

The Doctor's comments

info@sportsclinicnq.com.au | www.sportsclinicnq.com.au



Diets: Confusion may reign supreme here but let's try to unravel some of the mysteries

Diet is an interesting topic which I usually avoid discussing if I can. Discussions can tend to be quite emotive and devolve in to arguments which support each position. In many instances it is adversarial in nature which is disappointing. From my perspective I will simply attempt to avoid any confrontational statements and keep this as impartial as one can.

There is no doubt that the Paleo (Paleolithic diet) ([link to be included](#)) and LCHF (low carbohydrate high fat diet) ([link to be included](#)) trends have improved the quality of lives on tens of thousands of people and moved mainstream science and dietary advice forward in many respects. Fat has never been evil and should never have been portrayed that way. It is good that people are no longer fearful of avocado and eggs. There have been some secondary benefits from this movement e.g. the debate on the role of statins in primary prevention of low risk groups is a major one. There is however no doubt in my mind that overzealous promotion, modification of the diets and vilification of certain nutrients has been a backward step in many respects.

The LCHF and paleo success stories are impossible to ignore, but it is prudent to acknowledge that there were similar stories of success during the period when the low fat diets were the flavour of the day.

It is argued that low fat diets have failed modern society. Brukner and Noakes who are both respected leaders in their respective fields in sports and nutrition, site that the emergence of first world societal obesity has essentially had a chronological parallel with the advocacy of low fat diets. They argue that over the last decade society has adopted a high carbohydrate diet and site supporting studies. It is however ignored that modern society, while eating high carbohydrate meals are not altogether eating low fat. Over the last few decades energy intake has increased by 100-300k cals per day. This increase is almost exclusively from an increase in carbohydrate intake largely from sugary drinks. It is important to note that there has been no significant reduction in overall fat intake. People have essentially eaten in a similar manner with respect to macronutrients and added a couple of hundred calories of Coke or Pepsi to their diet. This is in no way reflective of what was intended when a low fat diet was recommended.

To argue that society has adopted government recommendations regarding healthy life styles and nutrition is simply misleading and inaccurate. Only about 20% of the population meet recommendations for exercise, 48% meet the fruit recommendations and only 8% of people eat enough vegetables. Clearly modern society is not adopting these dietary recommendations. This is not necessarily a defence of the low-fat-high-carbohydrate diet (or the governments exercise interventions). The recommendations have been in place for three decades now and only a very small portion of the population

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actually adhere to them. Meanwhile there has been a continuing upward trend in those suffering from obesity and diabetes. In summary rather than the recommendations being responsible for the rise in obesity it could be argued that the reason is probably more related to individual decision making not to adopt them or alternatively the individual may not be in a position to adopt or adhere to them.

To understand adherence and success of a low fat diet it is important to understand what was actually intended to be included in this diet. At this point it is worth stating that there is not really such a thing as a healthy or unhealthy food but rather healthy and unhealthy eating patterns. Even healthy eating will include treats occasionally. It is however important to recognise which foods should not be considered foundation foods in any kind of diet. Muffins, pastries etc are often referred to as being high carb foods and labelled as such by LCHF advocates - but in reality if you look at the macronutrient breakdown they would also be considered high fat foods in most instances. While they might be used as a treat they should not be considered a staple of a low fat diet. A recent tweet from Dr Karim Khan a legend in sports medicine fields had "drowning in a sea of carbs" next to a picture of some muffins (see right). After perusing the local shopping centre it should be apparent that the average muffin (not specified as low fat) has about 400 calories, of which, roughly 45% were from fat and 50% from carbohydrate. This type of food is not low in fat or particularly high in carbs and the average five year old child can tell you that it is a special occasion food!

Originally low-fat was a relatively exclusionary diet. It meant no chips, no ice cream, no muffins.

All of those foods would have been in the pointy end of the food pyramid and seen as treats. Now when you walk down the supermarket aisle you can purchase low fat versions of all those items. Low fat chips (some with a heart foundation approval tick, which in my opinion is absurd), low fat muffins, low fat ice cream even "lite" oil. This widening of the food groups has made low fat eating much more inclusive, increasing food options most of which are energy dense, highly processed and not at all nutritious. It is entirely possible to have a low fat pastry, low fat milkshake, low fat chips and low fat ice cream for a meal absurdly high in empty calories. This was absolutely not intended to be part of low fat eating when it was first established, in fact at that point most of the low fat varieties of those foods did not exist.

When assessing the success of LCHF and paleo eating it is important to consider some of the well-established science. There is quite strong evidence that when calories and protein are controlled, there is virtually no difference in weight change between diets of differing carbohydrate and fat ratios. There is a small almost immediate drop in weight with LCHF diets which is almost exclusively water and glycogen in nature that is not seen with LFHC diets. In uncontrolled eating, LCHF and paleo type eating tends to have higher protein content, be more satisfying and some studies also show higher compliance. It is important to note that in healthy non-diabetic or pre-diabetic individuals, there is nothing magical about the LCHF or paleo eating. The reason that they are effective is that people are more likely to actually stick to it. There is no metabolic advantage. There are probably two major advantages to the LCHF and paleo eating options. Firstly the higher protein and fat is slightly more satisfying and that the types of food themselves are less processed and secondly (and this shouldn't be understated) the diet is still relatively exclusive.

The concern for the LCHF and Paleo movements is that they are headed in exactly the same direction as LFHC. There are more and more LCHF and paleo options including highly refined desserts and snacks. This is a real concern. While still relatively "fringe" it is now possible to go to the



Britis Sport Medic Karim Khan @BUSM_BMJ Mar 20 Drowning in ocean of carbs (there was more!). Normalising the abnormal through prevalence. Time to rebalance eating pic.twitter.com/pq6r2Qvll



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Paleo dessert



Paleo Pancakes



"Paleo cookies"



Low carb brownie

supermarket and purchase a low carb chocolate bar, low carb m&ms, low carb lollies, low carb chips, low carb milkshakes and low carb ice cream. These foods, while technically higher in fat and protein, are barely more filling than the conventional options. They are not necessarily any lower in calories and are now technically "LCHF" options. The same is true for Paleo.

Modern Paleo eating is supposedly based around the eating habits of the Palaeolithic era. The extent that the modern paleo diet resembles a diet eaten by someone living in the Palaeolithic era is arguable. Anthropologists argue that modern meat, nuts, fruit and vegetables in no way resemble Palaeolithic variations. Prior to harvesting and farming, meat would have been wild prey including rodents rather than steak and many fruits and vegetables would have resembled weeds rather than the luscious colourful varieties of fruit we see today. The messages regarding food choices are still good messages. It is therefore quite the paradox that paleo approved chocolate fudge brownies exist.

Rather than focussing on and demonising single macronutrients, the world needs to move past that and look to other aspects of nutrition.

Focussing on single macronutrients is a losing battle in a practical sense and makes a mockery of the science. The paleo movement with its focus on whole, unprocessed foods is actually a very positive message, but looking at what is actually eaten by many practitioners it is clear that people have vastly different interpretations of "processed" and for that matter "paleo". Food companies with increasing technology are able to manipulate food composition, ingredients, and probably more importantly their marketing and labelling to fit with any developing fad. See below for a range of products that one might argue is an outcome of manipulation to appear healthier than what they might be. Modern society in comparison with previous generations is fiscally wealthy, time poor, sleep deprived and stressed. The combination of these can cause overeating and indulgence eating (often regardless of how satisfying they may or may not feel, further dampening some of the arguments for LCHF) and does not lend itself to exercise or wholesome eating. A strong emphasis on education of the basics is important and needs to start with children as young as possible. Finally, people actually need to care about their health and be in a position in which they have the knowledge to and can afford (both the time and the money) to prepare healthy meals, which is a problem bigger than nutrition and will not be fixed with any specific dietary recommendation.

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