

The First Low Carb Book Is Nearly 150 Years Old

Introduction

For three decades we have been told that for our health and to lose weight we all should eat a diet based on carbohydrate foods: breads, pasta, fruit and vegetables, and low in fat.

Over the period there has been such a dramatic increase in obesity and related diseases that recently there has been a strong backlash: cut out foods high in carbohydrates and eat a lot more fat. In the 1990s and increasingly over the past year, this latest 'fad' diet has taken the world by storm.

There seems to be a general belief that the rash of low-carbohydrate, high-fat diets are 'new' or 'revolutionary' in some way. Popular books certainly give that impression. But nothing could be further from the truth. I started eating a low-carbohydrate diet in 1962 when a doctor advised me that this the best way to lose weight.

You may also think that these 'new' low-carbohydrate regimes have been pioneered by far-seeing and learned medical men. Again, this is incorrect. The truth is that we would probably never have heard of diets where people could lose weight eating that most calorific of foods, fat, if it had not been for a 19th century English carpenter by the name of William Banting.

Being overweight has affected a small proportion of the population for centuries but clinical obesity was relatively rare until the 20th century. Indeed obesity remained at a fairly stable low level until about 1980. Then its incidence began to increase dramatically.

By 1992 one in every ten people in Britain was overweight; a mere five years later that figure had almost doubled. In the USA it is even worse: by 1991 one in three adults was overweight. That was an increase of eight percent of the population over just one decade despite the fact that Americans spend a massive \$33 billion a year on 'slimming'.

It may be hard to believe, but this has occurred in the face of increasing knowledge, awareness, and education about obesity, nutrition and exercise. It has happened despite the fact that calorie intake has gone down by twenty percent over the past ten years and exercise clubs have mushroomed.

More people are cutting calories now than ever before in their history yet more of them are becoming overweight. There is now a pandemic of increasing weight across the industrialized world.

But it needn't be like that, for nearly 150 years ago one man changed thinking on diet completely.

It all started with a small booklet entitled Letter on Corpulence Addressed to the Public, not written by a dietician or a doctor, but by an undertaker named William Banting. It became one of the most famous books on obesity ever written. First published in 1863, it went into many editions and continued to be published long after the author's death. The book was revolutionary and it should have changed western medical thinking on diet for weight loss forever.

William Banting was well-regarded in 19th century society. He was a fine carpenter, and undertaker to the rich and famous. None of Banting's family on either parent's side had any tendency to obesity. However, when he was in his thirties, William started to become overweight.

He consulted an eminent surgeon, a kind personal friend, who recommended increased "bodily exertion before any ordinary daily labors began". Banting had a heavy boat and lived near the river so he took up rowing the boat for two hours a day. All this did for him, however, was to give him a prodigious appetite. He put on weight and was advised to stop. So much for exercise!

He was advised that he could remedy his obesity by moderate and light food. But wasn't really told what was intended by this. He says he brought his system into a low, impoverished state without reducing his weight, which caused many obnoxious boils to appear and two rather formidable carbuncles. He went into hospital and was ably operated upon - but also fed into increased obesity.

Banting went into hospital twenty times in as many years for weight reduction. He tried swimming, walking, riding and taking the sea air. He drank "gallons of physic and liquor potassae", took the spa waters at Leamington, Cheltenham and Harrogate, and tried low-calorie, starvation diets; he took Turkish baths at a rate of up to three a week for a year but lost only 6 pounds in all that time, and had less and less energy.

He was assured by one physician, whom he calls "one of the ablest physicians in the land", that putting weight on was perfectly natural; that he, himself, had put on a pound for every year of manhood and he was not surprised by Banting's condition - he merely advised "more exercise, vapor baths and shampooing and medicine".

Banting tried every form of slimming treatment the medical profession could devise but it was all in vain. Eventually, discouraged and disillusioned - and still very fat - he gave up.

By 1862, at the age of 66, William Banting weighed 202 lbs and he was only 5 ft 5 ins tall. Banting says that although he was of no great weight or size, still, he says:

"I could not stoop to tie my shoes, so to speak, nor to attend to the little offices

humanity requires without considerable pain and difficulty which only the corpulent can understand, I have been compelled to go downstairs slowly backward to save the jar of increased weight on the knee and ankle joints and have been obliged to puff and blow over every slight exertion, particularly that of going upstairs."

He also had an umbilical rupture, and other bodily ailments.

On top of this he found that his sight was failing and he was becoming increasingly deaf.

Because of this last problem, he consulted an aural specialist who made light of his case, sponged his ears out - and blistered the outer ear - without the slightest benefit and without enquiring into his other ailments. Banting was not satisfied: he left in a worse plight than when he went to the specialist.

Eventually, in August of 1862 Banting consulted a noted Fellow of the Royal College of Surgeons: an ear, nose and throat specialist, Dr. William Harvey. It was an historic meeting.

Dr. Harvey had recently returned from a symposium in Paris where he had heard Dr Claude Bernard, a renowned physiologist, talk of a new theory about the part the liver played in the disease of diabetes. Bernard believed that the liver, as well as secreting bile, also secreted a sugar-like substance that it made from elements of the blood passing through it. This started Harvey's thinking about the roles of the various food elements in diabetes and he began a major course of research into the whole question of the way in which fats, sugars and starches affected the body.

When Dr. Harvey met Banting, he was interested as much by Banting's obesity as by his deafness, for he recognised that the one was the cause of the other. So Harvey put Banting on a diet. By Christmas, Banting was down to 184 lbs and, by the following August, 156 lbs.

Banting's diet to that date had followed this pattern:

- Breakfast: bread and milk for breakfast, or a pint of tea with plenty of milk and sugar, and buttered toast (this was before the invention of breakfast cereals but it is actually very similar to the modern cereal breakfast);
- Dinner: meat, beer, bread and pastry for dinner;
- Tea: a meal similar to breakfast;
- Supper: generally a fruit tart or bread and milk.

Banting says he had little comfort and far less sound sleep.

Harvey's advice to him was to give up bread, butter, milk, sugar, beer and

potatoes. These, he told Banting, contained starch and saccharine matter tending to create fat and were to be avoided altogether. The word 'saccharine' meant sugar.

When told what he could not eat, Banting's immediate thought was that he had very little left to live on. Harvey soon showed him that really there was ample and Banting was only too happy to give the plan a fair trial. Within a very few days, he says, he derived immense benefit from it: the plan leading to an excellent night's rest with six to eight hours' sleep per night.

For each meal, Harvey allowed Banting:

- up to six ounces of bacon, beef, mutton, venison, kidneys, fish or any form of poultry or game;
- the 'fruit of any pudding' - he was denied the pastry
- any vegetable except potato;
- and at dinner, two or three glasses of good claret, sherry or Madeira.
- Banting could drink tea without milk or sugar.

Champagne, port and beer were forbidden and he could eat only one ounce of toast.

On this diet Banting lost nearly 1 lb per week from August 1862 to August 1863. In his own words he said:

"I can confidently state that quantity of diet may safely be left to the natural appetite; and that it is quality only which is essential to abate and cure corpulence. . . . These important desiderata have been attained by the most easy and comfortable means . . . by a system of diet, that formerly I should have thought dangerously generous."

After 38 weeks. Banting felt better than he had for the past 20 years.

By the end of the year, not only had his hearing been restored, he had much more vitality and he had lost 46 lbs in weight and 12 1/4 inches off his waist. He suffered no inconvenience whatever from the new diet, was able to come downstairs forward naturally with perfect ease, go upstairs and take exercise freely without the slightest inconvenience, could perform every necessary office for himself, the umbilical rupture was greatly ameliorated and gave him no anxiety, his sight was restored, his hearing improved, his other bodily ailments were ameliorated and passed into the matter of history.

Banting was delighted. He would have gone through hell to achieve all this but it had not been necessary. Indeed the diet allowed so much food, and it was so

easy to maintain, that Banting said of it:

"I can conscientiously assert I never lived so well as under the new plan of dietary, which I should have formerly thought a dangerous, extravagant trespass upon health."

He says that this present dietary table is far superior to what he was eating before:

"more luxurious and liberal, independent of its blessed effect, but when it is proved to be more healthful, the comparisons are simply ridiculous."

"I am very much better both bodily and mentally and pleased to believe that I hold the reins of health and comfort in my own hands."

"It is simply miraculous and I am thankful to Almighty Providence for directing me through an extraordinary chance to the care of a man who worked such a change in so short a time."

It is quite obvious from these comments that Banting didn't need the strength of willpower that today's slimmer needs; that he found his weight-loss diet very easy to maintain.

He wish that the medical profession would acquaint themselves with the cure for obesity so that so many men would not descend into early graves, as he believed many did, from apoplexy, and would not endure on Earth so much bodily and mental infirmity.

Banting was so pleased with his progress that on top of Harvey's fees, he gave the doctor £50 to be distributed amongst Harvey's favorite hospitals. Although, despite this, he still felt deeply obligated in a way that he could never hope to repay.

But in 1868, Banting published a prospectus and started a fund to found and endow a new institution for the service of humanity - the Middlesex County Convalescent Hospital.

It was to be for those working-class people who could not afford to convalesce but had to return to work to make ends meet thus allowing no time to get over their hospital ordeal and so succumbed to relapses.

There was a small home at Walton on Thames which, although small, was, he thought, possibly sufficient for the purpose. Banting estimated that £12,000 per year was needed to run it.

Banting put up £500, his son £100 and two other members of his family a

further £50; with other patrons he raised a total of £5,000.

Banting charged nothing for the first two editions of his book - he didn't want the accused of doing it merely for profit. He had printed 1,000 copies of the first edition and he gave them away.

The second edition numbered 1,500 which he also gave away although they cost him 6d each. Copies of the third edition, still in 1863, were sold at 1/- each.

When Banting's booklet, in which he described the diet and its amazing results was published, it was so contrary to the established doctrine that it set up a howl of protest among members of the medical profession. The 'Banting Diet' became the center of a bitter controversy and Banting's papers and book were ridiculed and distorted. No one could deny that the diet worked, but as a layman had published it, and medical men were anxious that their position in society should not be undermined, they felt bound to attack it. Banting's paper was criticized solely on the grounds that it was 'unscientific'.

Later, Dr. Harvey had a problem too. He had an effective treatment for obesity but not a convincing theory to explain it. As he was a medical man, and so easier for the other members of his profession to attack, he came in for a great deal of ridicule until, in the end, his practice began to suffer.

However, the public was impressed. Many desperate, overweight people tried the diet and found that it worked. Like it or not, the medical profession could not ignore it. Its obvious success meant that the Banting Diet had to be explained somehow.

To the rescue from Stuttgart came a Dr. Felix Niemeyer. He managed to make the new diet acceptable with a total shift in its philosophy. At that time, the theory was that carbohydrates and fat burned together in the lungs to produce heat. The two were called 'respiratory foods'.

After examining Banting's paper, Niemeyer came up with an answer to the doctors' problem. All doctors knew that protein was not fattening, only the respiratory foods - fats and carbohydrates. He, therefore, interpreted 'meat' to mean only lean meat with the fat trimmed off and this subtle change solved the problem. The Banting Diet became a high protein diet with both carbohydrate and fat restricted. This altered diet became enshrined in history and still forms the basis of slimming diets today.

Banting's descriptions of the diet are quite clear, however. Other than the prohibition against butter and pork, nowhere is there any instruction to remove the fat from meat and there is no restriction on the way food was cooked or on the total quantity of food which may be taken. Only carbohydrate - sugars and starches - are restricted. The reason that butter and pork were denied him was that it was thought at this time that they too contained starch.

Banting, who lived in physical comfort and remained at a normal weight until his death in 1878 at the age of 81, always maintained that Dr. Niemeyer's altered diet was far inferior to the one that had so changed his life.

The Banting diet is confirmed

Banting's Letter on Corpulence traveled widely. In the 1890s, an American doctor, Helen Densmore, modeled diets on Banting. She tells how she and her patients lost an average 10-15 lbs (4.5-6.8 kg) in the first month on the diet and then 6-8 lbs (2.7-3.6 kg) in subsequent months 'by a diet from which bread, cereals and starchy food were excluded'. Her advice to would-be slimmers was: 'One pound of beef or mutton or fish per day with a moderate amount of the non-starchy vegetables given above [tomatoes, lettuce, string beans, spinach and such] will be found ample for any obese person of sedentary habits'.

Dr. Densmore was scathing of those others of her profession who derided Banting's diet. She says of them: 'Those very specialists who are at this time prospering greatly by the reduction of obesity and who are indebted to Mr. Banting for all their prosperity are loud, nevertheless, in their condemnation of the Banting method'.

Real-life tests

In 1906, Dr. Vilhjalmur Stefansson, a young Harvard anthropology teacher who later became a world-famous explorer and anthropologist, revolutionized polar exploration by crossing the Arctic alone and living off the land with the Eskimos. It was not quite what had been planned. Stefansson had gone on ahead of the Leffingwell-Mikkelson Expedition and had missed a planned rendezvous at Herschel Island. He was left to spend an Arctic winter with the Eskimos eating a diet composed only of meat and fish. Unlike the diet he had been brought up on, it contained no plant material whatsoever.

It was a golden opportunity for the young scientist to conduct an experiment into the effects of an Eskimo diet on a European unaccustomed to it. The usual Eskimo meal consisted of briefly stewed fish washed down with water. It was so different from what he was used to that at first Stefansson was repelled by it.

To try to make the fish more palatable, he tried broiling it. This resulted in his becoming weak and dizzy, with other symptoms of malnutrition. Stefansson reasoned that with such a restricted diet the body had to have not just the fish but the other nutrients that had been leached out into the water. And so he tried harder. Eventually he became so accustomed to the primitive diet that, by the time he left the Eskimos, Stefansson managed as well as them. On this regime, Stefansson remained in perfect health and did not get fat.

The experience had a profound effect on Stefansson. Like Banting before him, he became interested in the possibilities of diets high in proteins and fats and low in carbohydrates. It seemed to him that a balanced diet in which there was relatively little meat, 'balanced' by larger amounts of potatoes, bread, rice and other starchy foods followed by sweet desserts and sugared coffee might be balanced in the wrong direction. And so, like Banting, Stefansson questioned the established ideas on diet. Unfortunately, he had no more success than Banting. Although he became famous and his position as an anthropologist was unassailable, still no one took any notice of his ideas on nutrition.

Some years after his first experience with the Eskimos, Dr. Stefansson returned to the Arctic with a colleague, Dr. Karsten Anderson, to carry out research for the American Museum of Natural History. They were supplied with every necessity including a year's supply of 'civilised' food.

This they declined, electing instead to live off the land. In the end, the one-year project stretched to four years, during which time the two men ate only the meat they could kill and the fish they could catch in the Canadian Arctic. Neither of the two men suffered any adverse after-effects from their four-year experiment. It was evident to Stefansson, as it had been to Banting, that the body could function perfectly well, remain healthy, vigorous and slender if it used a diet in which as much food was eaten as the body required, only carbohydrate was restricted and the total number of calories was ignored.

The First Clinical Dietary Trial

In 1928, Stefansson and Anderson entered Bellevue Hospital, New York for a controlled experiment into the effects of an all-meat diet on the body. The committee which was assembled to supervise the experiment was one of the best qualified in medical history, consisting as it did of the leaders of all the branches of science related to the subject.

Dr. Eugene F. DuBois, Medical Director of the Russell Sage Foundation (subsequently chief physician at the New York Hospital, and Professor of Physiology at Cornell University Medical College) directed the experiment. The study was designed to find the answers to five questions about which there was some debate:

1. Does the withholding of vegetable foods cause scurvy?
2. Will an all-meat diet cause other deficiency diseases?
3. Will it cause mineral deficiencies, of calcium in particular?
4. Will it have a harmful effect on the heart, blood vessels or kidneys?
5. Will it promote the growth of harmful bacteria in the gut?

The results of the year-long trial were published in 1930 in the Journal of Biological Chemistry and showed that the answer to all of the questions was: no. There were no deficiency problems; the two men remained perfectly healthy; their bowels remained normal, except that their stools were smaller and did not smell. The absence of starchy and sugary carbohydrates from their diet appeared to have only good effects.

Once again, Stefansson discovered that he felt better and was healthier on a diet that restricted carbohydrates. Only when fats were restricted did he suffer any problems. During this experiment his intake had varied between 2,000 and 3,100 calories per day and he derived, by choice, an average of eighty percent of his energy from animal fat and the other twenty percent from protein.

One interesting finding from a heart disease perspective was that Stefansson's blood cholesterol level fell by 1.3 mmol/l while on the all-meat diet, rising again at the end of the study when he resumed a 'normal' diet.

But the published results had little effect on the people trying to lose weight in 1930. A diet that allowed as much meat as one could eat and also allowed a large proportion of fat must contain lots of calories. To the average slimmer, lots of calories meant putting on weight.

The evidence mounts

In 1933, a clinical study carried out at the Royal Infirmary, Edinburgh studied the effects of low- and high-calorie diets, ranging from 800 to 2,700 kcals.

Average daily losses:

- high carb/low fat diet - 49g [like a modern slimming diet]
- high carb/low protein - 122g
- low carb/high protein - 183g
- low carbohydrate/high fat - 205g

Drs Lyon and Dunlop pointed out that:

'The most striking feature of the table is that the losses appear to be inversely proportionate to the carbohydrate content of the food. Where the carbohydrate intake is low the rate of loss in weight is greater and conversely.'

In other words, the less carbohydrate was eaten, the greater was the amount of weight lost.

In 1955 Dr Albert Pennington in the USA also found that: 'weight loss appeared to be inversely related to the amount of glycogenic materials in the diet.'

Carbohydrate is 100 per cent, protein 58 per cent and fat 10 per cent glycogenic.' (In other words, the more a food increased insulin production, the less weight was lost - and in this respect, to lose weight, again carbohydrate was worst and fat best.)

Pennington continued: 'The recommended diet is a calorically unrestricted one, very low in carbohydrate, high in fat and moderate in protein. Neither fat nor protein is restricted, however.'

Pennington's diet was so successful that it was reported in Holiday magazine, where it became known as 'The Holiday Diet'.

Professor Alan Kekwick and Dr Gaston Pawan had similar results: In a trial at the Middlesex Hospital, London, overweight patients:

- lost the most weight on a high-fat, low-carbohydrate diet
- lost the least weight on a high-carbohydrate, low-fat diet
- Lost weight even at 2,600 calories a day - but only on a high-fat diet.

In 1959, Dr John Yudkin, Professor of Nutrition and Dietetics, Queen Elizabeth Hospital, University of London, confirmed Kekwick and Pawan's findings when he showed that a diet with unlimited protein and fat, but with little or no carbohydrate was far more effective in causing weight loss than a calorie-controlled, low-fat diet.

During the 1950s, another British physician, Dr Richard Mackarness, found that the low-carb, high-fat diet was so successful with his overweight patients that he wrote a book that was in print for nearly twenty years - a feat almost unheard of in the slimming book industry. It was Dr Mackarness who introduced this concept to me in 1962 and so dramatically changed the lives of my family and me. In the forty years since, none of my family has been overweight, although we were before that date.

As time passed and praising the value of fat became politically incorrect, it became more difficult to get such trials published. Nevertheless, it did happen occasionally.

Published in the year 2000, a prospective study was conducted to evaluate the effect of a low carbohydrate, high-protein/fat diet in achieving short-term weight loss. Researchers at the Center for Health Services Research in Primary Care, Durham, North Carolina, reported data from a six-month study that included fifty-one individuals who were overweight, but otherwise healthy.

The subjects received nutritional supplements and attended bi-weekly group meetings, where they received dietary counseling on consuming a low-carbohydrate, high-protein/fat diet. After six months, they had lost, on average,

more than ten percent of their weight and (remember this for later) their total cholesterol dropped by an average 10.5 mg/dl (0.27 mmol/l).

Twenty patients chose to continue the diet after the first six months, and after twelve months, their mean weight loss was 10.9 percent and their total cholesterol had decreased by 14.1 mg/dl (0.37 mmol/l).

Dr William S. Yancy, M.D. admitted that:

'This study of overweight individuals showed that a low carbohydrate, high-protein/fat diet can lead to significant weight loss at one year of treatment.'

All these recommendations and evidence could have saved a great deal of grief, trauma and ill-health if two other doctors had been listened to in 1994. Writing in the British Medical Journal, Professor Susan Wooley and Dr David Gardner highlighted the role of the professional in people's increasing weight. They said:

'The failure of fat people to achieve a goal they seem to want - and to want above all else - must now be admitted for what it is: a failure not of those people but of the methods of treatment that are used.'

In other words, blaming the overweight for their problem and telling them they are eating too much and must cut down, is simply not good enough. It is the dieticians' advice and the treatment offered that are wrong. Wooley and Garner concluded:

'We should stop offering ineffective treatments aimed at weight loss. Researchers who think they have invented a better mousetrap should test it in controlled research before setting out their bait for the entire population. Only by admitting that our treatments do not work - and showing that we mean it by refraining from offering them - can we begin to undo a century of recruiting fat people for failure.'

But of course there is a 'better mousetrap'. William Banting wrote of it nearly a century and a half ago.

Second-opinions.co.uk