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Exercise therapy for overweight and obese sedentary adults



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Overweight and obesity in the UK



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One of the leading causes of preventable death

In the UK,

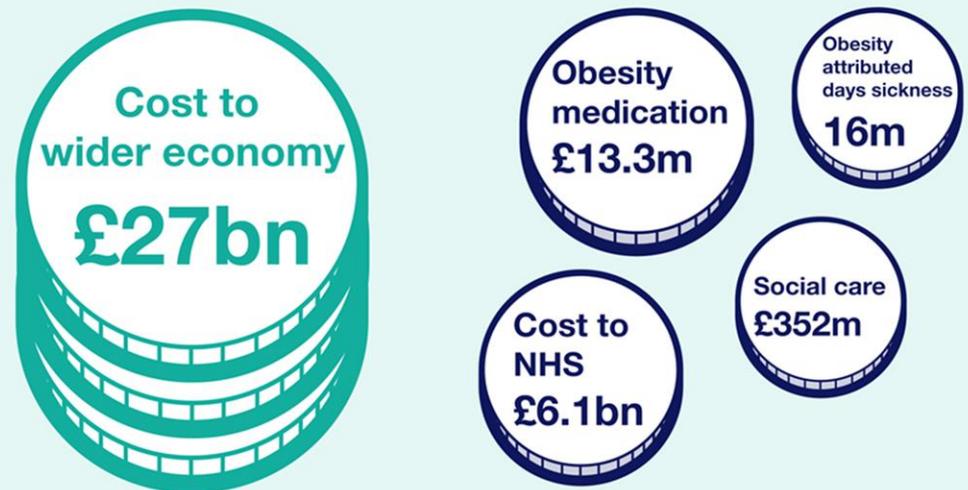
64% of adults classed as **overweight** (BMI >25)

28% of adults classed as **obese** (BMI >30)

By 2050, 50% of adults predicted to be obese

World Health Organisation, 2014

The annual cost of obesity



Public Health England, 2014

Obesity and Sedentary Behaviour



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'Obesogenic' environment difficult to

- Stay active
- Maintain healthy body weight

Obesity associated with

- ↓ MVPA and
- ↑ Sedentary behaviour



Sedentary behaviour

- Sitting/lying
- Low energy expenditure
- Multi-faceted (work, home, transport, leisure)

Few interventions target sedentary adults

Prevalence of sedentary behaviour

- Adults report sitting for >5h per day
- >2h per day TV watching
- 7h per day sedentary

Knowledge gap - 'Catch them early'



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Chronic diseases develop over time and current behaviour change strategies are largely aimed at serious chronic disease groups.

- Exercise referral scheme
 - ➔ poor adherence
 - ➔ <60% drop out at 12 weeks

Coulson M, Innerd P. An evaluation of the Move to Improve Exercise Referral Programme (in press)

- Few interventions aimed at sedentary adults before serious chronic disease develops
- Few interventions to reduce sedentary behaviour

Aims of this project:

- **Assess feasibility**
- **↑ Functionality**
- **↑ Mental Health**
- **↓ Sedentary behaviour**



Focus group

Participants wanted:

- Enjoyment
- Group exercise
- Increased confidence
- To feel better



Programme design based on:

- Self efficacy
- Enjoyment factor
- Instructor's delivery style
- Use of music
- Adaptable exercises
- Social features

Intervention

12 weeks duration

Focus on:

- Balance
- Stability
- Coordination
- Endurance
- Strength



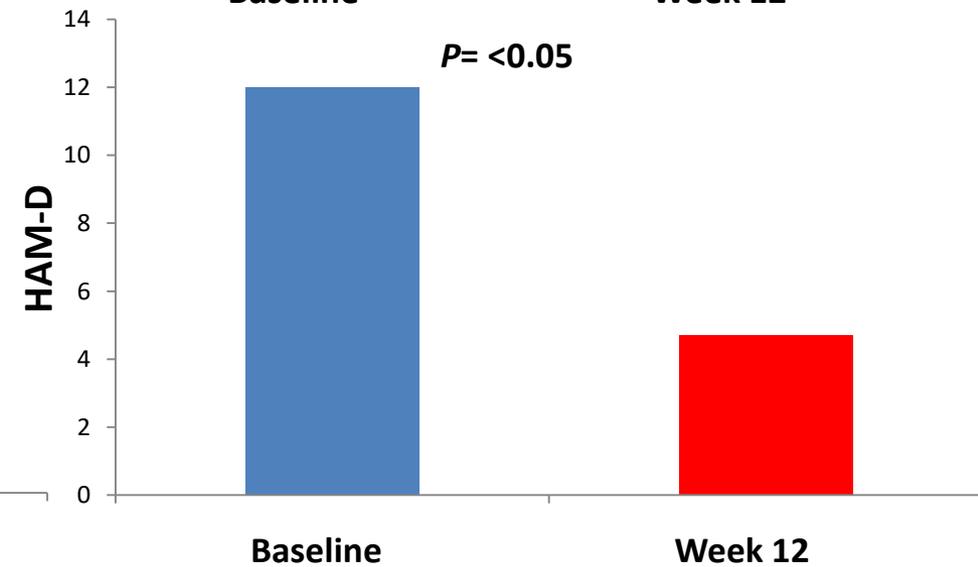
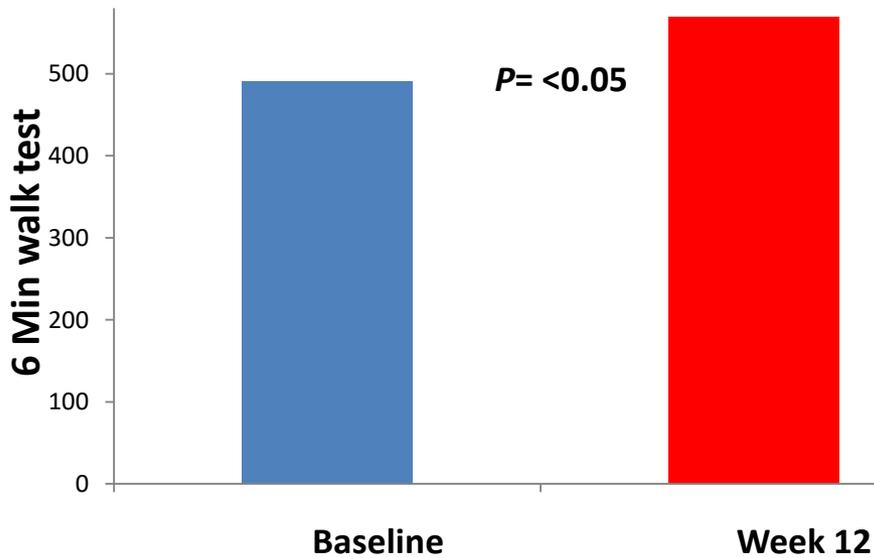
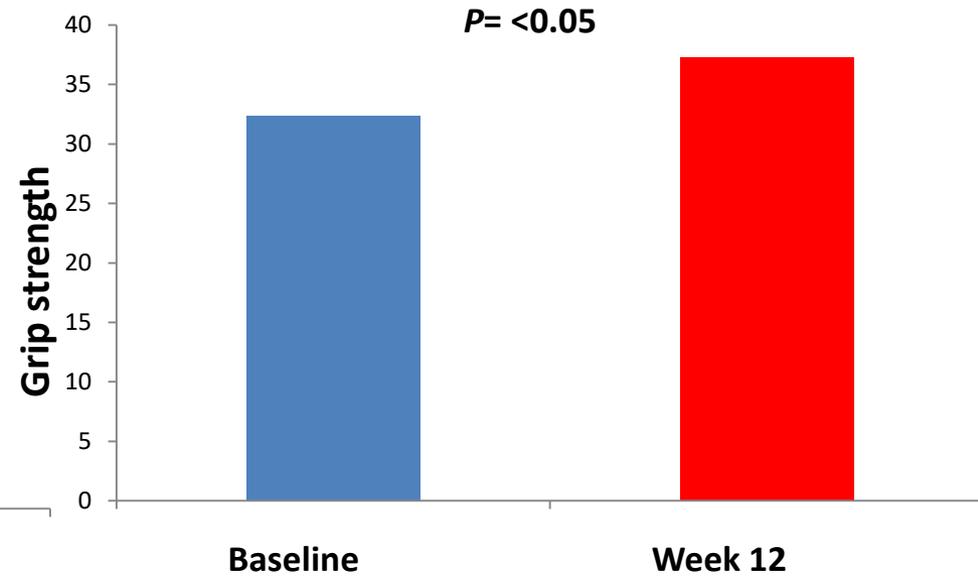
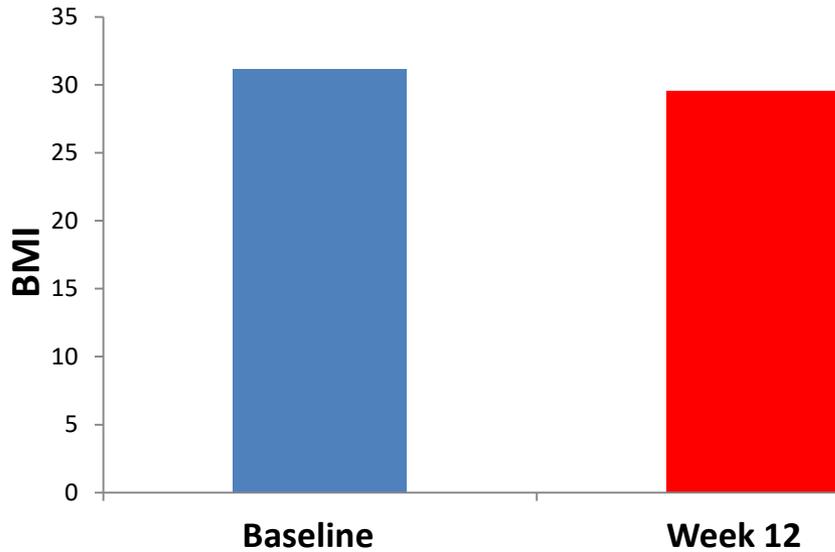
Outcomes:

- Feasibility
- Functional capacity
- Mental health
- Physical activity/sedentary behaviour

Health Outcomes



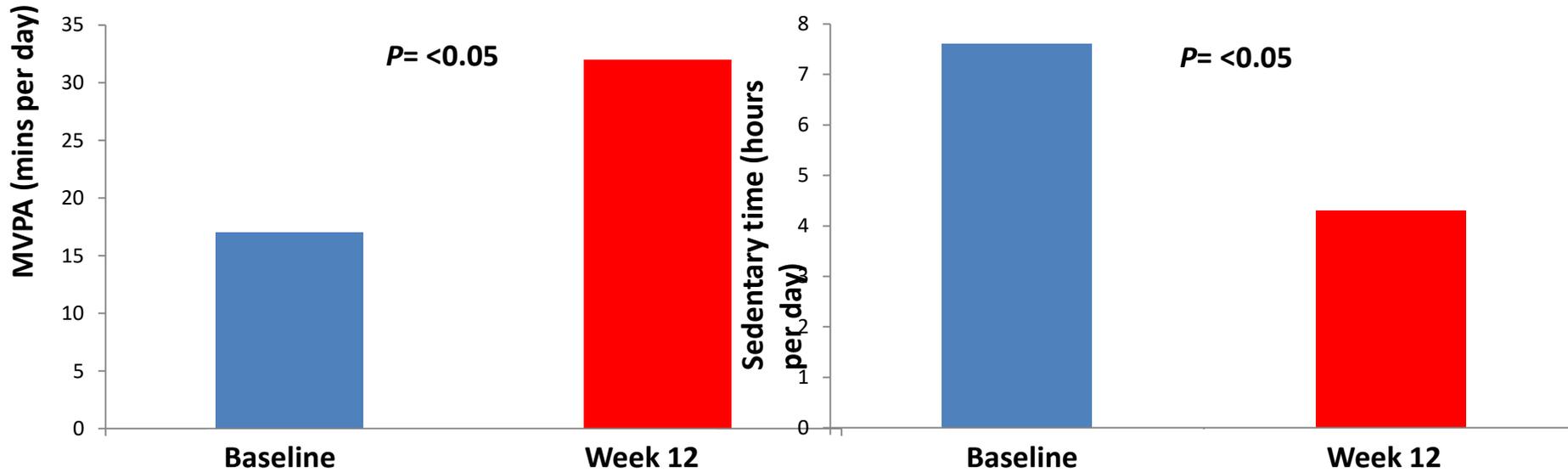
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Activity Outcomes



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Innerr P et al. Comparison of subjective and objective measures from the Newcastle 85+ study. Age and Ageing. 2015

Rowlands et al. Sedentary Sphere. MSSE. 2016

Feedback



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"my self-confidence
has increased"

"I feel physically and
mentally stronger to deal with
everyday task."

"really looking forward
to carrying on"

"more
confident"

"I look forward to sessions
and feel like it is a good
place to see new people"

"The
camaraderie
in the group
has been a big
part of the
enjoyment."

"I feel more
confident about
my body"

"I feel more
energetic and
have a more
positive
outlook."

"The structural nature of this
programme has helped me stay
involved for the whole 12 weeks."

"feel more
focused"

"sleeping
better"

Conclusion

- Despite no change in BMI
- This study showed 96.25% adherence
- Supervised exercise therapy increased functional and psychological outcomes
- ↑ physical activity
- ↓ sedentary behaviour

Future recommendations

The same programme is suggested to be carried out in the future but in a different study design with a randomised controlled trial:

- Dietary intervention
- Weight loss
- Implementation on a larger scale

Thanks to,

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Dr Paul Innerd, project supervisor



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