

Archives of Physical Medicine and Rehabilitation

Editors' Selections From This Issue: Volume 103 / Number 11

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See *DIY Postoperative T-Shirts for Arm or Shoulder Injuries*, by Johnston-Brooks, et al on page 2273. 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>.

Randomization to Treadmill Training Improves Physical and Metabolic Health in Association With Declines in Oxidative Stress in Stroke

Serra and colleagues investigated the effect of aerobic exercise vs. control on inflammatory and oxidative stress biomarkers in stroke survivors. Participants completed six months of 2x/wk stretching/balance (control; n=19) or 3x/wk aerobic treadmill rehabilitation (n=20). Physical function and metabolic health parameters tended to improve following treadmill rehabilitation, but not in the control condition. Six months of treadmill rehabilitation was associated with increased functional capacity and reduced oxidative stress in chronic stroke survivors. The authors conclude that results support incorporation of aerobic exercise training into the rehabilitation of stroke survivors into the chronic phase of recovery, particularly in individuals at elevated functional and metabolic risk. They also identified several potentially modifiable markers of inflammation and oxidative stress, which may serve as biomarkers of physical and metabolic recovery post-stroke. ■ SEE THE FULL ARTICLE AT PAGE 2077

Effect of Perineural Dextrose Injection on Ulnar Neuropathy at the Elbow: A Randomized, Controlled, Double-Blind Study

Mansiz-Kaplan and colleagues compared perineural 5% dextrose injection in the treatment of ulnar neuropathy at the elbow (N=20) with a control condition that received normal saline injections (n=20). Ultrasound-guided perineural injection of 1 cc each was administered into the ulnar nerve, 2 cm and 4 cm distal to the medial epicondyle, at the level of the medial epicondyle, and 2 cm and 4 cm proximal to the medial epicondyle. The total fluid injection was 5 cc. The improvements in pain, disability, ulnar motor nerve velocity and cross-sectional area in the dextrose group were superior to those in the control group, especially at weeks 4 and 12. Other positive aspects of the dextrose injection included the absence of side effects, repeatability, and low cost. The authors conclude that perineural 5% dextrose injection may be an effective therapy for those with ulnar neuropathy at the elbow for up to the 12th week. ■ SEE THE FULL ARTICLE AT PAGE 2085

The First FDA Approved Early Feasibility Study of a Novel Percutaneous Bone Anchored Prosthesis for Transfemoral Amputees: A Prospective 1-year Follow-up Cohort Study

Sinclair and colleagues evaluated the safety and efficacy of a novel press-fit bone-anchored prosthesis in an FDA-approved study. Ten male Veterans with unilateral transfemoral amputation received a novel press-fit Percutaneous Osseointegrated Prosthesis and a minimum of 10 days supervised rehabilitation therapy. Eight of 10 participants completed all study procedures. One implant loosened at 5 weeks, requiring removal. A second was removed following periprosthetic fracture from a non-device related fall at 28-weeks. One patient required oral antibiotics for a superficial infection. There were significant increases in bone density in the lumbar spine and adjacent to the distal porous coating with no radiographic evidence of bone resorption. Compared to a socket system, use of a Percutaneous Osseointegrated Prosthesis was associated with significantly reduced prosthetic don and doff times and patient-reported prosthetic problem scores. Significant improvements in mean mobility, global health, and walking test scores were also observed. The authors conclude that improvements in bone density, function, and patient reported outcomes were observed with the Percutaneous Osseointegrated Prosthesis compared to a socket suspension system. ■ SEE THE FULL ARTICLE AT PAGE 2092

Anxiety Trajectories the First 10 Years After a Traumatic Brain Injury (TBI): A TBI Model Systems Study

Neumann and colleagues studied anxiety trajectories and predictors up to 10 years after traumatic brain injury (TBI) in 2,836 people. Linear mixed models showed that higher Generalized Anxiety Disorder (GAD)-7 scores were associated with Black race, public insurance, pre-injury mental health treatment, 2 additional TBIs with loss of consciousness, violent injury, and more years post-TBI. A latent class mixed model identified three anxiety trajectories: low-stable (n=2,195), high-increasing (n=289), and high-decreasing (n=352). The high-increasing and high-decreasing groups had mild or greater GAD-7 scores up to 10 years. A substantial minority of participants had anxiety symptoms that either increased or decreased over 10 years, but never decreased below mild severity. The authors conclude that awareness of risk factors may lead to identifying and proactively referring susceptible individuals to mental health services. ■ SEE THE FULL ARTICLE AT PAGE 2105