REAL-TIME LONGITUDINAL WIRELESS-BASED MONITORING OF PATIENT DIET, EXERCISE AND WEIGHT LOSS; HAS SUBSTANTIAL POSITIVE EFFECTS ON METABOLIC SYNDROME PARAMETERS.

Cardiovascular Diseases

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Introduction

The purpose of this study was to evaluate the efficacy of the real-time adherence monitoring of patient's diet and exercise plan, in targeting metabolic syndrome parameters of Weight/BMI, Blood Pressure (BP), and Total Cholesterol (TC) in overweight/obese (OWO) individuals.

Objectives

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Methods

- 232 OWO (BMI >25)
- 28 Elevated BP (>140/90)
- 12 Elevated TC (>5.5mmol/l)
- Baseline RMR Calculated
- Reduced Calorie Intake (~300-500 kcal below RMR)
- Increased Exercise (10-12.5k daily steps)
- Remote Adherence Monitoring
- Weekly Meetings (face to face or via telephone)

Results

Significant weight loss achieved

Average weight reduction of:

Week 4: 4.71% (+-1%), P value of .01

Week 8: 7.25% (+-1%), P value of .01

Week 12: 8.95% (+-1%), P value of .01

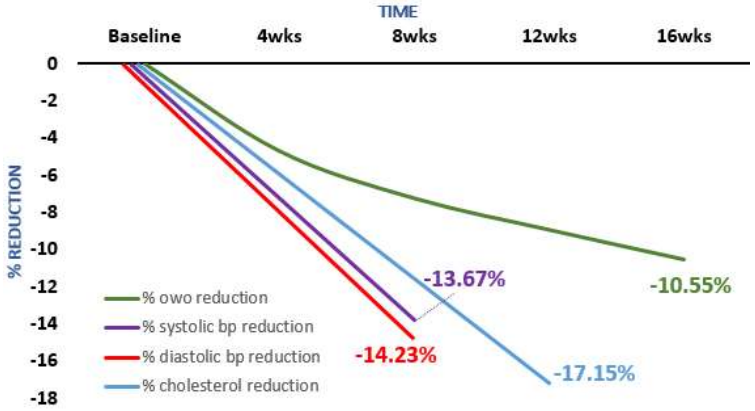
Week 16: 10.55% (+-1%), P value of .01

28 hypertensive subjects

- Avg. systolic bp declined 13.67%
- Avg. diastolic bp declined 14.23%

Raised total cholesterol cohort

- Avg. TC reduced 17.15% (6.5 to 5.38 mmol/l)



Conclusions

Intense lifestyle and behavioural intervention, coupled with real-time remote monitoring of patients diet, exercise and weight has a substantial positive effect on metabolic syndrome parameters and may have a seminal role to play in cardiovascular disease prevention.

Authors

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