

# From clinical trial to large-scale community implementation: evaluation of the mend child weight management programme in the UK

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## Introduction

- The mend 7-13 Programme is the only nationwide multi-component, community-based child obesity intervention in the UK<sup>1</sup>.
- The programme is also currently being delivered and evaluated in the USA, Australia, Denmark and New Zealand.
- A previous RCT has shown significant improvements in BMI, waist circumference, cardiovascular fitness, physical activity, sedentary behaviours and self-esteem<sup>2</sup>.

## Aim

To enable evidence-based child obesity management to be delivered in community settings at sufficient reach to make a meaningful difference.

## Methods

- In 2007-2009, overweight or obese children participated in standardised programmes across the UK.
- The intervention was delivered by a wide range of professionals in community venues.
- Outcomes of the intensive phase were assessed at baseline (pre) and at 10 weeks (post).

## mend 7-13 Programme

Development	Setting	Participants	Duration
<ul style="list-style-type: none"> <li>Developed in 2001</li> <li>In partnership with Great Ormond Street Hospital &amp; UCL Institute of Child Health</li> </ul>	<ul style="list-style-type: none"> <li>After school</li> <li>Community</li> <li>Group-based</li> <li>Venues include: schools, leisure centres, community centres</li> </ul>	<ul style="list-style-type: none"> <li>7-13 years</li> <li>≥91st BMI centile (UK)</li> <li>Parent/carer attendance required</li> <li>Siblings included</li> <li>Wide range of minority ethnic groups</li> </ul>	<ul style="list-style-type: none"> <li>Two year programme</li> <li>10 week intensive phase (20 x 2hr sessions)</li> <li>Followed by online family support and local activities up to 24 months in order to maintain and encourage new behaviour change</li> </ul>

## Behaviour change



## Land-based activity



## Water-based activity



## Nutrition education



## Clinical Trials

UK Feasibility Study 2002-2003

UK RCT 2005-2007

2<sup>nd</sup> UK RCT 2010+

US RCT 2011+

UK Pilot 2004-2005

UK Rollout 2007-2009

Australia RCT 2010+

Current UK implementation (roll-out) – 319 sites



## Results

### Demographics

- Children: 9,754
- Girls: 55%
- Minorities: 23.4% (UK: 7.9%)
- Single parents: 33% (UK: 24%)
- Socioeconomic status: 48% don't own home (UK: 31%)
- Mean age: 10.4±1.7 years
- Mean BMI z-score: 2.8±0.6 (UK: %) = UK national average

### Programme attendance, retention and BMI change

	Feasibility	RCT	UK Roll-out
n	11	117	6815
Mean attendance (%)	78	86	78
Drop-outs (%)	9	3	13

- Of the 9754 who participated in the intervention, 70% (6815) had valid pre- and post measurements and were analysed.
- Mean BMI and waist circumference z-scores decreased by 0.18 and 0.22 respectively (p<0.0001).
- 90% of children reduced their BMI z-score.

### Feasibility, RCT and rollout comparison at 10 weeks

From clinical to community professionals

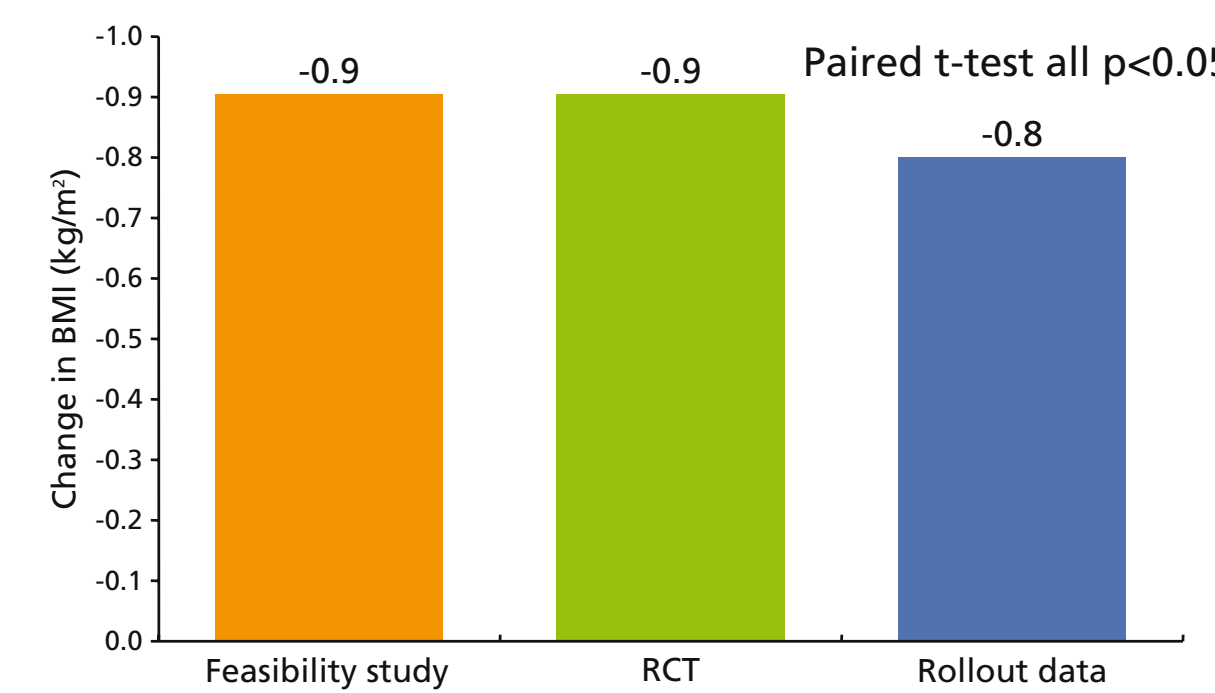
**Feasibility<sup>1</sup>:**  
Pediatric dietitian, clinical psychologist & physiotherapist

**RCT:**  
Health, social, education & exercise professionals

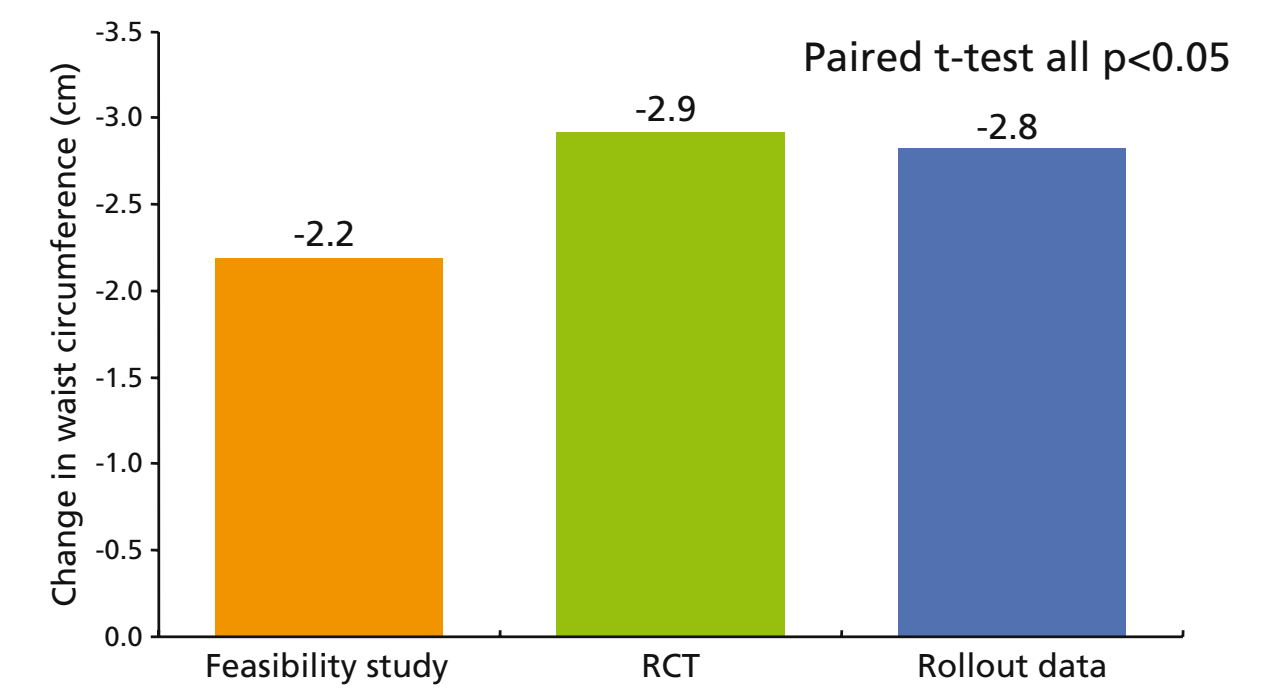
**Rollout:**  
Many additional non-specialists e.g. community health workers, health trainers

Shift in skills and expertise:  
increased scalability and improved cost-effectiveness

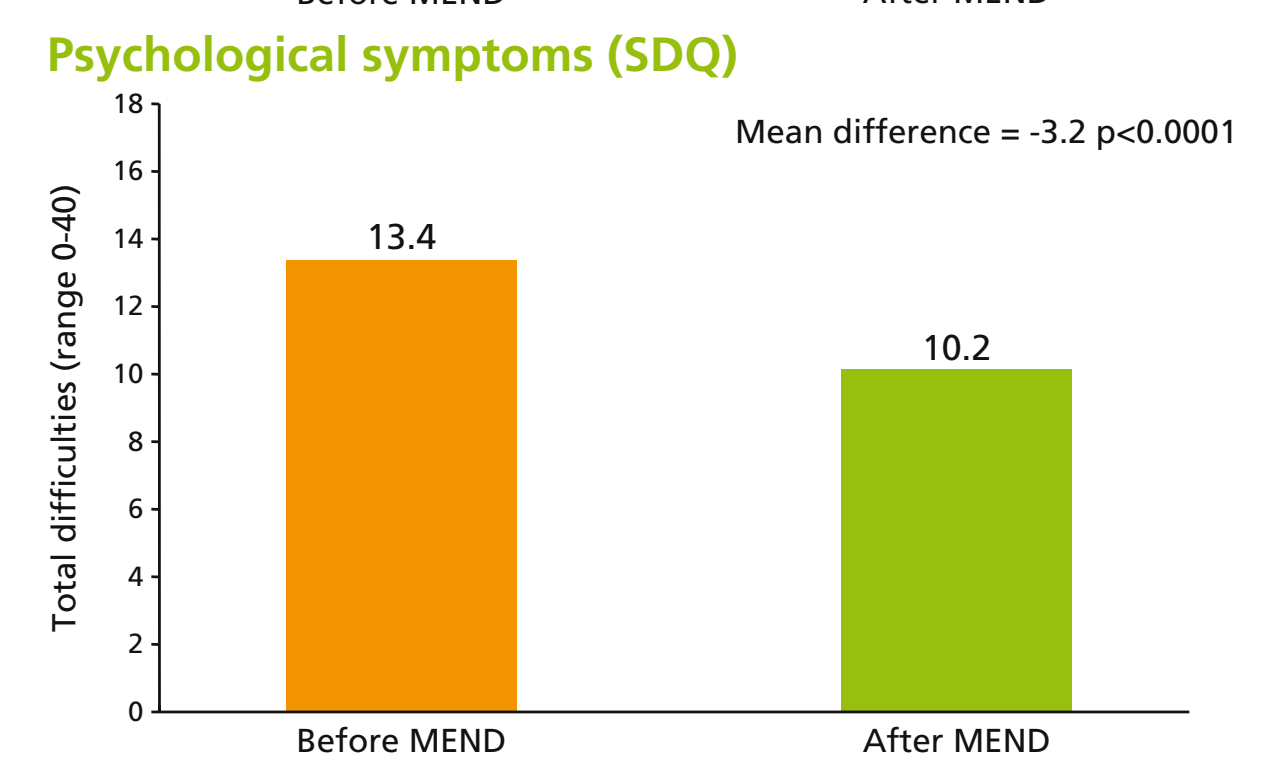
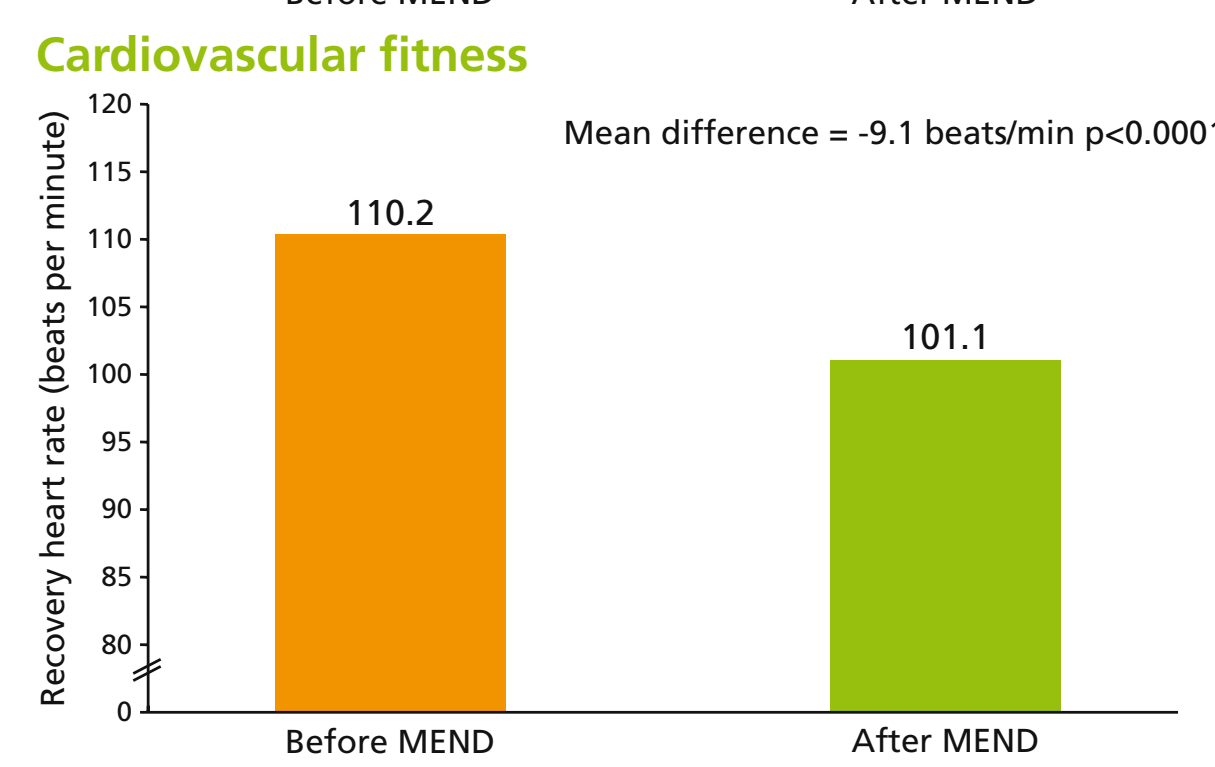
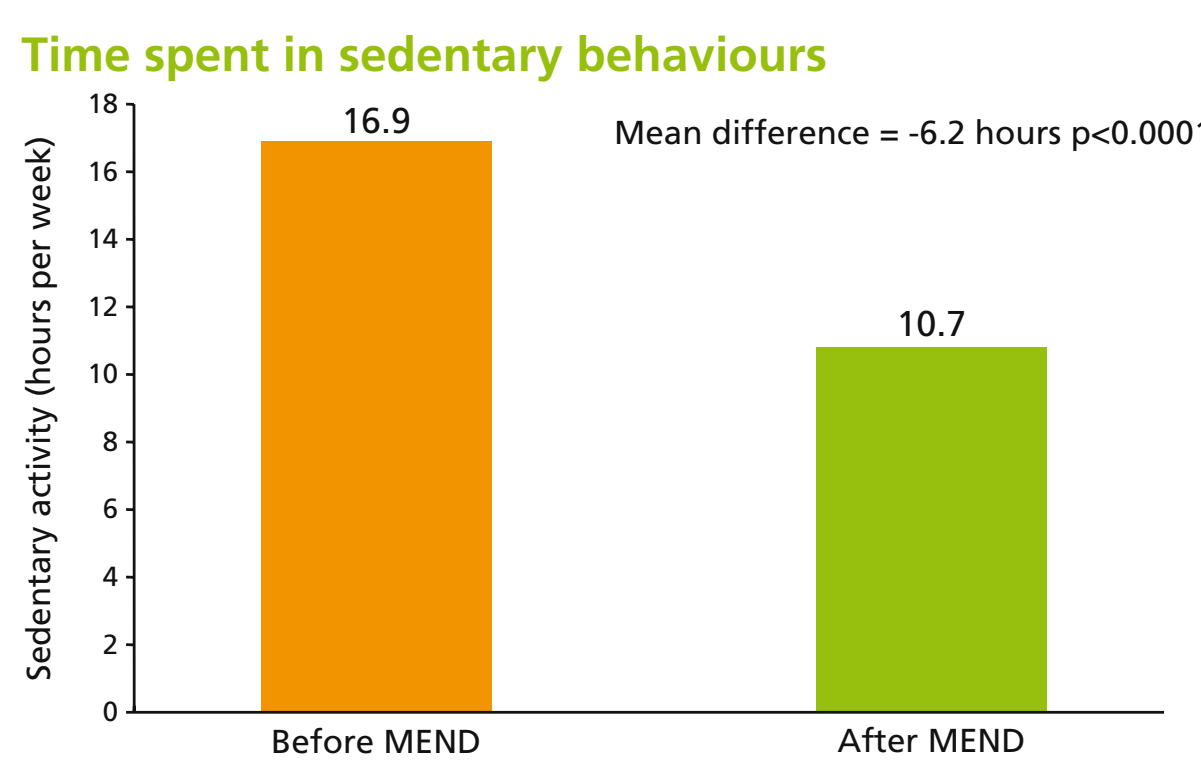
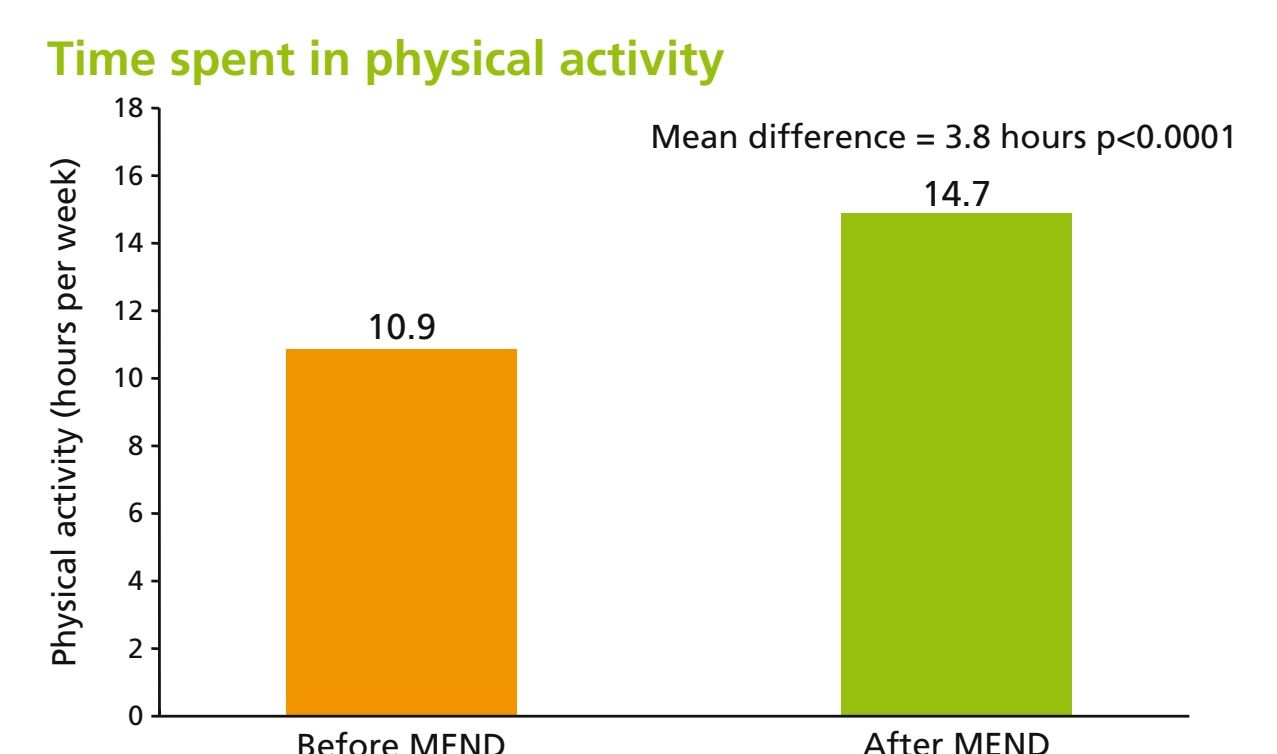
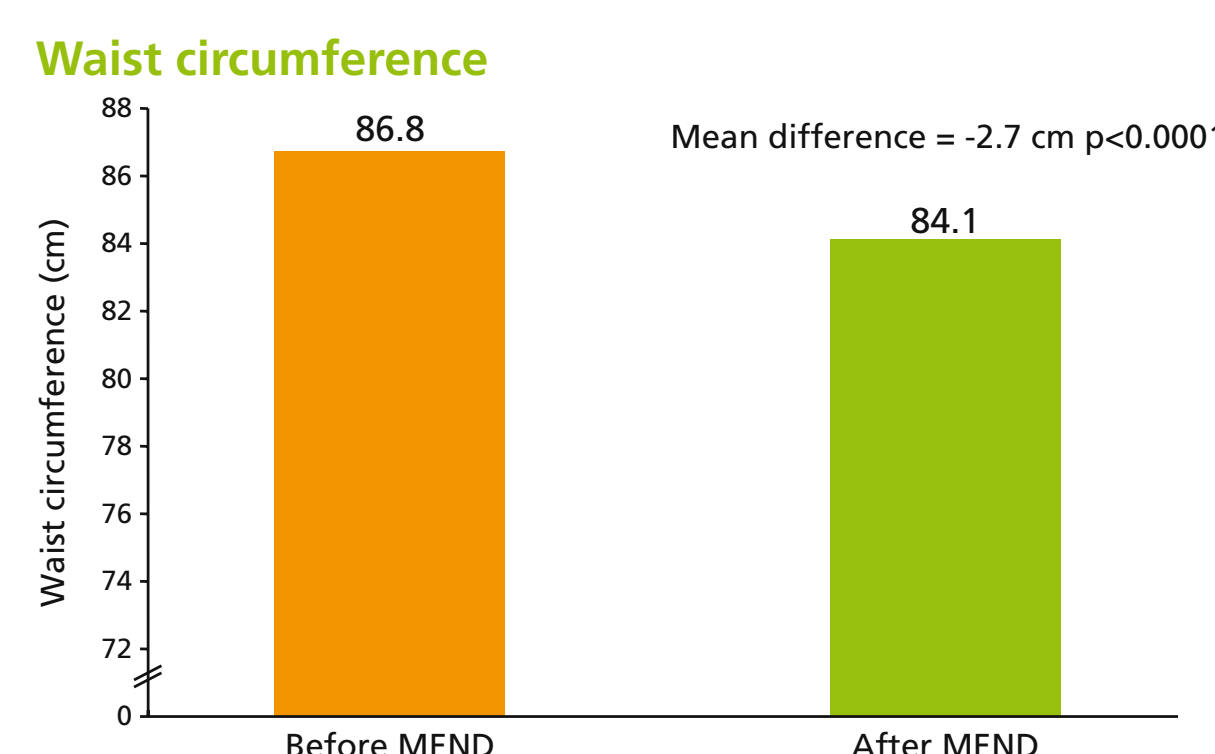
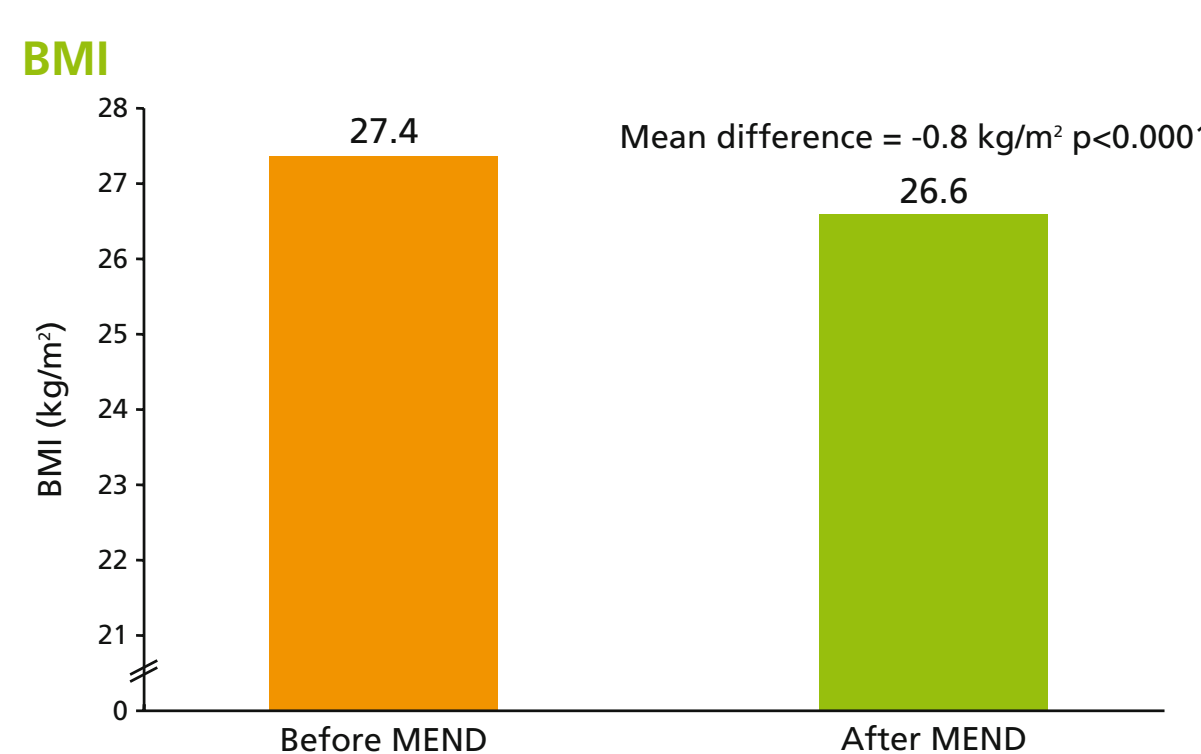
Change in BMI at 3 months



Change in waist circumference at 3 months



### Change in outcome measures at 10 weeks



## References

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## Acknowledgements

- Thank you to all MEND's funding and delivery partners and the families who took part in this evaluation.

## Discussion

- Current data suggest that the rollout of MEND achieved similar short-term outcomes as seen in previous studies
- Longer-term follow-up is still needed to see if rollout results are aligned to the RCT results at 6 and 12 months
- More research is required to determine what effect sizes are needed in order to achieve clinical significance

## Conclusion

- In accordance with an earlier feasibility<sup>3</sup> and RCT<sup>2</sup>, attending the MEND 7-13 Programme had beneficial effects on body composition, cardiovascular fitness, physical activity levels, sedentary behaviours and psychological symptoms, demonstrating effectiveness in the short-term for the management of child obesity in the UK.