Food for thought – snacking

A recent BBC radio soundbite caught my interest: '**Only eating breakfast and lunch may be more effective at managing type 2 diabetes than eating smaller, more regular meals.**' When searching for this story on the web, I found the Mail Online's version: '**Two hearty meals each day better for you than 6 snacks: Eating a big breakfast and lunch helps control weight and blood sugar levels.**'

The Mail goes on to suggest that the two meals strategy will result in greater weight loss in non-diabetics and, in fact, doesn't mention that the study involved diabetes patients until almost the bottom of the first screen.

So what, you may ask? Very few of you will have type 2 diabetes but you may know someone who does have it. Should you advise them to change their dietary habits? No, the official advice is still three meals a day plus small snacks and no one should make changes without consulting their doctor. But can we, as runners or cyclists, learn anything from the information in the original study?

Firstly, be careful of headline grabbers. The Mail's online article is accompanied by a photo of a huge breakfast spread with fried eggs, bacon, pancakes (with butter and syrup) and orange juice in the foreground (below, left) whereas the BBC website shows a picture of fruit, vegetables and lean meat (below, right).

The Mail's picture could easily be interpreted as a licence to eat anything you like for breakfast and lunch and yet still lose weight!

The original study doesn't specify the foods that were consumed, only the percentages of macronutrients (carbs, protein and fat) in the meals. The important information is that both regimes represented a 500kcal reduction against the daily total energy requirement. 500kcal is roughly equivalent to a big Mac or a generous slice of cake.

Consuming 500kcal less energy than is needed, each day, should lead to weight loss of a pound a week (5.5kg in 12 weeks) yet the study reports weight losses of only 2 to 4kg,

in what are described as ‘motivated’ obese diabetics albeit the greater losses are associated with the two meals strategy.

In simple terms, something doesn’t add up. Although the actual foods were provided to one half of the participants (the other half were educated in meal selection and preparation) the study had to rely on the participants’ food diaries to establish what was eaten. It is firmly established that almost everyone will ‘under record’ when keeping a food diary, whether intentionally or simply through forgetting to write down every single item of food and drink.

Reading further into the study, however, there are some interesting points made by reference to other scientific literature.

The two meal strategy involves a period of ‘fasting’ between the afternoon meal and the following day’s breakfast. Laboratory mice, yes **mice**, have been shown to benefit from this type of regime, in terms of longer lifespan and reduced tendency to develop type 2 diabetes and other chronic diseases. Whilst it is not known if those observations are also true for humans, it is an attractive argument in support of less frequent meals.

It is known that the energy produced as heat by the digestion of a quantity of food is greater after a large meal than after the same quantity of food spilt into several small meals, although the same total number of calories is consumed. This means that more energy is required to digest the large meal and hence less energy is available to be used for activity or stored (as fat).

In addition, the body’s ability to store fat increases during the day and peaks after an evening meal. So, in addition to the total amount of calories consumed, the timing of meals may be important too.

Last, and not least, habitually eating breakfast seems to protect against weight gain, even if that breakfast increases the total calorie intake.

So, despite some reservations about the recent study, it does seem that there are a number of pieces of evidence to support the suggestion that two larger meals per day is a better weight management strategy than six small meals.

For those who exercise regularly, and are neither obese nor overweight, snacking may be a fact of life. It becomes an essential strategy for maintaining energy intake and fuelling performance and recovery in those who are training hard. Snacks are likely to be eaten in addition to regular meals and then the choice of snack needs to match the requirement: quick release carbs for energy, quick release carbs and protein for recovery, slower release carbs for longer effect and, importantly, water for hydration.

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