344.5 Effect of weight loss and low intensity exercise training on arterial compliance in obese men

Arterial compliance is associated with an increase in weight loss and low intensity exercise training on arterial compliance in obese men. We studied the effect of weight loss induced by a very low calorie diet (VLCD) with or without low intensity exercise training on arterial compliance in healthy obese men. Thirty-seven obese subjects were randomly assigned to a diet (D) or diet plus exercise group (DE). Both groups received a VLCD during 6 weeks. The DE group participated in a low intensity exercise training program during 5 weeks. Before the intervention and at weeks 3 and 8 after the start of the intervention, cross-sectional compliance (CC) and distensibility index (DI) as well as isometric tension (T) and isometric compliance (IC) of the brachial artery (BA) and the carotid artery (CA) were measured. In both groups body weight, BMI and T were significantly reduced in week 3 and week 8, respectively. The difference in body weight was significant between the groups, with no significant difference between groups. In week 13, 18, and 20, CC and IC of the BA were increased in the DE group (P<0.05) and not in the D group (P>0.05). Compliance and T were significantly lower in the DE group than in the D group (P<0.05). The distensibility index was higher in the DE group than in the D group (P<0.05). These results suggest that a low intensity exercise training program can improve arterial compliance in obese men.

344.6 Modifying effects of dietary fat and fatty acids on markers of inflammation
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It has been shown that obesity, diabetes, and the metabolic syndrome are associated with increased risk of cardiovascular disease. The association between diet and cardiovascular disease is well established. A recent study conducted in men found that the intake of dietary fatty acids is associated with increased risk of cardiovascular disease. In the present study, we aimed to determine the impact of dietary fatty acids on markers of inflammation. The study included 400 men and women aged 40-69 years. Dietary intake was assessed using a validated food frequency questionnaire. Anthropometric and clinical data were collected at baseline and at 4-year follow-up. The primary outcomes were changes in inflammatory markers, including C-reactive protein (CRP), interleukin-6 (IL-6), and tumor necrosis factor-α (TNF-α). The secondary outcomes were changes in adiposity, blood pressure, and glycemic status. The study was divided into 4 groups: high saturated fat (SFA), high monounsaturated fat (MUFA), high polyunsaturated fat (PUFA), and low fat (LF). The results showed that the intake of saturated fats was associated with increased CRP and IL-6 levels, whereas the intake of ω-3 fatty acids was associated with decreased CRP and IL-6 levels. These results suggest that a low fat diet rich in ω-3 fatty acids may have a beneficial effect on markers of inflammation.