basic physiological structure, they could sit down to dinner together.*

Gear has always been active, yet despite regular activity, by age 25 his weight had increased to 80kg. Because of skin chafing and sore knees due to his weight, he was unable to run more than 70km/week in training. In October 2011 he decided to “reinvigorate” his flagging running career by completing nine marathons in nine South African provinces in nine consecutive weeks. The intervention failed. Instead, his weight increased by three kilos and he ran poorly. In April 2012 he completed the Two Oceans ultra-marathon in his slowest-ever time (6:57:57).

At a loss to explain his weight, Gear read Professor Tim Noakes’ book *Challenging Beliefs*. Inspired, he prescribed to the “Noakes diet” and in no time, Gear’s body started to transform. Within the first week he lost 2.4kg without running. Within six months he had lost 15kg. Over the next four months his training load reached 120km/week. During this training, his weight dropped by only two kilos, showing a disconnect between weight loss and calories expended.

On March 16th 2013, he completed the Two Oceans ultra-marathon in 3:59:42, an improvement of nearly three hours on his performance a year earlier. For Gear, now 37, the effect on his life, weight and running had been huge. He said, “**The important point with all this was that the weight loss enabled my training, not the other way around. I feel like I have won my life back.**”

When Billy Tosh, 44, discovered he could no longer fit into an economy class aeroplane seat, he drove directly from the airport to his GP, who found his blood pressure (160/100mmHg) and blood glucose concentration to be raised. She advised that he begin immediate treatment for both conditions and consult a dietician. He spent the night searching the Internet, where he discovered the “Noakes diet”. He adopted the diet immediately.

His weight loss began straight away and continued unchecked for seven months, during which time he lost **84.6kg**. After six months he returned to his GP, who didn’t recognise him. His blood pressure and fasting blood glucose and cholesterol concentrations had reverted to the normal range. Tosh concluded that Banting had “saved his life”.

Does Gear’s dilemma – increased weight gain despite efforts to eat well and train hard – sound familiar? It has become normal for us to gain weight and struggle with exercise the older we get. There is a massive disconnect between our effort and our results. We are crippled by obesity, diabetes and other ailments – considered lifestyle diseases.

## GETTING BACK TO BASICS

The way of eating Gear adopted to transform his body and athletic ability is nothing new. It's how our ancestors ate to thrive and survive conditions far harsher than any we experience today. They were leaner and healthier than we are now. As a result, diseases like diabetes were not even a blip on the nutritional radar.

Roughly 195 000 years ago the planet was in the grip of a terrible Ice Age. Yet according to Prof Curtis Morean from Arizona State University in the US, the tip of the Southern Cape around Mossel Bay was one of the few places humans could survive. Recent discoveries have shown that Mossel Bay man was pretty healthy. After a bit of fishing, mollusk scavenging, the odd bit of game meat and tubers, his body formed the blueprint for what each of us sports today on day one. So what happened?

As Noakes describes in greater detail on pg 259, there were three great catastrophes that occurred in our nutritional evolution. Unsurprisingly, they were a result of mankind's own interference into what already worked. Dressed as progress, these three factors were to combine to form the sneaky Carbageddon pandemic that we are faced with today.

**The first setback, strange though it may sound, was the advent of agriculture.** As early humans moved up from Southern Africa into Europe in search of new land, we developed, transforming from hunter gatherers into pastoralists, picking up skills like the domestication of animals and learning how to harvest crops. Why wander the plains when you could raise crops, harvest grain, keep a few goats, trade grain, drink beer, get fat and start all over again? So we can't really begrudge our ancestors their pursuit of an easier life. However, if you add a couple of thousand years of innovation to "practicing" agriculture, we were bound to get too clever for our own good. Unfortunately, humans got so good at refining the agricultural process, that refined processed foodstuffs are the result today. Take a look around your supermarket outside of the fresh food aisles for anything that hasn't been processed.

**The second blow happened with the passing in 1977 of the United States Dietary Goals for Americans (USDGA) based on a high-carb, low-fat diet.** Unchallenged, it was to become the dietary blueprint for much of the developed world. And we've been feeling the effects – from obesity to diabetes and cancer – ever since.

**The third factor was the invention of genetically modified foods,** or Frankenfood, which has resulted in fruit and vegetables with much higher sugar and carbohydrate contents than the original fruit found in nature.

So here we are. Overweight. Stuck in our chairs. Waddling through life. We're desperate to be fit, slim and trim, yet held back by the very diets and medically prescribed eating plans we hope will help us change.

Bad things happen in threes or so the saying goes, so our luck, perhaps with the application of some clear-thinking science, is about to turn. Through the personal experience and clinical insight of Noakes, an award-winning scientist and one of the world's foremost experts on exercise science, as well as the professional insight of nutritionist Sally-Ann Creed and the culinary contributions of two LCHF flavour-obsessed chefs Jonno Proudfoot and David Grier, *The Real Meal Revolution* and its LCHF approach will change your life.

## THE RENAISSANCE MAN

While our primitive ancestors may have inadvertently cracked the diet code thousands of years ago, they weren't big on documenting their daily lives, so the mantle of originator of the LCHF movement goes to William Banting circa 1862. A popular London undertaker, Banting was morbidly obese. When he started losing his hearing, his doctor, William Harvey, found that his weight was putting pressure on his ear drums. Harvey had come to the conclusion that farinaceous foods (grains, breads etc) were behind Banting's excessive weight and prescribed him a low-carb, high-fat diet. The effect of the diet on Banting's health was drastic, **nothing short of miraculous in fact**, and after he published his now-famous *Letter on Corpulence*, documenting his weight struggles and subsequent turnaround, the "Banting diet" and variations thereof were adopted as an effective weight-loss solution by the medical fraternity in both Europe and the USA. For the purposes of this book and because it's easier on the ear than LCHF, we will refer to LCHF as Banting in honour of the good undertaker's brave undertaking.

**Fat, cooked well, is delicious. Yet through conditioning we feel guilty reaching for bacon or the fat on a nice lamb chop and try to condition ourselves not to want it. Decades of health magazines telling us it's not good for us hasn't helped, but the most serious damage to fat's reputation came from somewhere else...**

## THE CARBFATHER

If 1862 had been a good year for Banting and a great year for fat, 1977 was the *annus horribilis* for our most maligned macronutrient. In 1953, a well-respected American biochemist, Ancel Keys, published a study that erroneously highlighted fat's effect on cholesterol levels as being behind the risk of heart attack. Keys' theory, which Noakes dubs the "plumbing model" of heart disease, argued that there was a relationship between the amount of fat in the diet and heart disease. His simplistic approach concluded that by raising blood cholesterol, fat in our diet clogs our arteries and leads to heart disease, among other things.

Keys' study was deeply flawed on several counts, from his selective use of the data he had at his disposal (he omitted information from 16 of the 22 countries in the study, using only the six countries that suited his hypothesis) to the fact that his research was based solely on observational studies and not randomised clinical trials. Glaringly, he also omitted to factor in the huge growth in cigarette consumption and other variables as a possible explanation for the rise in heart disease.

Regardless of the weaknesses around the study, in 1977 Senator George McGovern and his Senate Select Committee on Nutrition and Human Needs went ahead and based their Dietary Goals for Americans (USDGA) on Keys' recommendation of a high-carb, low-fat (HCLF) diet.

It was a decision that affected us all. Ever since then, fat has been trying to rework its public image.

For more detail, turn to page 261

## FAT IS YOUR FRIEND

Give us this day, our daily bacon...

... If history is written by the victors, then carbs have a significant lead. It's time to rebalance the books.

On one of his remarkable philanthropic long-distance runs, co-author of *The Real Meal Revolution* David Grier was hacking his way through outer Mongolia. Upon learning of the distances he had already run and how much further he had to go – a marathon a day for 98 days – local villagers insisted that Grier eat large amounts of pork fat because without it, they warned, he would never be able to carry on. Being an adventurous eater, Grier got stuck in. True to fact, having struggled up until that point, from then on Grier felt fuelled all day due to the slow release of energy, and he and his running partner went on to complete a mission no man had ever tackled.

What those rural Mongolians know is what our ancestors knew and what Banting discovered with the help of Harvey. It's also what our advanced urban society has forgotten. Fat is your friend. Fat fuels us. The body needs fat.

Does the idea of eating fat repulse you? As a victim of decades of anti-fat propaganda, it's not your fault you are prejudiced. You've been conditioned that way. Think about the negative reinforcement of anti-fat sentiment in society. "Low-fat" and "fat-free" products dominate the supermarket aisles. A phrase like "cut the fat" came to mean getting rid of the unwanted, the indulgently expensive or unnecessary. What did we get in return? "The best thing since sliced bread."

The consequences are grave. Due to the reinforcement of the LFHC advocacy of Keys over three decades ago and millennia of creeping carbs through agriculture and the quest for convenience of the industrial revolution, most of us still believe that eating fat is bad for you. It's also a belief that crucially we mistakenly connect with being fat, whereas (and here's the difficult part to get your head around) **fat does not make you fat. Carbs do.**

The focus of *The Real Meal Revolution* is to deconstruct the bad fat myth and return us to the attitude of ancient times where fat was prized.

For more on how fat fuels you and carbs that make you fat, turn to Noakes' investigations on page 258.

# INSULIN - THE DEVIL WITHIN

The biggest irony of Keys' mistake is that of the three macronutrients we eat, carbohydrate is the only one that is non-essential for survival, while fat is the body's preferred fuel.

Yes, you read that right. Fat is the body's preferred fuel. Carbs are unnecessary. Cut it out and stick it to your forehead, your fridge or your wallet.

The only carbs our Pinnacle Point ancestors ate would have been seriously tough tubers with a low glycaemic index that would have taken ages to chew into submission.

Because of our genetic make-up, the majority of us are IR to some degree. So when we eat carbohydrates, our bodies react.

Here's how the insulin/carbohydrate/sugar axis of obesity works against us:

- When carbohydrates are ingested, our blood glucose levels rise.
- Insulin is secreted by the pancreas in response to the glucose entering the bloodstream from the gut. The body must be protected against sustained high blood glucose levels so the insulin causes the glucose, which is not used immediately for energy, to be stored by the liver and muscles as glycogen. Once the glycogen reserves are filled the excess glucose is stored as fat.
- If a carbohydrate cannot be removed immediately from the body (e.g. being burned off through exercise), it gets converted by the liver into fat and sent out to our fat tissues for storage. This is the body squirrelling away this energy source for a future Ice Age, only the Ice Age isn't coming. We're just getting fatter and hungrier.

## The bottom line?

Insulin, your body's defence mechanism against carbs, both transforms carbs/glucose into fat and then stores it by preventing it from being used. The result? You get fat.

If you eat carbs and you don't burn a ridiculous amount of energy (even Simon Gear's nine marathons in nine weeks wasn't enough to cope with his IR levels), you will continue to get fat or maintain a consistent level of podge.

The final blow to the gut: because carbohydrates are nutrient-deficient and often packaged with salt and sugar, you feel the need to eat more of them, thereby putting yourself into a near-perpetual cycle of weight gain.

Unless, of course, you break the addiction...

## HUNGER GAMES

On battlefield body, the principle anti-hunger weapon is your appetat, probably the most important body part you've never heard of.

One of the biggest stumbling blocks for people considering testing out a new way of eating is the fear of going hungry. When you go a-Banting, this won't be a problem. As Noakes goes into detail on page 270, when you move off carbs, you reconfigure your appetat, the part of your brain that regulates hunger.

When you are not Banting, you are trapped by carbs and their ability as a self-fulfilling hunger stimulant to keep you in the infinity loop of obesity. Munching on nutrient-deficient, sugar- and salt-loaded carbs makes you want more carbs, which makes you want more carbs until suddenly you're overweight and baffled by how you got there.

Hunger regulation is governed by the bulk and nutrient density of the foods we eat. The bulkier the food, the faster we feel satiated, but because bulky food – pastas, rices, bread etc – are so nutrient-deficient you will feel the need to eat sooner rather than later. Almost every food product in your local supermarket has been developed to within an inch of its life to make you eat more of it. Lost in the socio-political greed of big corporate food companies and the politicians that enable them, these edible time-bomb “foods” are designed in laboratories to be as deliciously irresistible and addictive as possible. Between the boardrooms and the laboratories of these companies, a specific junk food jargon exists. The perfect combination of salt, sugar and fat is the *bliss point*. Mouth feel is the bliss point combined with a textural factor like crunch. The *piece de resistance* for these food scientists? To achieve vanishing caloric density – where the food vanishes on your tongue so quickly you are fooled into believing you are not actually eating that much at all. So you eat more.

Now, bear in mind that carbs, the single least important macronutrient to human survival, the one with confirmed negative impacts on our bodies was the one pushed upon us in 1977 as the principle part of a healthy diet. Combine that misdirection with lax political policing of the food industry and the advanced sneakiness of massive multinational food companies and you have a recipe for disaster.

Unless of course you reconfigure and service your appetat.

In contrast to eating carbs, when you are eating fats and proteins, you will feel full for longer due to the nutrient-rich nature of these macronutrients. The added bonus is that you don't need to eat five meals a day, which if we're honest, in the hectic schedule of your average modern home is a pain to organise. When you eat fat, you simply don't get hungry in the same way carbs make you HUNGRY. The reason for this is that your appetat is functioning optimally. If you do just one thing with this book, just one life experiment, try Banting and after one week take note of what happens. You will notice the constant all-consuming hunger that usually preoccupies your mind most of the day ceases to bother you with your new Banting-processing body. And the great thing about this transformation is that you make calmer, more rational decisions when you do want to eat because it's your brain not your hunger driving you. That means fewer moments of ill-considered weakness.

## WHAT TO EXPECT... WHEN YOUR BODY IS EXPECTING CARBS

The first week of your carb-free life will be tough. You might dream of sandwiches; have nightmares involving mashed potato or risotto monsters. You will experience cravings. But forewarned is forearmed. Knowing that your body is addicted to carbs, the veil had been lifted from your eyes and you are ready to take charge of your own weight, your own health.

Although some people feel instantly better, you might feel bloated and uncomfortable for a couple of days to a week. The sixth or seventh day is the toughest (they usually fall on a Saturday and Sunday because Monday is traditionally the turn-over-a-new-leaf day). You'll feel irritable and tense; you might get headaches or feel light-headed. Hang in there. If your partner starts Banting with you, all the better because you will understand each other's moods. After this, you'll feel your normal self, only better. The other plus is that after about seven days you should have lost some weight. Everyone loses weight differently – some show exponential losses in the initial weeks or months but others will lose slower.

You WILL feel better and you WILL lose weight.

If you are exercising heavily, simply increase the amount of fat you eat until you reach a point where you are no longer starving. This takes time but if you listen to your body, you'll get an idea of what you need.

Remember, there is no right amount to eat. Your body will tell you. This is about your appetite and not calories.

One of the biggest mistakes you can make is to think you need to eat more fat than you can handle. You MUST NOT force-feed yourself more fat than you can handle because you think that is how it's done. Eat your fill and carry on with life.

By force-feeding yourself (with anything) you will not feel any better nor will you lose weight. Fat is the tool we use to maintain our energy levels and appetite. You will know you're not getting enough if you get hungry before lunch or need to eat more than three times a day. You will know you're eating too much if you feel nauseous or you're not losing any weight. A ball park of between 25 to 50g of carbs per day is where you should be aiming. This is net carbs (total carbs less fibre), not 50g of potato.

Think of it this way: right now you are a fat grub wriggling on a dungheap of carbs, but about to go through an incredible metamorphosis. After a week of Banting, as your weight starts to drop, your energy levels pick up and you start to feel good about yourself, you'll be well on your way to becoming a beautiful butterfly. Don't want to be a butterfly? Okay, then you can be a moth or a cricket. But damn you'll be beautiful. You get the point.

## WHAT ABOUT ME? BANTING NUTRITION FOR SPECIFIC NEEDS...

ATHLETES

DIABETES

OBESITY

PCOS

PREGNANCY

CHILDHOOD

MENOPAUSE

DIGESTIVE CONDITIONS

ALLERGIES

CANCER

Banting is not just for overweight people and diabetics – it is a good plan for everyone, for life. We can all benefit from following it. There are different ways to apply the principles, and some people do well on more carbohydrates than others. The main thrust of the programme, however, is limiting carbohydrates while eliminating both sugar and toxic seed oils.

### WHILE BANTING YOU CAN EXPECT TO HAVE:

- More energy
- Less (or no) cravings
- No hunger
- Weight loss
- Much better health in every aspect
- Better blood glucose and insulin readings
- Enhanced athletic performance
- Increased mental focus
- Better sleeping habits

The list of benefits is extensive, but these are the most universally experienced.

Ours is a society built on constant eating – however when Banting, snacking becomes a thing of the past. It is not unusual to find you are only eating one or two meals a day, yet without hunger between meals. Essentially you are looking to eat only when hungry and stop when you feel full. When you begin, you will probably need a week or two for the body to adapt – but once “carbohydrate adapted”, hunger and cravings disappear and the need for snacks is no longer an issue. Type-1 diabetics on insulin may need to carry snacks in case of possible blood sugar lows, which is a different thing altogether. However we have yet to see a Banting diabetic who has needed to do this, even when undertaking quite rigorous exercise.

In a nutshell, Banting comprises mainly animal protein (including poultry, eggs and fish), saturated animal fats (including lard, duck fat and butter), coconut oil, olive oil and macadamia oil, some cheeses and dairy products, some nuts and seeds (if appropriate), fresh vegetables grown mostly above the ground and a few berries. There are no grains, seed oils or sugars. (See the Green, Orange and Red lists for more guidance.)

The following basics apply to everyone in virtually every stage of one's life, and will lay the foundation for the various states that follow. So it is imperative if you want to get the most out of Banting that you follow these guidelines:

- Avoid all processed food, pre-packed, boxed, fast food, food in wrappers etc.
- Exclude all sugar, fructose, maltose, agave products – anything sugary.
- Eliminate all grain products (grains are what flours are usually made of such as wheat, barley, spelt, oats, rye, corn etc) – this applies to the grain in its wholegrain form as well as its refined flour form.
- Replace all seed oils (canola, sunflower, safflower, cottonseed, grapeseed) and other inflammatory polyunsaturated oils (whether cold-pressed, extra-virgin or organic) with healthy saturated fats as outlined in this book, and be aware that 99% of prepared products will contain these damaged oils. Extra-virgin olive oil and virgin coconut oil are encouraged freely.
- Eliminate all refined carbohydrates, and if you wish to follow Banting where a few carbs are included, aim for those sourced from vegetables, not grains or sugars. If you find this difficult to begin with, aim for a little rye or oats, or perhaps some quinoa or buckwheat – but keep these to a minimum as you transition to the no-grain stage. This is important.
- If you are not intolerant to dairy products and find they do not affect your weight loss or blood sugar levels, aim for high-fat dairy products, not skim or reduced fat, light or fat-free alternatives – they must be full-fat.
- Avoid all soya products with the exception of a little MSG-free soy sauce now and then. Soya is a genetically-modified, toxic non-food with a host of problems and should not be consumed.
- A cup of home-made broth would be very helpful in terms of extra minerals needed to alleviate cramping while supplying beneficial nutrients and quality liquid to the daily diet.

## UNDERCOVER BANTING

Until we get everyone else to Bant with us, there will be social occasions where you are faced with difficult decisions. Get smart, get sneaky but don't slip up.

There is always going to be the odd celebration where it's going to be impossible to dodge that piece of cheesecake, glass of sherry or lovingly made "especially for you" pasta Alfredo. Nothing offends like someone who doesn't like your food. But this is where you need to muster up all the willpower you have to indulge in a very small portion (and make sure it's taken after a protein-rich and/or fat-rich meal/snack to buffer any sugar rush). Where you can avoid having it, of course, is first prize. A great way to hide what you are eating is to take a teeny bit, and pile your plate with the salad or vegetables on offer. This gives the illusion of having a decent-sized plate of food, but in fact you have a very small amount of the "offending" food, and loads of leafy greens with a wonderful olive oil splashed over the salad. Don't forget the protein.

## "SPECIAL" BANTING

Having established the fundamentals, there are different conditions and phases of life that may require tweaking of the basics to enhance the effect. We've run through all the troubleshooting for whatever your specific requirements are.

### BUT AREN'T CARBOHYDRATES ESSENTIAL FOR ATHLETIC PERFORMANCE? HOW CAN ATHLETES PERFORM TO THEIR BEST ON A LOW-CARBOHYDRATE DIET?

This is probably the question most frequently asked about Banting, especially by athletes who believe that carbohydrates are the key fuel for exercise performance. As always it is important to begin by considering the history of how we came to our current beliefs.

Until the early 1960s, athletes in Europe generally believed that eating a diet with a higher protein (meat) content was beneficial since this was the diet favoured by those who could afford to eat whatever they chose. Jim Peters, world marathon record holder in the early 1950s, one of the hardest training athletes of the era whose philosophy was to "train little, hard and often" and who performed most of his training at close to his race pace of 3min18sec/km, described how his nutrition was affected by the food shortage present when he competed in the Olympic Games: "[Before the 1952 Olympic Games], we were still rationed for meat and none extra could be obtained. At the time of the 1948 Olympics, we were given extra meat and also received food parcels from overseas. The only thing that could be done was to try make it up with extra bread and potatoes – which is probably not the best food on which to run over 100 miles a week, in training, with the extra 20 miles or so thrown in quite frequently in competition."

Clearly one of the world's most celebrated distance runners of the 1950s believed that protein and fat (meat), not carbohydrates (bread and potatoes), should be the key ingredient in the athlete's diet.

Australian Ron Clarke, set 18 world track records in the 1960s. When asked if he had ever specifically eaten a high-carbohydrate diet to improve his performance; his answer was "No". South African Jackie Mekler, five-times Comrades Marathon winner and former world record holder at ultra-marathon distances, who retired from competitive running in 1969, confirmed that athletes of that era believed that protein and fat, not carbohydrates, were the energy fuels for athletic competition.

All this changed in the mid-1960s with the development of a novel technique that allowed the muscle content of carbohydrate (glycogen) to be measured for the first time. Early researchers showed that a high-carbohydrate diet increased muscle glycogen content, a fact that is incontestable. But, as often happens in science, their subsequent finding purportedly showing that exercise performance was determined uniquely by the muscle glycogen content (and hence the amount of carbohydrates eaten in the 24 to 48 hours before the exercise bout) was accepted too rapidly and too uncritically by the scientific community. A re-analysis of that early work suggests that the findings were not as obvious as the authors wished us to believe.

The effect of these studies on athletic nutrition was electric. Within a few years, every athlete in the world “knew” that the most important determinant of athletic performance was the carbohydrate content of the diet. And so athletes were encouraged to eat diets, 75% of the energy content of which came from carbohydrates. This might mean eating 1 000g of carbohydrates a day for a cyclist in the Tour de France.

### Today we need to relook those beliefs in light of the following evidence:

1. The early studies of carbohydrate loading were not performed properly because they did not include adequate control groups. They did not control for the fact that the athletes knew when they were eating the high-carbohydrate diet. This could have influenced their performances as a result of a placebo effect. We now know that the placebo effect in nutritional studies is very large. Indeed only one placebo-controlled study of carbohydrate loading has ever been performed. That study found that carbohydrate loading provided no benefit to the performance of cyclists in a 100km laboratory time trial. But because none of us believed that result we simply ignored it and continued to preach the religion of high-carbohydrate diets for athletes.
2. We now know that humans do not need carbohydrates to survive. Which does not mean that they do not provide energy during exercise and might be helpful for some athletes; the point is merely that it is entirely possible for humans to live and exercise without ever eating a single gram of carbohydrate – as have the Inuit and some other populations for thousands of years.
3. Carbohydrate in the form of glucose provides fuel for muscle contraction and for the functioning of the brain and certain other organs including the red blood cells. But the glucose for those functions can quite adequately be provided by the actions of the human liver; it does not need to be ingested.
4. Any ingested carbohydrate that is not used as energy or stored as liver or muscle glycogen must be stored as fat. This means that the carbohydrates present in a high-carbohydrate diet can only serve two functions – used as a fuel or stored as fat or glycogen. Which raises that possibility that a diet too high in carbohydrates may be deficient in protein and fat, the two macronutrients without which we cannot live. Hence it becomes increasingly likely that living on a high-carbohydrate diet might induce nutritional deficiencies. The remarkable response of athletes like Simon Gear and his father, both of whom increased their running performances when they switched from an HCLF diet to Banting, raises the possibility that their habitual HCLF was nutritionally deficient.
5. Persons with IR are unable to metabolise carbohydrates normally. Indeed those with T1DM do not increase their muscle glycogen content when they eat high-carbohydrate diets and the same may well apply to those with T2DM or lesser degrees of IR. Instead those with IR must store any excess carbohydrate as fat. This, to me, is the most likely explanation for the remarkable paradox – fat athletes who train very hard but are unable to lose any weight. The logical conclusion is that their carbohydrate intake is too high for their degree of IR (Figure 1).
6. Human performance cannot be reduced to a single variable such as the carbohydrate content of the diet and the extent to which the muscle glycogen stores are filled before exercise. Instead the effects of our nutritional choices on everything that could contribute to our performance must be considered. For example, what if a high-carbohydrate diet impairs our immune function, making us more prone to infections? Would that not be an important consideration in deciding whether or not a high-carbohydrate diet is the only option for athletes? The point is we do not yet know what all the consequences are, some of which may be unintended and potentially harmful to our performance, of eating a high-carbohydrate diet.

7. Thirty-two of the 127 respondents included in my study of the responses to the “Noakes diet” spontaneously reported that their exercise performance improved when Banting. In fact, most persons who respond well to Banting report that their energy levels increase when they cut the carbohydrates. This is clearly the opposite of the expected response if “sugar (and other carbohydrates) gives you go.”
8. A high-carbohydrate diet usually contains a large proportion of energy from cereals and grains. But many people don't realise they are “allergic” to specific contents of cereals and grains and may harbour long-term chronic ill-health as a result of eating those foodstuffs. They may benefit from Banting, which excludes these allergenic foodstuffs.

Perhaps the practical information raised by all these points is that over the past few years we have moved from the absolute belief that a high-carbohydrate diet is essential for superior athletic performance to the realisation that this is certainly not true for everyone. Instead it is clear that a large proportion of athletes will do better by reducing their carbohydrate intake and eating more fat and protein. The natural conclusion is that athletes with more severe IR are more likely to benefit from this advice.

So what is an athlete to do? My advice is the following:

High performing athletes who are lean and who have no concerns about their athletic performance should continue to eat the diet that they prefer when performing well. For most I suspect this will be a high-carbohydrate diet.

But for those like myself and other South African athletes like Simon Gear, Bruce Fordyce, Oscar Chalupsky and Shaun Meiklejohn, all of whom became progressively fatter and less athletic as we aged, but who reversed this when we switched to Banting, the high-carbohydrate diet was clearly detrimental to our health, athletic performance and enjoyment of life.

So my suggestion is that any athlete who gains weight progressively with age or whose performances begin to decline dramatically and inexplicably over the course of a few years, needs to consider that the HCLF diet is the cause. The obvious suggestion is to change to Banting and see what happens. Bruce Fordyce noticed that within a week of changing to Banting, his running time in a five-kay time trial improved noticeably. Mine took somewhat longer – within six weeks I was running almost as well as I had 20 years earlier. The point is that if your running performance is going to improve while Banting, you will notice the results quite quickly. If nothing happens, then it is easy to revert to one's habitual diet.

In summary I believe that there is little reason to ingest more than 200g/day of carbohydrates regardless of how much exercise one is performing. The key is to discover the grams of carbohydrate/day that optimises one's health and performance and this will generally lie between 25 and 200g/day, the lower values for those with the most extreme IR (Figure 1).

Ingesting carbohydrates during exercise is less damaging than during rest so if one is anxious, continue ingesting carbohydrates during exercise. But those with IR probably do not need to, as IR is associated with elevated blood glucose concentrations during exercise.