**TITLE.** Why breakfast is not the most important meal of the day: Another myth bites the dust!

**INTRODUCTION.**

How many time have you heard ‘Breakfast is the most important meal of the day’? This view is so pervasive that to admit to not eating breakfast is almost tantamount to admitting to a non-healthy behaviour!

I am a rheumatologist and look after patients with osteoarthritis. This is associated with obesity. As we still don’t have treatments that stop progression of osteoarthritis, prevention is the key. Central to this is preventing obesity and for people who are overweight and obese to lose weight.

Over the years I have been struck by the number of patients who sought help for their weight and were advised to eat breakfast as part of their weight management plan. Some people would even tell me that they would force themselves to eat breakfast, even if they didn’t feel like it. To eat when you are not hungry, especially if you are trying to lose weight, never made sense to me, so our team decided to look at the evidence for breakfast eating and obesity.

**WHAT IS THE BASIS FOR THE BELIEF IN BREAKFAST EATING AND PREVENTION OF OBESITY?**

Most previous studies that examined breakfast eating and obesity were what we call ‘observational studies.’ In observational studies people are followed and their behaviors such as breakfast eating and then their weight are assessed. The problem with observational studies is that it may not be the breakfast eating that is good but rather the individual’s wider healthy lifestyle and food choices that result in the benefits on weight. There is very clear evidence that those who eat breakfast are not the same as those who don’t eat breakfast. The best way to examine the effect of breakfast and take into account differences between people is do an experiment, also known as a clinical trial. Here you can take a group of people and randomly ask one group to eat breakfast while the other group skips breakfast. This then allows us to compared people who are otherwise very similar except in whether they eat breakfast or not.

**METHODOLOGY.**

In our study we examined the scientific literature to find all the clinical trials that had been performed in adults with the aim of examining the effect of breakfast eating on obesity. We found 13 clinical trials. We then performed a meta-analysis of these 13 trials. This is a way to take all the data from these trials and pool it together. This is a very effective way to use all the available scientific information on a topic. By doing this, we were able to examine the effect of breakfast eating on weight and also calorie intake.

**RESULTS.**

We found that those who ate breakfast tended to eat about 260 extra calories per day and gain an average of 0.44 kg over 7 weeks. We found this to be the case regardless of whether a person was a regular breakfast eater or not. We also found no evidence to support the belief that people who ate breakfast ate less later in the day.

We did not examine whether a healthy breakfast, eg with cereal, was better than a less healthy breakfast, eg eggs and bacon. In our study we focused on the overall effect on weight and calorie intake. It is important to keep in mind that a calorie is a calorie whether it comes from a healthy or unhealthy source when we consider the effect on weight. Someone once reminded me that gorillas in the zoo are vegetarian!

**CONCLUSIONS.**

We would conclude that there isn’t a ‘one size fits all’ answer to breakfast eating. Some people feel the need to eat breakfast, some don’t. The key message is that we should not change a person’s diet to include breakfast in order to lose weight. This has the potential to have the opposite effect! If a person likes to eat breakfast, we are not suggesting that person stops having breakfast. However the evidence is that eating breakfast tends to add to the overall calorie intake of the person. We found no evidence that eating breakfast reduced food intake later in the day. Also when we reviewed the literature we found no evidence that food eaten at breakfast is metabolized more efficiently. Unfortunately a croissant eaten at breakfast has the same effect on the waist line as a croissant eaten later in the day!

It is also important to keep in mind that there are some people in whom breakfast eating may be advisable For example, children are growing and need to concentrate at school so it makes sense to encourage them to eat before school so they are not hungry during classes, especially as in most situations they cannot eat during their classes. Also, some people on medications, for example for diabetes, are often advised to eat at regular times and spread their eating over the day.

**GENERAL CONCLUSIONS AND FUTURE PERSPECTIVES.**

Obesity is one of our major medical and public health challenges. We are not winning. The advice many of our patients are getting regarding eating breakfast, although well meaning, may have the opposite effect. We need to challenge our health related beliefs if we are to tackle obesity in the community. This will be very important as obesity is a major contributor to many of the chronic medical conditions that result in death and disability in our communities including cardiovascular, diabetes and joint diseases. The aim is to improve health outcomes. We should replace myths with evidence.