



# Archives of Physical Medicine and Rehabilitation

Editors' Selections From This Issue: Volume 101 / Number 7 / July 2020

## TOP PAPERS IN THE ARCHIVES

For the most-cited and downloaded articles published in the *Archives of Physical Medicine and Rehabilitation* during the past two years go to <http://ACRM.org/toppapers>.

## REHABCAST

The audio hub for rehabilitation medicine produced by the *Archives of Physical Medicine and Rehabilitation*, the field's top journal. Hosted by Dr. Ford Vox, each episode features in-depth interviews with scientists publishing in the journal and news briefs relevant to all rehabilitation clinicians. Our growing collection of podcasts, is available at [http://www.archives-pmr.org/content/podcast\\_collection](http://www.archives-pmr.org/content/podcast_collection).

## INFORMATION/ EDUCATION

See *Practical Sleep Information for People with Multiple Sclerosis*, by Siengskun, et al on page 1271. 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.archives-pmr.org/content/infoeducation>.

## MEASUREMENT TOOL

See *Measurement Characteristics and Clinical Utility of the Participation with Recombined Tools-Objective Measure in a Traumatic Brain Injury Population*, by Schwertfeger, et al on page 1269. Measurement Tools, from the Rehabilitation Measures Database, are designed to facilitate the selection of outcome measures by clinicians. Previously published Tools are available at <https://www.archives-pmr.org/content/measurementtools>.

## ACRM MEMBERSHIP

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## ACRM 2020

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## Effects of Whole-Body Vibration Training on the Physical Function of the Frail Elderly: An Open, Randomized Control Trial

Wadsworth and colleagues investigated the feasibility and benefits of Whole-Body Vibration (WBV) exercise for countering sarcopenia and age-related declines in mobility and function in the frail elderly. Older adults (N=117) participated in 1 of 3 groups: Control (CON), Simulated-WBV (SIM) or WBV-exercise (WBV). All participants received regular care, and WBV- and SIM- participants also underwent thrice-weekly exercise sessions for 16 weeks. WBV training began with 5 × 1-min bouts at 6 Hz/2 mm, progressing to 10 × 1-min at up-to 26 Hz/4 mm, maintaining knee-flexion. Training for SIM participants mimicked WBV-exercise stance and duration. In comparison to baseline-levels, WBV-training elicited clinically important treatment effects in all parameters compared to SIM and CON groups. Treatment-effects remained apparent up to 12 months post-intervention. Functional test performance declined during- and post-intervention in non-WBV groups. The authors conclude that 16 weeks of low-level WBV-exercise provides easily accessible, adequate stimulus for the frail elderly to attain improved levels of physical functionality. ■ SEE THE FULL ARTICLE AT PAGE 1111

## Bilateral Arm Training vs Unilateral Arm Training for Severely Affected Stroke Patients: Exploratory Single-Blinded Randomized Controlled Trial

Renner and colleagues compared the effects of unilateral and bilateral arm training on arm impairment in severely affected stroke patients. Sixty-nine first time subacute patients with stroke and a non-functional hand participated in repetitive bilateral arm training on an "arm-cycle" followed by synchronized bilateral repetitive distal hand training, or an identical unilateral arm training performed by the paretic limb only. Both unilateral and bilateral trainings were administered twice daily over 6 weeks. All patients improved their Fugl-Meyer Arm Scores and most biomechanical parameters after intervention. However, the post-hoc analysis stratifying patients according to lesion location showed that patients with pure subcortical stroke, but not patients with cortical involvement of stroke, showed a significantly greater improvement following the bilateral training in FMA compared to unilateral training. The authors conclude that the benefit of bilateral arm training followed by repetitive bilateral hand training for motor control of the severely paretic upper limb may depend on lesion location. ■ SEE THE FULL ARTICLE AT PAGE 1120

## An Innovative STRoke Interactive Virtual thErapy (STRIVE) Online Platform for Community-Dwelling Stroke Survivors: A Randomized Controlled Trial

Johnson and colleagues investigated the STRoke Interactive Virtual thErapy (STRIVE) intervention on upper-extremity clinical outcomes in community-dwelling stroke survivors. Sixty people participated in either 8 weeks of virtual therapy (VT) or a control group who received usual care. The participants in the VT group attended exercise training twice weekly, on non-consecutive days, for 8 weeks, with each session lasting approximately 45 minutes. The intervention was delivered via Jintronix Rehabilitation, which uses a Microsoft Xbox Kinect camera to detect limb movements, and a standard laptop connected to a television to display the exercises. Exercise adherence was excellent, and no adverse events were reported. Significant between group differences for the Fugl-Meyer Upper Extremity scale were seen at the end of the intervention. No significant differences were observed with the Action Research Arm Test. The authors conclude that delivery of this VT-based exercise is feasible, safe, and effective. ■ SEE THE FULL ARTICLE AT PAGE 1131

## Risk Factors for Suicide in a National Sample of Veterans With Multiple Sclerosis

Kellerman and colleagues examined risk factors in the year prior to suicide in a national sample of veterans with multiple sclerosis (MS) as well as means of suicide and receipt of mental health services prior to death. Participants were veterans with MS who died by suicide (N=71) and randomly selected non-suicide MS controls who were alive at the time of the index suicide (N=355). Mental health disorders and medical comorbidities were identified in the year prior to death for suicides and during the identical time period for controls. Results from the adjusted multi-variable model suggest the following factors were associated with an increased risk for suicide: male gender, depression, and alcohol use disorder. One half (50.7%) had a mental health appointment in the year before suicide. Primary means of suicide was by firearm. The authors conclude that routine assessment of suicide risk in individuals with MS is warranted, particularly for those with recent history of depression or alcohol use disorder. ■ SEE THE FULL ARTICLE AT PAGE 1138