A MEDITERRANEAN-STYLE EATING PATTERN WITH LEAN UNPROCESSED RED MEAT HAS CARDIOMETABOLIC BENEFITS

For adults who are overweight/obese in a randomized crossover controlled feeding trial
O'Connor et al. American Journal of Clinical Nutrition, 2017

OBJECTIVE

To assess the effects of consuming a Mediterranean pattern with different amounts of red meat on CMD risk factors.

STUDY DESIGN & SETTING

An investigator-blinded, randomized, crossover, controlled feeding trial. Subjects were provided a Mediterranean Pattern for two 5-week interventions, separated by 4-weeks of self-selected eating. The Mediterranean Patterns contained ~500 g (17.6 oz.) (Med-Red) and ~200 g (7.05 oz.) (Med-Control) of lean unprocessed beef/pork/wk.

PARTICIPANTS

Overweight or obese (BMI: 25-37 kg/m2) adults (30-69 yrs.) were recruited.

Additional inclusion criteria:

- Total cholesterol <120.7 mg/dl
- LDL cholesterol <73.8 mg/dl
- Triglycerides <81.1 mg/dl
- Fasting glucose <109.9 mg/dl
- Systolic blood pressure <160 mm Hg
- Diastolic blood pressure <100 mm Hg
- Body mass <140 kg
- No acute illness
- Non-smoker
- Normal liver and kidney functions
- Non-diabetic
- Weigh stable (±4.5 kg)
- Consistent physical activity levels for 3 months prior to starting the study
- Stable medication use for six months prior to and throughout the study

RESULTS

- Total cholesterol decreased, but greater reductions occurred with Med-Red compared to Med-Control (-7.2 ± 0.1 and -1.8 ± 0 mg/dl, respectively).
- LDL decreased with Med-Red, but was unchanged with Med-Control (-5.4 ± 0.1 and -1.8 ± 0.1 mg/dl, respectively).
- HDL concentrations decreased non-differentially (-1.8 ± 0.0 mg/dl).
- Triglycerides, total cholesterol: HDL, glucose and insulin did not change with either Med-Red or Med-Control.
- All blood pressure parameters improved, except during sleep, independent of red meat intake amount.

CONCLUSIONS

- Adults who are overweight/obese can consume typical U.S. intake quantities of red meat, as lean and unprocessed beef and pork, when adopting a Mediterranean Pattern to improve cardiometabolic disease risk factors.
- Unprocessed and/or lean red meat consumption does not increase the risk of developing cardiovascular disease or impair associated risk factors.