Emerging evidence suggests statins, unlike exercise, may cause deleterious effects on skeletal muscle oxidative capacity and insulin sensitivity.

**Purpose:** The purpose of this study was to determine if daily statin therapy altered the ability of exercise to lower fasting plasma insulin and glucose and improve cardiorespiratory fitness.

**Methods:** Fifteen obese, sedentary adults with ≥ 2 MSynd risk factors were recruited and randomized into 1) exercise (Ex; treadmill 45 min ·day⁻¹, 5 day·week⁻¹ at 65% VO₂max) or 2) statin plus exercise (St+Ex; 40 mg·day⁻¹ simvastatin plus exercise) therapies for 12 weeks.

**Results:** Baseline age, body weight, and body mass index (BMI) of St+Ex and Ex were as follows: 41±2.5 and 40±4.7 yr, 98.2±7.0 and 84.7±4.0 kg, 33.6±1.6 and 30.3±1.0 kg·m⁻², respectively. Body weight and BMI were unchanged in response to both therapies. Fasting insulin levels decreased significantly with Ex therapy (10.6±5.0 to 8.8±4.8 uIU·ml⁻¹, p<0.05), while no difference was observed after St+Ex therapy (8.7±3.3 to 9.9±3.9 uIU·ml⁻¹). Fasting blood glucose did not change in response to St+Ex (94.4±3.2 to 90.7±3.9 mg·dL⁻¹) or Ex (83.7±3.6 to 85.5±3.8 mg·dL⁻¹) therapy. Only exercise improved maximal oxygen consumption (fitness) (33.8±2.6 to 36.3±3.4 ml·kg⁻¹·min⁻¹) while no improvements were observed in response to combined St+Ex therapy (25.7±1.4 to 26.0±1.3 ml·kg⁻¹·min⁻¹).

**Conclusion:** Preliminary findings suggest St-therapy may have deleterious effects on the capacity for exercise training to lower fasting insulin and improve cardiorespiratory fitness in obese, sedentary subjects. Further investigation utilizing a larger study population is needed to definitively determine the scope of effects that St-therapy may have on insulin sensitivity and cardiorespiratory fitness.

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