Concurrent Session 9A: Diet Intervention Studies/Obesity

After 2 years, do obese adults change their usual eating frequency if you ask them to as part of a 6 month weight loss program?

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Background – Best practice guidelines for weight management recommend regular eating. Despite 30 years of eating frequency (EF) research, few studies have examined whether prescribed EFs can be successfully maintained in the longer-term.

Objective – To examine whether specific EFs assigned as part of a weight loss program were actually adopted and maintained over a 2 year period.

Design – Obese (BMI >29-<45) adults (n=151, 108F) were randomly allocated to either 3 meals (3m) (n=46), 3 meals and 3 snacks (3m3s) (n=51) or 6 meals (6m) (n=54) for six months on standardised energy reduction diets of 5–7.5MJ (15%±5%, 30%±5%, 50%±5%). Daily EF was assessed using semi-structured diet histories at baseline (n=147), one year (n=48) and two years (n=30). Eating occasion was defined as intake >50kJ consumed at least one hour after last previous ingestion. Repeated measures, intention to treat, General Linear Model analysis using last value carried forward were conducted.

Outcomes – Average EF at baseline was 4.7±0.1 (mean±se), ranged between 4.4–5.1 over two years, and did not change over time from baseline (P=0.647). EF increased within 3m3s and 6m groups and decreased within 3m group over one year by only 0.3 eating occasions and began to revert towards baseline EF by two years (F=4.66, P=0.003, df=3.14).

Conclusion – Results showed that assigned EFs were not adopted over the longer-term. If changing EF over the longer-term is challenging then use of EF as a longer-term weight management strategy is questionable, and guidelines should reflect this.

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