Mobile devices for promoting healthy eating:
A systematic review

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Background
Unhealthy eating is a major risk factor for chronic disease. However, many current strategies to promote healthy eating are not sustainable over the longer-term. More cost-effective, wide-reaching initiatives are urgently needed. Mobile health (mHealth) interventions, delivered via mobile devices, could provide a solution.

Objectives
To summarise the evidence from randomised controlled trials (RCTs) investigating the effect of mHealth interventions for promoting healthy eating.

Methods
Systematic review
A comprehensive search of five scientific databases was conducted using methods from the Cochrane Handbook.

Eligible Studies
RCTs published up to 1 July 2016, which examined healthy eating interventions for adults (aged ≥ 18 years) delivered via mobile device.

Results
A meta-analysis was not considered viable due to large between-trial heterogeneity.

Narrative review results found: Small positive effects of mHealth interventions on healthy eating and weight loss.

Conclusions
mHealth is an emerging field of research, which offers an alternative, possibly effective, method of improving dietary intakes. Although there are promising trends toward effectiveness, the current evidence base is insufficient (studies are of poor quality) to determine conclusive positive effects. More rigorous RCTs with longer-term (> 6 months) follow-up are warranted to determine if effects are maintained.

*Despite reporting statistically significant results, many trials were not sufficiently powered to detect between-group differences; 1outcome of blood pressure is not displayed as there were no observed effects (n=2); 2Personal Digital Assistant

Rebecca McCarroll conducted the review and independently extracted and summarised the data. Feedback was provided from H.E. and C.N.M on specific studies as required.