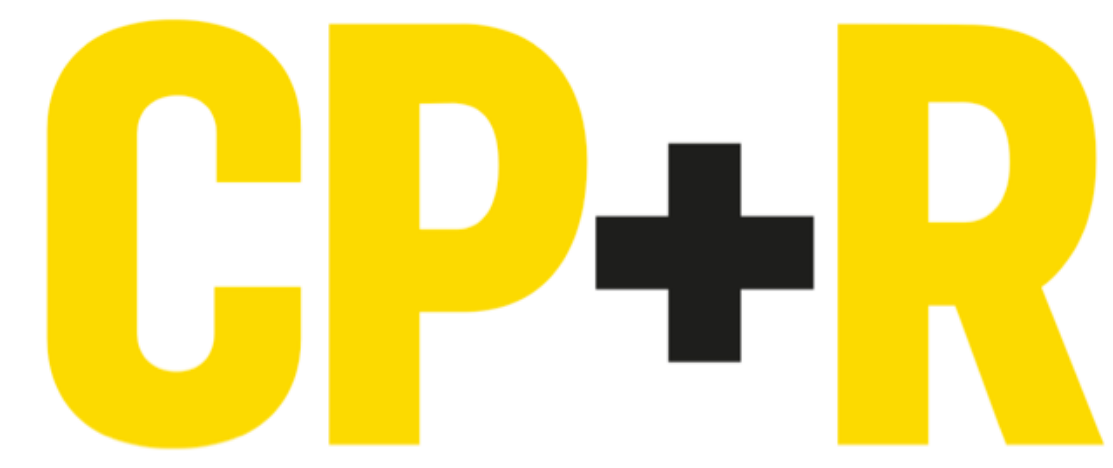


# A NOVEL MODEL OF CLINICAL EXERCISE DELIVERY UNIVERSALLY



## REDUCES CARDIO-METABOLIC RISK FACTORS

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### INTRODUCTION

Public Health England recently highlighted the importance of prevention in cardiovascular disease. Physical activity reduces the risk of cardiovascular disease by 30-35%, despite this there remain very limited avenues for exercise referral within the UK healthcare system. This study sought to determine the effectiveness of a novel clinical exercise referral scheme on a number of cardio-metabolic risk factors.

### METHODS

Participants ( $n=50$ ) were selected based on a Body Mass Index (BMI) status of obese ( $>30\text{kg/m}^2$ ). This is a measure commonly taken in clinical practice and thus could be a practical screening tool for potential intervention triage.



Gender (M/F)	39 Males, 11 Females
Age (years)	56.5 ± 9.5
Body Mass Index	34.4 ± 4.4

#### Initial Assessment

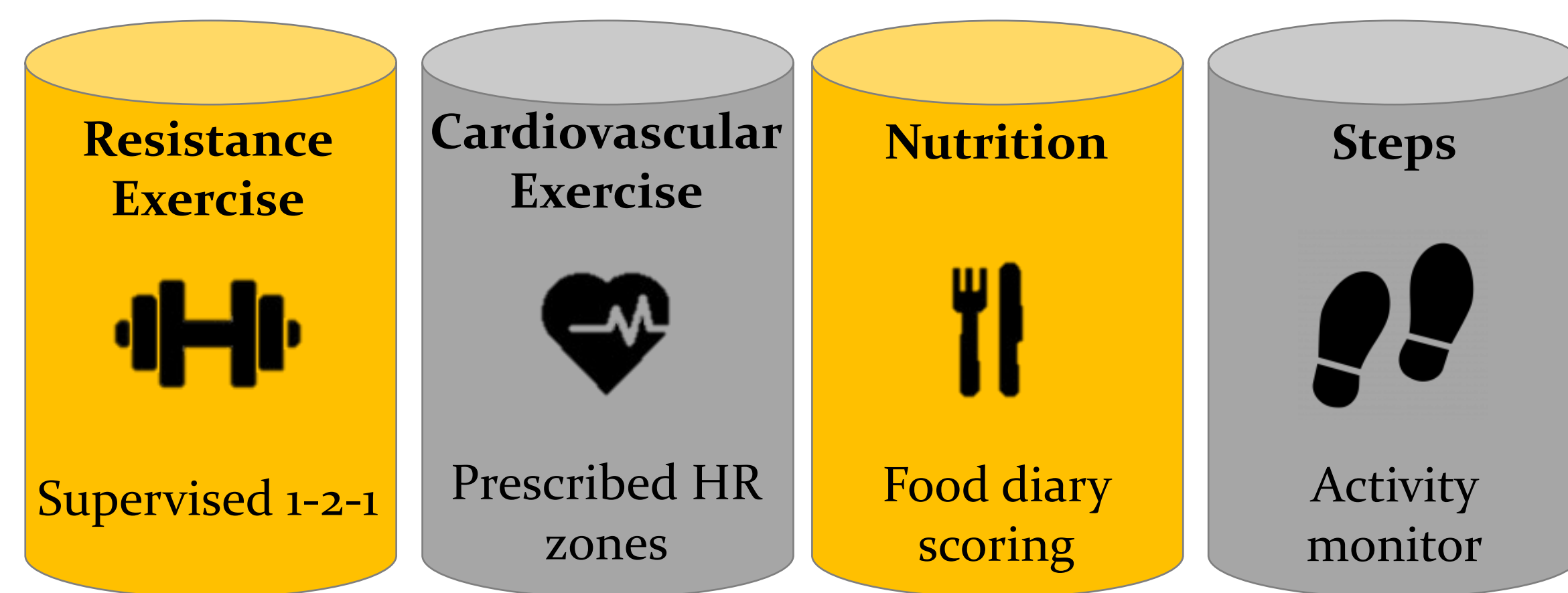
Clinical Nurse  
Clinical Exercise Specialist

- 1 hour baseline assessment:
1. Medical History
  2. Lifestyle Assessment
  3. Physiological Measures: Body Mass Index (BMI), Body Fat Percentage (BF%), Waist Circumference (WC), Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), Blood Cholesterol (BC), Cardiorespiratory Performance ( $\text{VO}_{2\text{peak}}$ ).

#### 12-Week Programme

Clinical Exercise Specialist  
Clinical Nurse

#### Four Pillar Model



#### Reassessment

Clinical Nurse  
Clinical Exercise Specialist

- 1 hour reassessment:
1. Medical History
  2. Lifestyle Assessment
  3. Physiological Measures – as per initial assessment

#### Resistance Exercise (2 x 1 hour per week):

- Comprising warm up, mobility, conditioning, cooldown and stretch.
- Performed in a private clinic setting under the supervision of a Clinical Exercise Specialist and overseen by a Clinical Nurse.

#### Cardiovascular Exercise (2 x 1 hour per week):

- Comprising warm up, conditioning, cooldown and stretch.
- Performed as homework at an intensity prescribed by their Clinical Exercise Specialist using both heart rate and rate of perceived exertion (RPE).

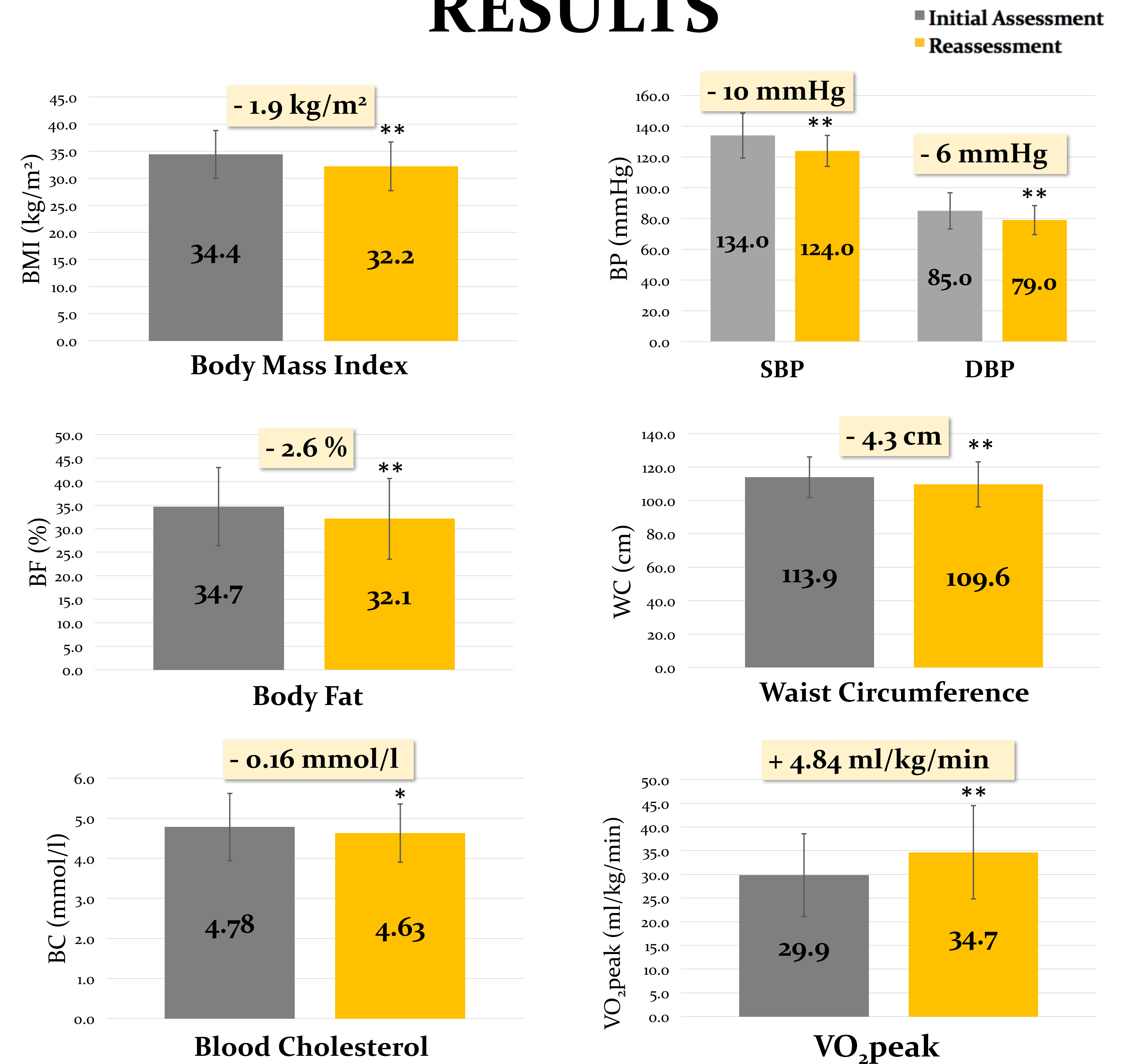
#### Nutrition:

- Participants encouraged to adopt an 80:20 approach, making positive food choices in line with the principles of the Mediterranean diet, at least 80% of the time.
- Monitored using weekly food diaries with a bespoke marking scheme and regular feedback given by Clinical Exercise Specialist.

#### Steps:

- Targeted 10,000 steps per day, monitored remotely by their Clinical Exercise Specialist.

### RESULTS



Student's paired *t* tests were performed to determine any differences pre and post intervention. Statistical significance is reported as \*\* ( $P < 0.005$ ) \* ( $P < 0.05$ ). Graphical representations are presented as mean ± SD.

### CONCLUSION

We believe a 'Four Pillar' model of exercise and nutrition reproducibly ameliorates a number of cardio-metabolic risk factors in clinical populations. BMI is routinely taken in clinical practice and thus could provide a blueprint for an optimal cardio-metabolic care pathway within the modern healthcare system.

### REFERENCES

1. Public Health England. Action on cardiovascular disease: getting serious about prevention. 2016.
2. Department of Health UK. Start Active, Stay Active- A report on physical activity for health from the four home countries' Chief Medical Officers. 2011.

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