



# Technology supported self-guided physical activity interventions in adults with cancer: a systematic review

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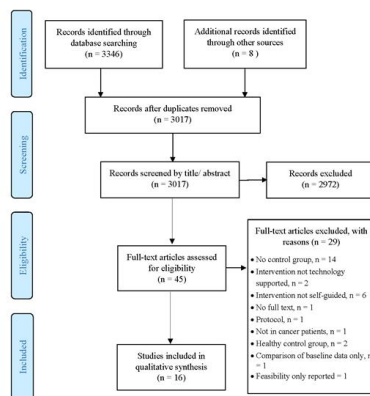
## Background

- Nutrition & physical activity are important components of cancer care
- Increasing demand for health services creates a need for flexible, easily accessible and tailored models of care whilst maintaining optimal outcomes
- Aim: To describe and appraise the efficacy of technology supported self-guided nutrition and physical activity interventions for people with cancer.

## Methods

- Multiple databases searched through to July 2018 for randomised and non-randomised trials
- Risk of bias assessed using Cochrane risk of bias tool

Figure 1: PRISMA diagram



## Results

- 16 randomised trials representing 2,684 participants were included
- Interventions involved physical activity alone (n = 9), diet alone (n = 1) and combined physical activity and diet (n = 6)

### Technology platforms:



Web-based  
n=9



Device-based  
n=3



App-based  
n=3



DVD-based  
n=1

### Behavioural outcomes:

- 2 of 7 studies found significant benefit to diet quality
- 8 of 15 studies found significant improvement in muscle strength and/or moderate to vigorous physical activity

### Clinical outcomes:

- Inconsistent findings for weight, BMI, body composition

### Health-related outcomes:

- 4 of 9 studies found significant improvement in health-related QoL
- 4 of 6 studies found significant improvement in fatigue
- No studies examined health service usage or financial outcomes

## Issues

- 10 of 16 studies did not specifically recruit participants with poor diet or physical activity behaviours
- Sub-analysis in 2 studies of participants with baseline poor diet and physical activity behaviours revealed the intervention was more effective in those not meeting current guidelines

## Conclusions

- Short-term benefit of technology supported self-guided interventions on physical activity behaviour and fatigue
- Some benefit in the short-term on dietary behaviour and health-related QoL
- Considerable potential of these types of interventions but currently a lack of evidence regarding long-term benefits

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