



Research Article

Behavioural weight management interventions for the treatment of obesity: network meta-analysis of trial and real-world individual participant data

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Plain language summary

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Plain language summary

Weight loss interventions are the main treatment for people living with obesity who want to lose weight. These programmes are around 12 weeks long and support people by using a combination of techniques such as changing diets, exercise advice and ways to change behaviour. Researchers need to compare these programmes to know which work best. Without clear answers on what works, local weight management services are unsure how best to support people.

Nineteen real-world programmes and six research trials shared anonymised information about their participants (age, gender, height, ethnicity and deprivation and weight loss results). To know if a programme is successful and for who, we compared how much weight has been lost by participants on average (in kilogram and per cent) after 12 weeks. We used a statistical analysis technique that would compare the overall results of the programmes. When we analysed these data, we could see which research trials and real-world programmes produced the biggest weight loss. All the programmes show weight loss, but some are greater than others. The male-only trial, football fans in training, showed the highest weight loss among the trials. Individual real-world services also showed weight losses with some being more than others.

These findings however are not the most helpful as, for many reasons, these programmes all differ in some way in the components that make them up. They may be gender specific for example, and for these reasons may not give the same results if they were delivered to different people or in a different part of the country. To answer this problem, in the future we will be combining the weight loss data with the different components (parts) of the programme to see which parts of an intervention work best.