

higher risk of falls and increased wrist fracture risk compared to normal weight peers. Lower physical function is the main driver for the increased risk in obese subjects. Lifetime fractures and fall history are associated with an fracture independently from obesity.

INERTIAL LOAD SPRINT TRAINING IMPROVES NEUROMUSCULAR POWER IN OLDER ADULTS

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PURPOSE: Maximal strength and neuromuscular power decline after the fourth decade of life. The physiological cause of this progression is partly a selective atrophy of Type II or “Fast-twitch” muscle fibers. The aim of this study was to determine the efficacy of a novel, time-efficient form of exercise training involving repeated sprints lasting 4 s on an inertial load cycle ergometer, to promote increased neuromuscular power in males and females aged 50-70y. **METHODS:** Three days a week, forty older adults performed 15, 20, and 30 sprints per day over weeks 1, 2-4 and 5-8 of the study respectively. Rest intervals were progressively reduced from 56s, 41s, and 26s over the same time periods. Subjects began each sprint while stationary and then were instructed to pedal as hard and as fast as possible for 4 s. Maximal power was reached after 1-4 s of sprinting and measured after a familiarization day (PRE), and then post-training (POST). **RESULTS:** The average increase in maximal power was $10.5 \pm 1.4\%$ from PRE to POST (616 ± 41 to 684 ± 48 watts) ($p < 0.01$). **CONCLUSION:** Only ~2 min of cycle sprinting per training session was able to increase maximal neuromuscular power, an important physiological component of tasks of daily living throughout the lifespan.

LIFESTYLE PHYSICAL ACTIVITY IN OLDER WOMEN: ASSOCIATIONS OF CHANGE, SELF-EFFICACY, AND WELL-BEING

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Reduction of cardiovascular disease risk in undeserved populations, such as older women, is a top priority of the U.S. Our innovative trial tested a new approach to PA promotion for older women—motivational interviewing (MI), shifting the paradigm from structured exercise to self-selected activities. We present data comparing stage of change (SOC), self-efficacy for exercise (SEE), and well-being: 8 dimensions (physical, social, role limitations, emotional, general mental health, vitality, health perceptions and pain) and associations with physical activity outcomes in the Lifestyle Physical Activity for Women (LPAW) clinical trial. **Methods:** 106 women, > 60 years old, who did not engage in regular PA, and were not frail, participated in a clinical trial of a tailored MI intervention to increase PA. We report baseline, 3 and 6 month repeated measures and PA associations with SOC, SEE, and well-being (SF36). **Results:** Of 106 women,

36% were Black and 63% White, with a mean age of 69. Significant improvement in SOC in both arms noted but the proportion in action/maintenance was significantly higher in the PA arm at 3 mos (78% vs. 55%, $P=0.045$) and 6 mos (79% vs. 50%, $P=0.019$). A decrease in SEE for control ($p=.001$), but not for PA arm ($p=.45$); at 6 months, The PA arm had greater SEE compared to control. There were significant arm difference for physical component scores of SF36 ($p=.02$), but not for mental scores. Associations with PA will be tabulated. **Conclusions:** Preliminary results support the PA intervention, more data to be presented.

GENDER DIFFERENCES IN THE EFFECT OF DIFFERENT EXERCISE DOSES ON PREVENTING DEPRESSIVE SYMPTOMS IN OLDER ADULTS

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Regular exercise is potentially an effective way to prevent or reduce depressive symptoms for older adults. However, little research has focused on gender differences in exercise dose effects on depressive symptoms in older people. The purpose of this study was to test gender differences in the preventive effects of different exercise doses on depressive symptoms among community-dwelling older adults in Taiwan. This study was a secondary analysis of a longitudinal cohort study in a sample of older Taiwanese adults ($N = 2,673$; mean age 74.2 ± 5.7 years). Four different doses of moderate-intensity exercise were examined including three 15-min sessions/week, three 30-min sessions/week, six 15-min sessions/week, and six 30-min sessions/week. Descriptive statistics and generalized linear mixed models were used to analyze characteristics of the sample and hypotheses testing. All analysis models were adjusted according to age, gender, education, marital status, smoking, social participation, and chronic conditions. The results indicated that regular exercise with at least 15 min per session, 3 times a week of moderate intensity was significantly associated with lower levels of depressive symptoms for women, but there were no significant preventive effects on depressive symptoms for men. This study suggests that moderate-intensity exercise may play a protective role in depression prevention for older women, even with a very low dose (three 15-min sessions/week). Gender differences should be considered for future research and clinical practice when designing exercise interventions on preventing depression for older adults.

THE ROLE OF S100B IN AEROBIC TRAINING EFFICACY IN OLDER ADULTS WITH MILD VASCULAR COGNITIVE IMPAIRMENT

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