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±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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Aerobic training improves cognitive and brain outcomes across different populations and neurocognitive disorders of aging, including mild subcortical ischemic vascular cognitive impairment (SIVCI). However, little is known of the underlying mechanisms through which aerobic training exerts its beneficial effects on the brain. Recently, S100 calcium-binding protein B (S100B) has been proposed as a possible mediator of aerobic training. At low levels, S100B is neurotrophic but at higher levels it is neurotoxic. Elevated levels of S100B have been associated with decreased performance on measures of global cognitive function. Thus, we conducted a secondary analysis of data collected from the proof-of-concept single-blind randomized controlled trial (NCT01027858) in older adults with mild SIVCI to determine whether the beneficial effects of 6-months, thrice weekly, moderate intensity aerobic training on cognitive performance is related to changes in S100B levels. In a subsample of 45 participants, blood samples were collected both before and after trial completion. Global cognitive function was assessed using Mini Mental State Examination (MMSE). At trial completion, aerobic training decreased circulating levels of S100B compared with usual care plus education ($F(1,41) = 6.673$, $p = 0.013$, $\eta p2 = 0.140$; Figure 1). Furthermore, reduced S100B levels were associated with improved global cognitive function in those who received the aerobic exercise intervention (partial $r = -0.519$, $p = 0.023$). Together these findings suggest that S100B is a promising target mediating the beneficial effects of moderate-intensity aerobic training on brain health in older adults with mild SIVCI.

ACTIVITY EFFORT, SELF-MANAGEMENT AND INFLAMMATION IN OLDER MEXICAN AMERICANS WITH OSTEOARTHRITIS

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We extend our ongoing investigations of the health effects of activity effort among Mexican Americans (MA) with mobility limitations, specifically those with osteoarthritis (OA) (Harrison, 2009). Our previous research linked activity effort with co-morbidity and social participation in women with mobility limitations, finding significant variations between Non-Hispanic White and MA with physical disabilities. This bio-behavioral study takes the next step by examining the relationships between inflammatory measures (TNF-alpha & CRP), Mexican American-specific self-management behaviors (MA-SM), and activity effort (AE) in a sample of MA men and women. Over 5 months, 62 men and women, age 40 to 83, provided survey responses, blood, and saliva for analysis. After ensuring reliability of measures, we used Pearson correlations to provide initial associations. Findings indicated a significant negative correlation between AE and TNF-alpha (-.376, 0.005), which linked behaviors to inflammatory response; and between MA-SM and AE (-.254, 0.05), which linked the self-management to the behavior. These findings provide support for the biological impact of perceived activity effort on inflammation, as well as the positive effects that Mexican American specific self-management activities might have on health.

AGE-RELATED FUNCTIONAL RESERVE DECLINE IS NOT SEEN IN PHARYNGEAL SWALLOWING PRESSURES

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Age-related decline in functional reserve has been described in tongue strength: tongue pressure during swallowing does not change with age, but maximal-effort isometric tongue pressure decreases with age. Healthy persons show a slight increase in pharyngeal swallowing pressure with age, but it is unknown if there is a similar decline in functional reserve. Fifty-six healthy adults (n=38 60 years) underwent pharyngeal high-resolution manometry during effortful and normal-effort thin liquid swallows. Repeated measures ANOVAs were performed on maximum pressures, pharyngeal contractile integral (PCI), pharyngeal pressure gradients, and upper esophageal sphincter minimum pressures. We hypothesized that older individuals would generate a less-robust pressure increase with effortful swallowing than younger individuals. Maximum pressures, PCI, and gradients increase during effortful swallowing ($p<0.001$), but there was no interaction effect with age, suggesting a lack of age-related functional reserve decline. Older individuals had greater UES minimum pressures than younger individuals in the effortful swallowing task ($p=0.03$), which may stem from reduced muscular compliance in this area. These findings do not align with those reported in tongue pressures, suggesting that muscle properties and pressure generation may be fundamentally different between the pharynx and the oral tongue. Alternatively, the effortful swallowing task may not elicit maximum contractility of the pharyngeal musculature. The preserved ability to increase pharyngeal pressure during effortful swallowing may support the use of the effortful swallow exercise in older adults with swallowing disorders.

SESSION 925 (POSTER)

SOCIAL NETWORKS AND SUPPORT

CHATTIER WITH FRIENDS: OLDER ADULTS' DAILY SOCIAL CONTACT AND CONVERSATION

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Studies suggest conversation improves cognitive skills among older adults. While contact with family members is common in late life, contact with friends and acquaintances is relatively less frequent. Yet, we know little about how often older adults engage in conversation when they have contact with different social partners. This study used data from the Daily Experiences and Well-being Study to investigate how older adults talk with different social partners on a daily basis. Participants (N = 303) completed an initial interview about their social partners and reported on their