

MEND

(Mind Exercise Nutrition ...Do It)!



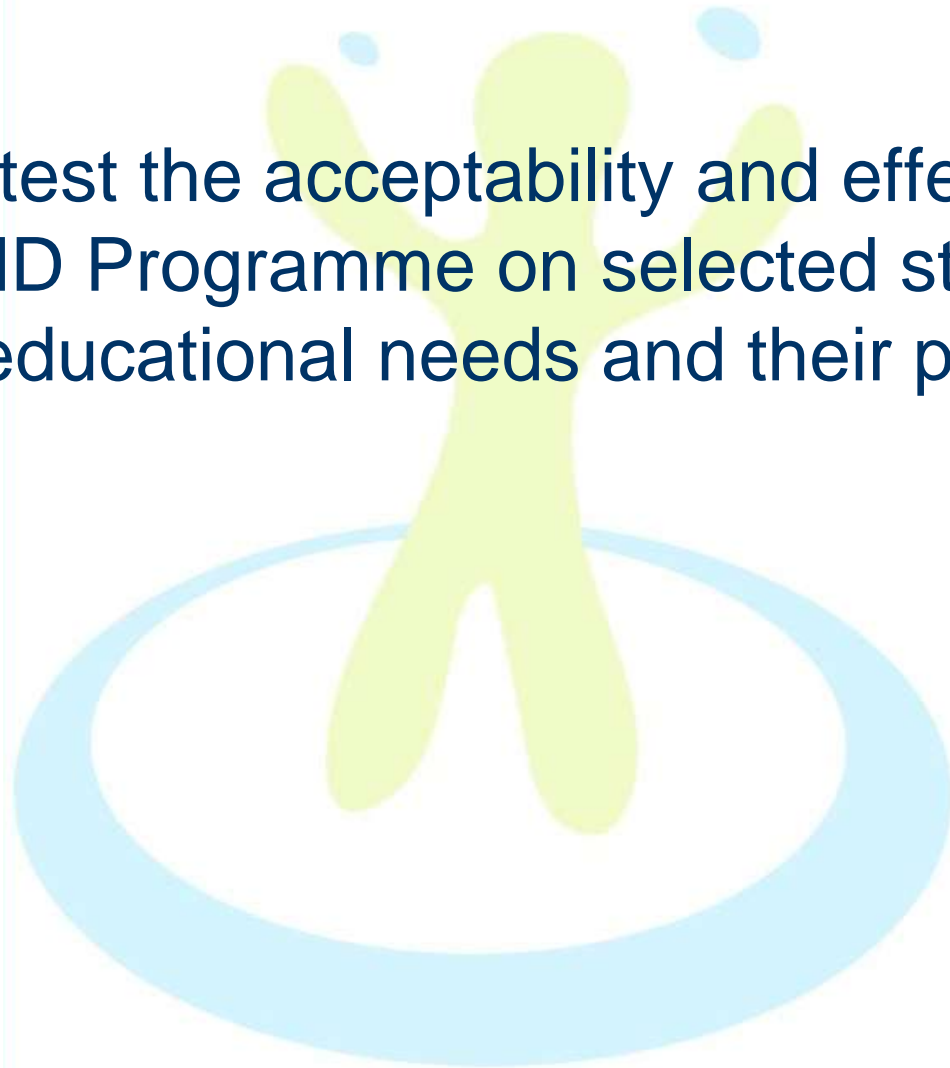
Tackling Childhood Obesity by getting
Children and their Families Fitter,
Healthier, Happier





NZ Special Educational Needs Pilot

- Aim: To test the acceptability and effectiveness of the MEND Programme on selected students with special educational needs and their parents / carers.



Why manage weight in children with disabilities?



- Children with disabilities have higher:
 - Prevalence overweight and obesity
 - Rates respiratory disease
 - Rates cancer
 - Less access to physical activity at home



MEND Team



- Leaders: dietitian, physiotherapist (CDT)
- Support network: 16 – 20 teachers / teacher aides, school management team, health promotion advisor, public health nurse
- Setting: 2 special schools in Auckland (Decile 1 & 3)
- Support and training from MEND Australia



MEND Programme Structure



Mend is a multi – component programme for families and children (7 – 13 years)

Family centred

Mind – 8 sessions (behaviour modification programme)

Exercise - 18 sessions including land and water based

Nutrition – 10 sessions including supermarket tour and food festival

MEND Evidence Base

- Feasibility study
2002-3

(Sacher et al, 2005)

- Pilot 2004-5

(Sacher et al, 2006)

- RCT 2005-7

(Sacher et al, 2007)

Research team

Paul Sacher

Dr Paul Chadwick

Prof. Tim Cole

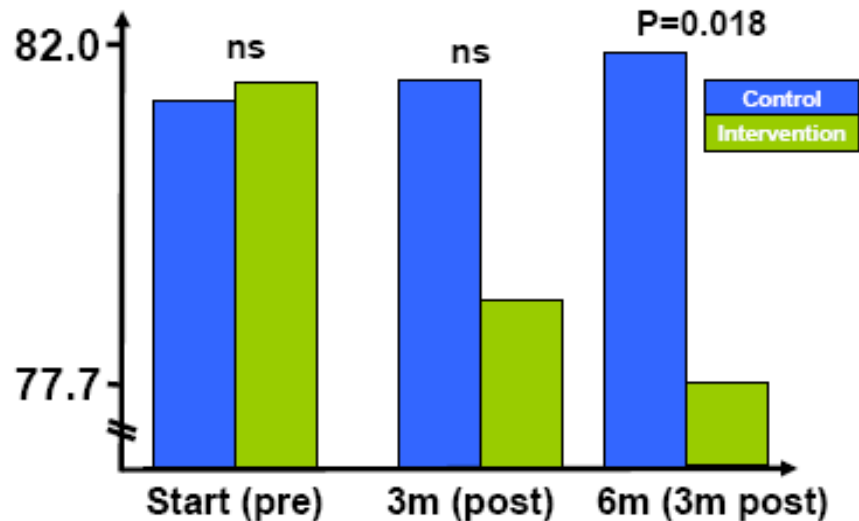
Maria Kolotourou

Dr Margaret Lawson

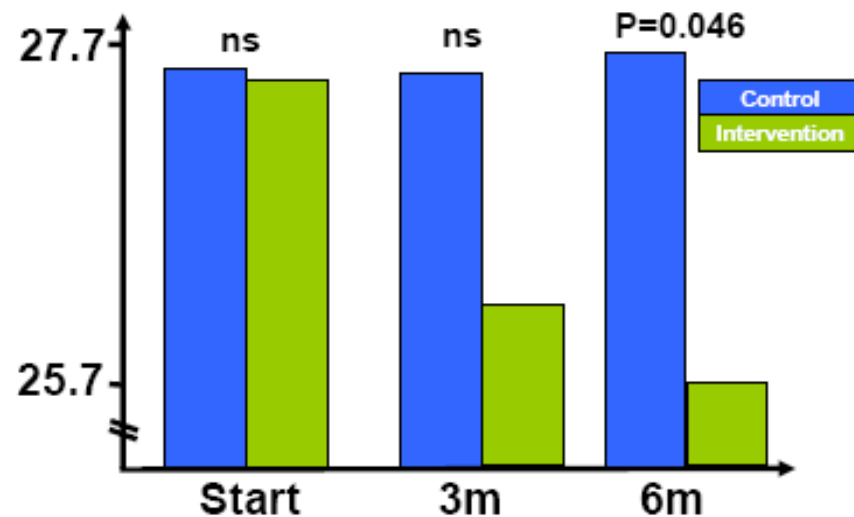
Prof. Alan Lucas

Dr Atul Singhal

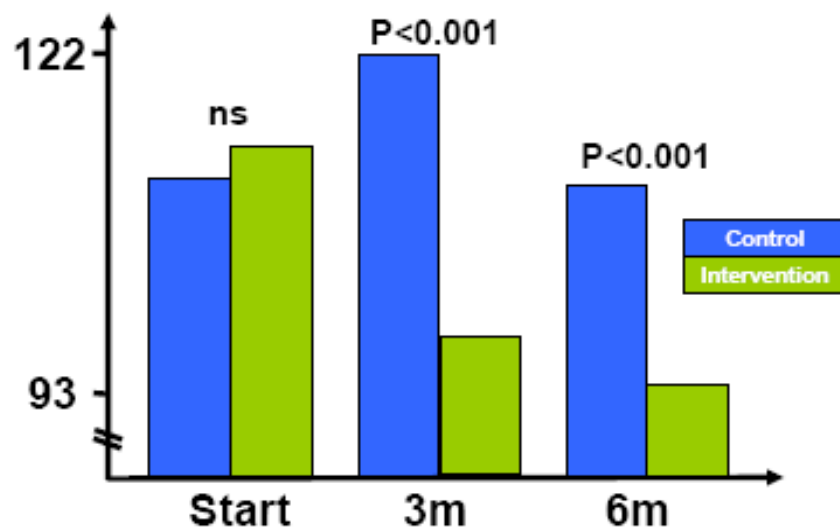
Waist circumference (cm)



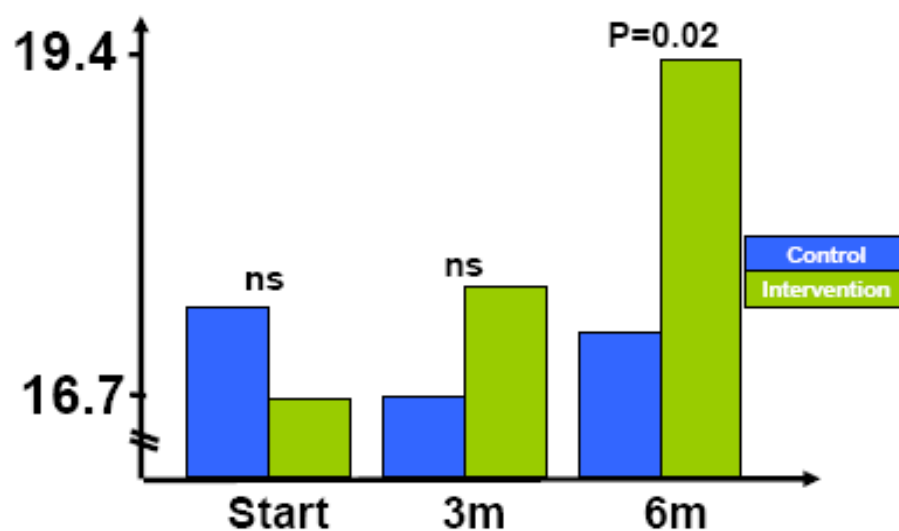
BMI (kg/m²)



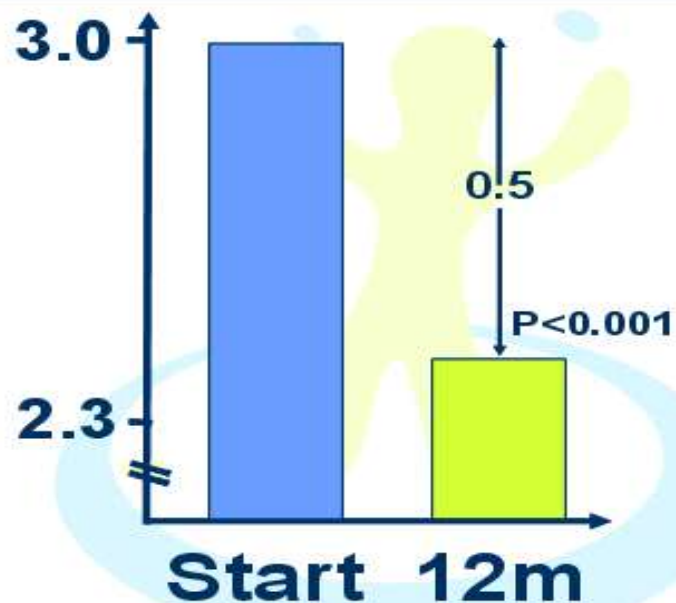
Recovery Heart Rate (bpm)



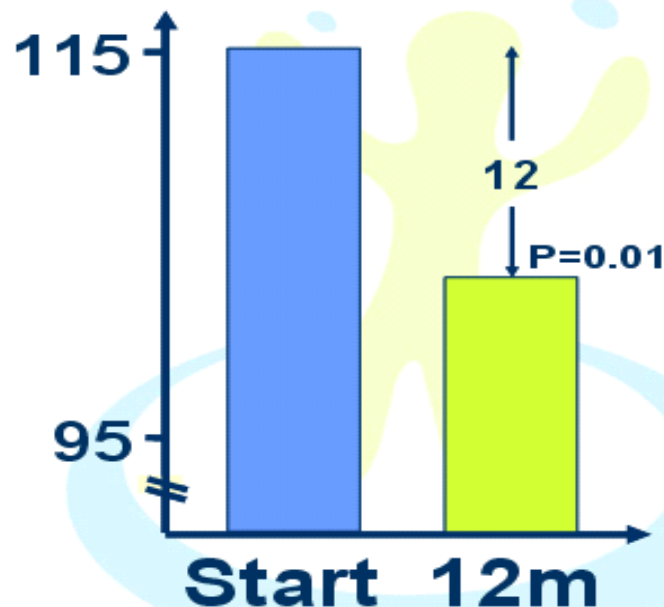
Self-esteem score (out of 24)



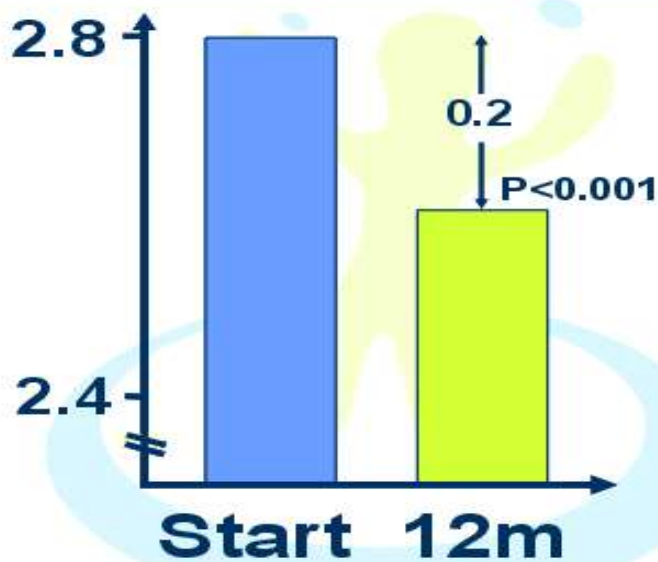
Waist circumference z-score



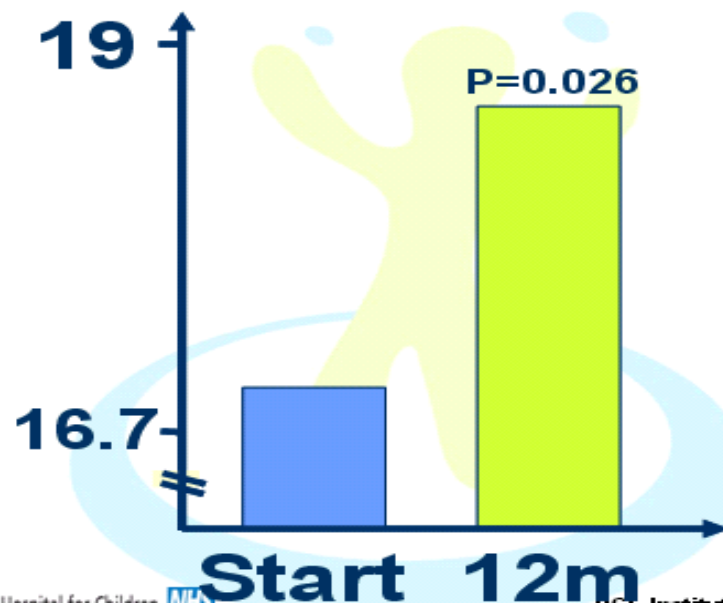
Recovery heart rate (bpm)



BMI z-score



Self-esteem score (out of 24)





Resources for children & families (1)

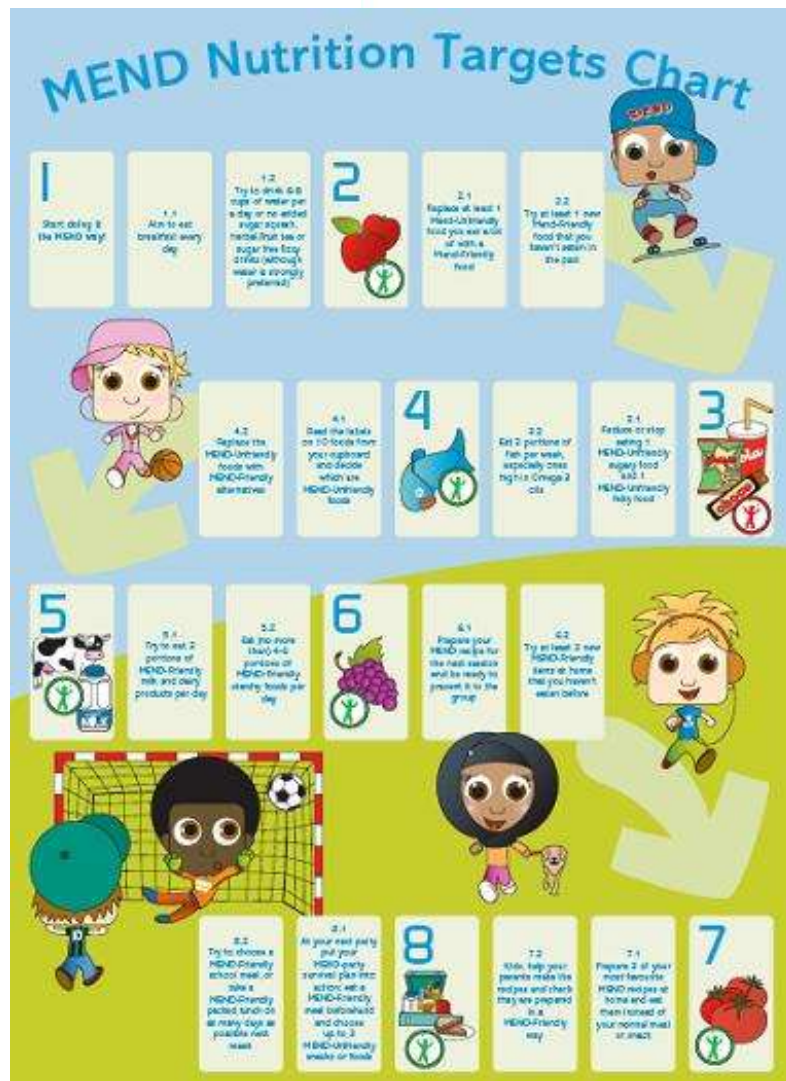


Comprehensive manuals



Examples of posters

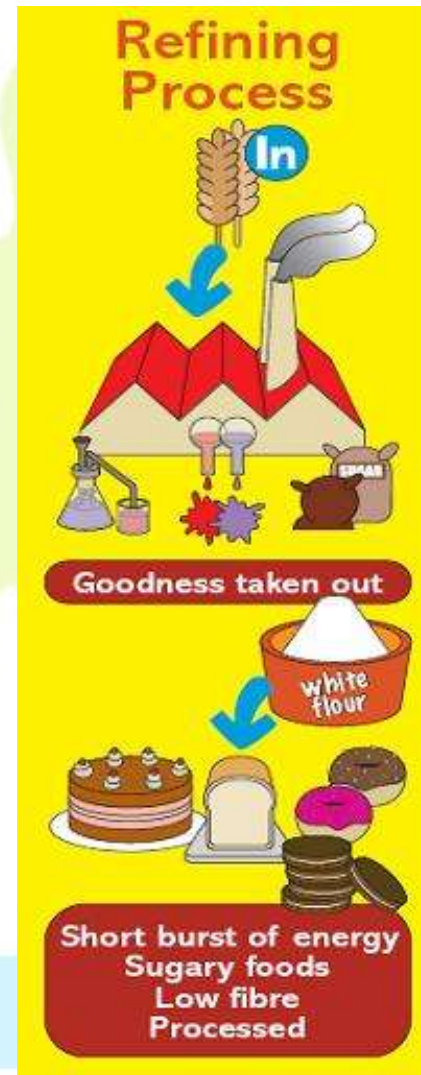
MEND Nutrition Targets Chart



A chart with 14 numbered targets (1-7) and 14 small illustrations of children and food items. Each target includes a specific goal and a small icon representing the goal.

- Start doing 3 the MEND way!
- 1.1 Aim to eat breakfast every day.
- 1.2 Try to drink 6-8 cups of water per a day or no added sugar drinks, homemade tea or sugar free tea or drink (although water is strongly preferred).
- 2.1 Repeat at least 1 MEND-Unfriendly food you eat a lot of with a MEND-Friendly food.
- 2.2 Try to eat 1 new MEND-Friendly food that you haven't eaten in the past.
- 3.1 Replace the MEND-Unfriendly foods with MEND-Friendly alternatives.
- 4.1 Read the labels on 10 foods from your cupboard and decide which are MEND-Unfriendly foods.
- 4.2 Eat 2 portions of fat per week, especially ones high in Omega-3 oils.
- 5.1 Reduce or stop eating 1 MEND-Unfriendly sugary food and 1 MEND-Unfriendly salty food.
- 5.2 Try to eat 2 portions of MEND-Friendly milk and dairy products per day.
- 5.3 Eat 30 more (hard-to-eat) portions of MEND-Friendly healthy snacks per day.
- 6.1 Prepare your MEND meals for the next week and be ready to present it to the group.
- 6.2 Try to eat 2 new MEND-Friendly items that you haven't eaten before.
- 7.1 Try to choose a MEND-Friendly school meal or take a MEND-Friendly packed lunch on at many days as possible this week.
- 7.2 As your next party plan your MEND-party yourself plan the school with a MEND-Friendly meal balanced and choose up to 3 MEND-Unfriendly snacks or treat.
- 8.1 Kids help your parents make the recipes and check they are prepared in a MEND-Friendly way.
- 8.2 Prepare 2 of your most favourite MEND recipes at home and eat them instead of your normal meal or snack.

Refining Process



A diagram showing the refining process of wheat. It starts with a wheat stalk labeled 'In' (with a blue 'In' circle) being processed in a mill. The resulting 'white flour' is shown in a bowl. Below this, various sugary and processed foods are displayed, including a cake, bread, donuts, and cookies. A red box at the bottom contains the text: "Short burst of energy Sugary foods Low fibre Processed".

Unrefined Process



A diagram showing the unrefined process of wheat. It starts with a wheat stalk labeled 'In' (with a blue 'In' circle) being processed in a mill. The resulting 'brown flour' is shown in a bowl. Below this, various whole grain and fiber-rich foods are displayed, including oats, whole grain bread, and crackers. A green box at the bottom contains the text: "Long-lasting energy Fibre, Vitamins Minerals, Wholegrains Unprocessed".

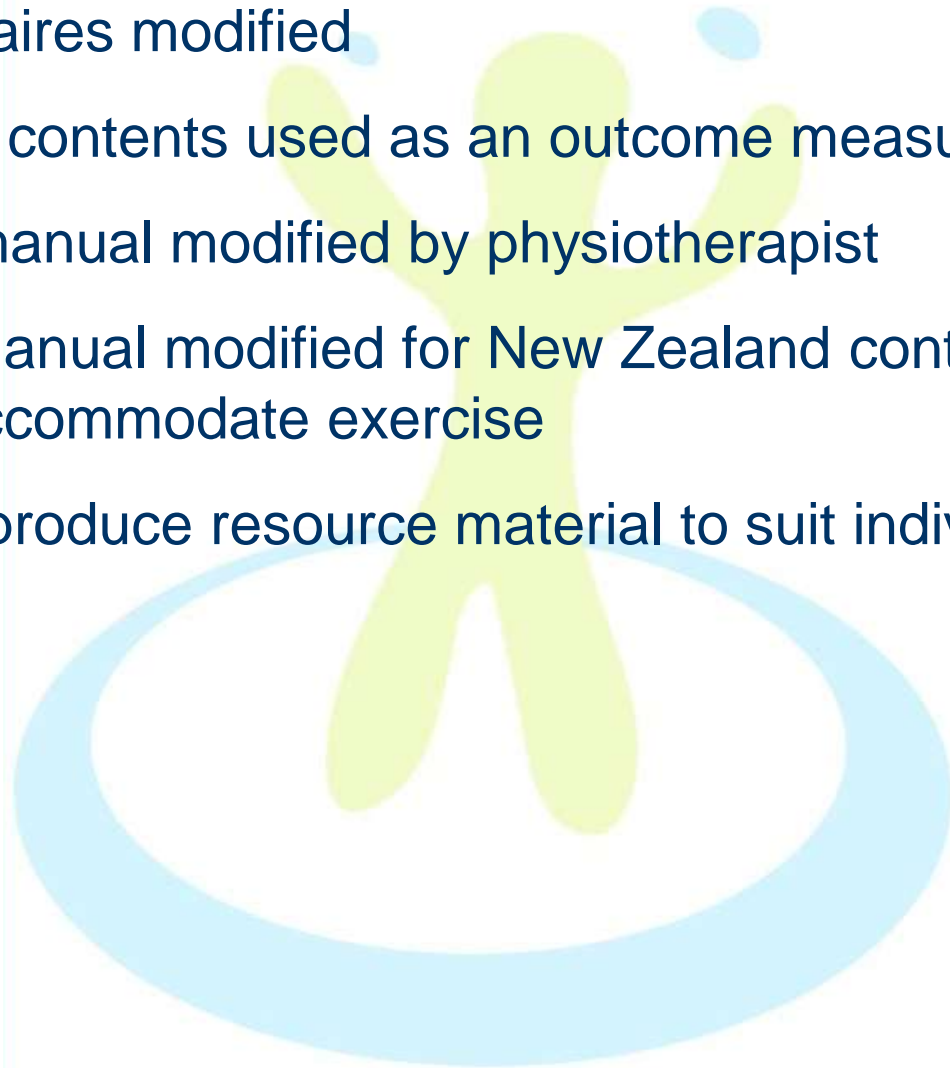


Features of MEND and SEN MEND

MEND	SEN MEND
Students are referred via various agencies and self referred	Students & families selected by school
Venue is based in a community setting – not a school	Venue is a special needs school
Self esteem is a major outcome	Self esteem measure is not used
Step test and heart recovery rate is a major outcome	6 minute walk test is used as an alternative measure
Exercise sessions involve children only	Family exercise sessions are expected
Most mind & nutrition theory sessions are designed for children and adults	Adults only attend mind and nutrition theory
Children are not supported outside the Mend sessions	Students are supported through MEND teachers packs
Children are involved in goal setting for nutrition and exercise	Families goal set on behalf of their children
Children have standard MEND handouts	Individualized educational programmes are developed by teachers

Other Modifications to Programme

- Questionnaires modified
- Lunch box contents used as an outcome measure
- Exercise manual modified by physiotherapist
- Nutrition manual modified for New Zealand context and scaled down to accommodate exercise
- Teachers produce resource material to suit individual students



6 Minute Walk Test



Lunch box contents

Dewy's morningtea



Megan's morning tea & lunch



LAURA



Nayler



Participants



- 20 young people supported by parents/carers / teachers / teacher aides in 2 groups
- Age range: 7.8-20.9 years
- Cognitive age 1.6-6.6 years
- BMI range: 52 – 20.5
- Cultural groups: Maori, Tongan, Samoan, Fijian Indian, Malaysian, NZ European

Disability and Support

Diagnoses: Chromosomal abnormality, genetic conditions. E.g. Tuberose sclerosis, microcephaly, Downs syndrome, Autistic Spectrum Disorder

Giving rise to: Global Developmental Delay, intellectual impairment, challenging behaviour, seizures

Requiring assistance with: Motivation, cognition, behaviour management, physical function

Student Assistance



- 18/20 require 1:1 support with motivation
- 13/20 require 1:1 support with cognition
- 9/20 require 1:1 support with behaviour management
- 5/20 require 1:1 support with physical function
- 6/20 require 1:2 support with motivation or cognition

Positive Indicators

- Inclusion of student
- Teacher involvement – involves IEP, 1:1 support
- MEND provides practical activities to match to curriculum for whole class
- ‘Exercise for everyone’ exercise sessions
- Whole school approach i.e. cookery sessions, healthy breakfasts, school events, health promoting school opportunity
- Positive support from school for students and families
- Forging networks between health and education

Cookery Session

Chicken Casserole



Teacher Evaluation (Video)



Challenges

- Sustaining engagement with Maori & PI families
- Pre – programme consultation with above families / whanau
- Measurements
- Goal setting
- Time constraints of reduced session time
- Parent participation in exercise
- Development of new resources
- Future support



Where to next?



Collaboration with AUT:

- To evaluate project
- To extend pilot to a larger trial across Auckland City





Anecdotal feedback from families

- 'MEND is special needs friendly. Inputs are always welcomed and everyone is encouraged to participate'.
- 'I am so impressed and very pleased with MEND. The teaching around fitness and nutrition is great. I would recommend this programme to anyone. Great for Special Needs children and parents'.
- 'MEND has shown me how easy it is to make changes to one's life style'.

Thank you



www.mendprogramme.org