Energy intake and expenditure in obese older adults with and without type 2 diabetes
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Disclosure of Interest:

Sports and Nutrition, Amsterdam University of Applied

Results:

samples T-tests.

expenditure (REE) was measured using indirect calorimetry and intake (EI) was measured by 3-day food diary and physical

between 55 and 85 years old and 45% was female. Energy

confirmed by use of diabetes medication. Subjects were

circumference >88 (women) or >102 cm (men). DM2 was

Obesity was defined as BMI > 30.0, or >27.0 with waist

total of 202 obese older adults were included in the analyses.

Methods:

older adults with and without DM2.

However not all obese people develop DM2. We explored

Obesity is a risk factor for type 2 diabetes (DM2),

Nutricia Research, Utrecht, Netherlands

WITH AND WITHOUT TYPE 2 DIABETES

ENERGY INTAKE AND EXPENDITURE IN OBESE OLDER ADULTS

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THE EFFECT OF DIETARY NITRATE SUPPLEMENTATION ON MECHANICAL EFFICIENCY AND CARDIOMETABOLIC RISK PROFILE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Rationale: Many patients with COPD have a decreased mechanical efficiency during exercise and are at increased cardiometabolic risk. Dietary nitrate supplementation may reduce oxygen requirements during submaximal exercise, improve exercise performance and lower blood pressure. This study determines the impact of acute and 7-days dietary nitrate supplementation on mechanical efficiency and cardiometabolic risk profile in patients with COPD.

Methods: In a double-blind, randomized cross-over placebo-controlled trial 18 COPD patients were included with moderate airflow obstruction and exercise impairment, normal BMI (25.9 ± 3.4 kg/m²) but high prevalence of abdominal obesity (77.8%) and moderately decreased mechanical efficiency. Subjects were randomly allocated to the treatment order of 7 days sodium nitrate ingestion (~8 mmol per day) and 7 days placebo (NaCl solution), separated by one week washout. Before (day 1) and after (day 7) both intervention periods mechanical efficiency during submaximal cycle ergometry, plasma nitrate and nitrite levels, cardiac plasma markers (e.g. high-sensitive troponin T (Hs-TNT), NT-proBNP and creatinine kinase (CK)) and blood pressure were measured.

Results: Plasma nitrate and nitrite concentrations increased at day 1 (7-fold and 2-fold, respectively) and day 7 (8-fold and 2-fold, respectively) after sodium nitrate compared with placebo ingestion. Systolic and diastolic blood pressure did not change following nitrate ingestion. Furthermore, no differences were observed in mechanical efficiency during submaximal exercise and no changes were observed in Hs-TNT, CK and NT-proBNP concentrations between the nitrate and placebo treatment.

Conclusion: Acute as well as 7-days of dietary nitrate supplementation does not increase mechanical efficiency or improve cardiometabolic risk profile in mild-to-moderate COPD patients.

Disclosure of Interest: None declared.