

Fad diets in athletes

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With every new Olympic cycle there seems to be a new “fad” diet going around. Of recent times there has been the paleo diet, the gluten free diet (in non-coeliac persons) and the intermittent fasting diet. These diets come and go over time, and there has been a great deal of interest recently around the low carbohydrate high fat diet (LCHF).

This diet is very polarising, with some controversy surrounding strong proponents of this diet such as Tim Noakes especially after a tweet he sent to a Mother of an infant. The subject of “tweeting” medical advice may be a good topic for another editorial! Despite this he has published a good review of this diet.¹

Looking at the core issue of a LCHF diet there are a few benefits and a few issues with this diet in athletes. There seems to be no debate that this diet is incredibly good at helping you lose weight if needed.² This is thought to be due to the appetite suppressive effect of the high fat and protein component of the diet, I have a few separate thoughts on this.

It is also proposed that the diet can help with ultra endurance events to teach your body to burn fat and increase rates of fat oxidation.³ Ironmen athletes have been shown to be “off the scale” on their fat burning ability after being on this diet for prolonged periods.⁴ Whether this actually helps race performance is another matter.

Shorter events and elite athletes are a different story. It has been shown to be detrimental to power sports.⁵ Studies on elite athletes have generally shown disappointing results.⁶

There is a possible benefit in ultra endurance athletes, but it shows negative performance for short events. So where is the cut off? There is no good data for that, but it is likely to be a sliding scale with impaired performance in events less than 1 hour, no significant change in events from 1 -10 hours and possible benefit in events over 10 hours and likely benefit to multi-day events.⁷

The other factor to take into account is energy availability. This is an incredibly important factor when we are thinking about reduced energy availability in sport and all the consequences involved with that condition.

So now to my personal experience. I was first made aware of this diet being used by athletes when one of my rowers started on it. He had always struggled to lose weight as a lightweight rower and decided to try this diet. In short it didn't work for him. As shown above it is not a diet for short events and he may have controlled his weight, but he lost his power and ultimately became a less capable rower.

In the spirit of physicians throughout the ages I felt a bout of self experimentation was in order. Although not to the extremes of previous medical colleagues⁸ I decided to try a LCHF diet for a few months.

My background is in ultra endurance events and I have transitioned from being around a 10 hour Ironman athlete to an ultra marathon runner now. After a 5 year break from hard training I had put on a few kilos and was struggling to lose this despite running up to 120km per week. I was also struggling with a number of overuse issues and had a weekly standing appointment with my physiotherapist.

I decided to try a very low carbohydrate diet (under 50g of carbohydrate per day). The initial couple of weeks were hard as I have a sweet tooth and had a marked craving for sugar. There was a spectacular weight loss and in 8 weeks I lost 8kg. Going from 82kg – 74kg. My running improved massively and I'm now back under 39minutes for a 10km run and my injuries all seem to have abated, there may be a place for some research on weight loss and running injuries. I had to modify the diet at this point as it was likely I was going to get into a situation of low energy availability and would likely start to pick up a whole set of new injuries secondary to this. To be fair I don't think it is the low carbohydrate diet that has improved my running times or my injuries, but purely the

weight loss. Whether it will help me come race day (11th November) remains to be seen.

In conclusion, it seems to be an acceptable weight loss tool, it is debatable if there is an effect above and beyond this and should be recommended with great caution in elite athletes. You also have to be careful about reduced energy availability, and it should not be recommended for power or short distance sports in a normal weight athlete.... Some food for thought.

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