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INFORMATION/ EDUCATION

See *Future Planning After Brain Injury: A Guide for Family Caregivers*, by Hammond, et al on page 1669; and *Physical Activity After Traumatic Brain Injury (TBI)*, by Pinto, et al on page 1673. Information/Education Pages are designed to provide consumer-friendly information on topics relevant to rehabilitation medicine and may be reproduced for noncommercial use for health care professionals. Previously published pages are available at <https://www.archivespmr.org/content/infoeducation>.

Robotic Locomotor Training Leads to Cardiovascular Changes in Individuals With Incomplete Spinal Cord Injury Over a 24-Week Rehabilitation Period: A Randomized Controlled Pilot Study

Evans and colleagues assessed the effect of robotic locomotor training (RLT) or activity-based training (ABT) on cardiovascular indices in sixteen individuals with spinal cord injury and chronic traumatic motor incomplete tetraplegia. No differences between groups or over time were evident in resting systolic and diastolic blood pressure, ankle systolic pressure, ankle brachial pressure index and heart rate variability. Standing heart rate at 24 weeks was significantly higher in the ABT group compared to the RLT group. In the RLT group, no significant changes in heart rate variability were found between the standing and 6-minute walk test physiological perturbations throughout the intervention. Cardiovascular efficiency in the RLT group improved. The authors conclude that both the RLT and ABT interventions were limited in their effect on brachial and ankle blood pressure. Large effect sizes and significant differences between groups found in this pilot study support the clinical effectiveness of RLT and ABT for changing cardiovascular indices over a 24-week period. ■ SEE THE FULL ARTICLE AT PAGE 1447

Effectiveness of Continuous Chest Wall Vibration With Concurrent Aerobic Training on Dyspnea and Functional Exercise Capacity in Patients With Chronic Obstructive Pulmonary Disease: A Randomized Controlled Trial

Pancera and colleagues investigated the effects of continuous chest wall vibration (CCWV) with concurrent aerobic training in addition to a 4-week pulmonary rehabilitation program on dyspnea and functional exercise capacity in patients with chronic obstructive pulmonary disease (COPD). Forty patients participated in either intervention, sham intervention, or control groups. The intervention group performed the aerobic training with the addition of CCWV applied during cycling, whereas the sham intervention group received CCWV as a placebo during cycling. There were no significant differences between groups for 6-min walk distance (6MWD) and Barthel index based on dyspnea. However, the increase in 6MWD was a clinically important difference in the intervention group, with a moderate effect size. The authors conclude that CCWV with concurrent aerobic training in addition to a standard pulmonary rehabilitation program might improve functional exercise capacity compared with usual care, but there were no effects on dyspnea, respiratory muscle function or quality of life in patients with COPD. ■ SEE THE FULL ARTICLE AT PAGE 1457

Treatment of Breast Cancer-Related Lymphedema Using Negative Pressure Massage: A Pilot Randomized Controlled Trial

Lampinen and colleagues evaluated the efficacy of negative pressure massage treatment (NPMT) compared to manual lymphatic drainage (MLD) in women with chronic breast cancer-related lymphedema (LE). Twenty-eight women took part in either an intervention group that received NPMT or a control group that received MLD; both received twelve 60-minute sessions over 4-6 weeks. Compared to the MLD group, the NPMT group demonstrated greater improvement with large effect sizes in L-Dex scores and interlimb volume differences. Differences in DASH scores were not statistically significant. The authors conclude that compared to MLD, treatment with NPMT resulted in greater improvement in L-Dex scores and interlimb volume differences in women with unilateral upper limb LE of >1-year duration. Future studies should use additional outcome measures to provide information on changes in tissue induration (e.g. tonometry, pitting) and composition (MRI, DXA) as well as changes in volume. ■ SEE THE FULL ARTICLE AT PAGE 1465

Race/Ethnic and Stroke Subtype Differences in Poststroke Functional Recovery After Acute Rehabilitation

Simmonds and colleagues worked to determine whether racial/ethnic disparities in the recovery of post-stroke function varied by stroke subtype. They also examined confounding factors associated with these racial/ethnic disparities. The records of 1,066 patients were examined. Compared to white patients, black and Hispanic patients had significantly lower FIM scores at 3 and 12 months. A significant 3-way interaction (race/ethnic*subtype*time) indicated that disparities varied by stroke subtype. Additionally, at 12 months, the magnitude of black-white disparities was over three times larger for hemorrhagic stroke compared to ischemic stroke. Age primarily influenced black-white disparities, but factors that influenced Hispanic-white disparities were not identified. The authors conclude that there are significant differences between stroke subtypes in the timing and magnitude of black-white disparities in post-stroke function. Overall, Hispanic patients had the lowest levels of post-stroke function, and more work is needed to identify significant factors that influence Hispanic-white disparities. ■ SEE THE FULL ARTICLE AT PAGE 1473