

Rehabilitation Topics for Systematic Review

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Amputees

- (1). How does immediate post op fitting of lower limb prosthetics with removable dressing, compared to prosthetics with non-weight bearing dressings, effect hospital discharge, wound healing, independent ambulation (time to ambulation, use of assistive devices, distances ambulated), pain, and psychosocial distress in traumatic lower limb amputees?
- (2). Does amputation in patients with severe lower extremity trauma influence pain, mobility or body image compared to limb salvage?
- (3). Do specialized pain management interventions (e.g. epidural anesthesia) in the pre-amputation or peri-amputation period influence the long term incidence of phantom limb pain compared to usual treatment?
- (4). Do the cosmetic characteristics of prosthetic replacement in child upper extremity amputees influence social acceptance by peers or family members?
- (5). Does limb reattachment surgery in traumatic upper extremity amputees influence pain, body image and functional utility of the upper extremity compared to amputation and prosthetic fitting?

Brain Trauma

- (6). Do psychopharmacologic agents, compared to placebo or no therapy, improve alertness, behavior, cognitive function, and motor recovery in patients with severe traumatic brain injury?
- (7). What measures of functional outcome are best suited to examine natural history of recovery and treatment interventions in adult patients with TBI?
- (8). Are interventions designed to reduce or prevent resumption of alcohol and substance abuse following TBI effective?
- (9). What is the cost benefit ratio of traumatic brain injury day treatment programs?
- (10). Does drug treatment improve depression in adults following TBI?

- (11). Does general physical condition (aerobic capacity) predict return to work in traumatic brain injury patients aged 18 to 65?
- (12). Will a 12-week general conditioning and strength training program for patients with TBI result in return to work earlier than usual care?
- (13). Does a TBI increase the risk of Alzheimer's dementia?
- (14). Can functional radiologic imaging track and/or prognosticate a patient's emergence from coma?
- (15). What patient characteristics predict improvement in neuropsychological functioning for post-acute patients with TBI after cognitive rehabilitation compared with traditional treatment or no treatment?
- (16). Does pharmacologic treatment of attention impairments (during the acute period of rehabilitation and during the post-acute period of rehabilitation) after TBI improve neuropsychological functioning and decrease length of stay compared with non-pharmacologic rehabilitation treatment or no treatment?
- (17). Does pharmacologic treatment of memory after TBI improve neuropsychological functioning / independence / social participation / vocational outcome compared with usual treatment or no treatment?
- (18). Is the return to work rate and work retention rate substantially better for a patient with TBI treated in a transdisciplinary outpatient day treatment program compared to traditional 3x/week OT, PT, & SLP?
- (19). Does intensity of acute (first week) rehabilitation interventions (PT, OT, SLP) impact acute LOS, rehab LOS, functional outcome at D/C, CIQ at D/C and 3 months, and costs after moderate and severe TBI?
- (20). Does intensity of rehabilitation interventions (PT, OT, SLP, Psychology, Nursing, Social Work) impact rehab LOS, functional outcome (FIM) at D/C and 12 months, CIQ at D/C and 12 months, employability at 1 year and costs after moderate and severe TBI?
- (21). Does rehab setting (inpatient, nursing home, non-nursing home sub-acute) impact rehab LOS, functional outcome at D/C and 12 months, CIQ at D/C and 12 months, employability at 1 year and charges/costs after moderate and severe TBI?
- (22). Does intensity of rehab services after hospital D/C impact 6 month and 1 year function, employability, re-hospitalization rate, and charges/costs after moderate and severe TBI?
- (23). Does an outpatient rehab program impact 1, 3, 6, and 12 month neuromedical complications after mild TBI?

(24). Are there age-specific differences in outcome after moderate and severe TBI, with specific emphasis on a comparison of major groupings of patient populations (0-5, 6-16, 16-34, 35-55, >55)?

(25). Does therapy focused on evaluation of driving skills and treatment for patients with mild to moderate TBI increase the likelihood of a safe return to driving in terms of an objective measure of driving skills or driving record over time?

(26). Is nerontin effective in decreasing neuropathic pain and post-traumatic headaches in patients with TBI, compared to no medication?

(27). Do rehab therapies (speech, OT) increase patient awareness and decrease visual neglect in patients with moderate to severe TBI and left visual field deficits?

(28). Is etidronate effective for the treatment of heterotopic ossification due to traumatic brain injury?

(29). What is the frequency of endocrine abnormalities as the result of traumatic brain injuries? What are the common features that would allow clinicians to better predict this set of diagnoses?

(30). Are antiseizure medications (depakote, tegretol, neurontin, etc.) helpful for controlling agitation?

(31). Do interventions focused on enhancing the link between trauma centers and school districts, compared to standard practice, effect school reintegration in terms of academic performance and behavior for school age children who suffered mild to moderate TBI?

(32). Do additional monitoring devices or therapies focused on reducing the incidence of secondary injury, (compared to standard patient transport practice), affect the number of hypotensive or hypoxic events resulting in brain insult before arrival at a trauma center and the correlating long term functional status among patients with TBI who are transported to hospitals?

(33). Does passive range of motion exercise alone prevent the development of contractures in patients with spasticity (ie. upper motor neuron syndrome) after central nervous system injury?

(34). Is peer support for persons with TBI effective in improving functional outcome?

(35). In patients with SCI or TBI, does neuroprotective pharmacologic intervention improve functional outcomes, or reduce the severity of impairment?

Other

(36). Is the use of botulinum toxin A injections into spastic muscles, during the first week post injury, helpful for maintaining shoulder and elbow range?

(37). Does treatment of criminal activity such as counseling, jail, and vocational rehabilitation, compared to standard medical treatment, affect continued violence or legal problems, employment, and satisfaction with life for perpetrators who become disabled from trauma?

(38). Does the timing of alcohol rehabilitation intervention (early rehab in the ER, before hospital discharge, during inpatient rehabilitation, and outpatient) effect abstinence, future injuries, and social dysfunction in trauma victims who have evidence of alcohol abuse, compared to no intervention?

(39). Does at home respite care for families of severely disabled trauma victims, compared to no respite care, effect nursing home placement, family burnout, patient health and quality of life?

Outcome Assessment

(40). Are objective prediction assessment questionnaires effective in predicting back pain disability in workers with low back pain, as compared to routine physician care and assessment?

(41). Are standardized functional capacity evaluations such as, (Matheson, Blankenship, the ERGOS, Mayer's assessment for his functional restoration program, the functional assessment used by Bigos et al in their prospective Boeing plant study) effective in predicting return to work and function in workers with musculoskeletal disabilities, compared to patient outcome assessment questionnaires or no intervention?

(42). Do multi-trauma patients who return to work after 6-12 months differ from patients who do not return to work in quality of life and pain scores?

(43). Do brief depression screening questionnaires have acceptable sensitivities and specificities for individuals with SCI and TBI, compared to standardized psychiatric instruments such as the Diagnostic Interview Schedule?

(44). Is length of disability for severely injured hospitalized patients shorter for those who receive early psychiatric consultation versus those who do not?

Plexus & Nerve Injuries

(45). Does neurosurgical intervention after traumatic brachial plexus injury influence body image, social role functioning or functional status compared to usual treatments?

(46). Is Electromyography effective at predicting 1 and 2 year neurological function in patients with plexus and nerve injuries?

Spinal Cord Injury

(47). Do strengthening exercises, biofeedback, and facilitation methods, compared to standard care, improve motor recovery in acute SCI patients with any degree of weakness as measured by ASIA motor scores and the FIM function measure?

(48). Does strengthening of respiratory muscles in acute or chronic SCI patients with reduced vital capacity, compared to standard care, effect PFT parameters including vital capacity, rate of complications, and rate of ventilator weaning for vent-dependent patients?

(49). Do treatments to reduce atelectasis and pneumonia in SCI patients with acute tetraplegia or high paraplegia, such as suctioning, bronchoscopy, IPPB, insufflation/exsufflation affect the rate of atelectasis and pneumonia, and the number of complications associated with treatments compared to standard care?

(50). Do alternate ventilator weaning strategies, including progressive ventilator-free breathing time and Conventional IMV effect time to complete weaning, as measured by percentage of patients who wean, complications including atelectasis, and pneumonia in acute SCI patients with acute tetraplegia and complete or partial ventilator dependence?

(51). What is the effect of pre-surgical hydrotherapy and/or debridement vs debridement at the time of surgery on the surgical outcomes of pressure ulcer treatment in persons with longstanding spinal cord injury?

(52). What is the effect of mechanical insufflator/exsufflator use on pulmonary morbidity and mortality as compared to routine treatment in persons with acute or chronic spinal cord injury?

(53). Is there a difference in outcomes (pain, sensation, strength) between surgical and conservative management of carpal tunnel syndrome in persons with longstanding spinal cord injury?

(54). Does combination drug therapy using an anticonvulsant and an antidepressant for SCI patients with neuropathic pain reduce pain intensity, increase FIM & Chart scores and reduce interference with ADLs compared to usual treatment?

(55). Do newer antidepressants specifically SSRIs for SCI patients with depression exacerbate spasms, spasticity, and increase hyperreflexia compared to TCAs and placebo?

(56). Does oxandrolone for patients with high level SCIs reduce muscle wasting, increase functional outcomes, and affect LOS compared to placebo?

- (57). Can oxandrolone be used safely in females with SCI and muscle wasting without causing significant side effects?
- (58). Do hydrophilic catheters for SCI patients with recurrent UTIs reduce severity and frequency of UTIs compared to standard catheters?
- (59). Do persons with SCI have more frequent re-hospitalizations with shorter initial rehabilitation adjusted for case-mix than those with longer initial rehabilitation?
- (60). Does early pharmacologic treatment for neuropathic pain in SCI patients, reduce or prevent neuropathic pain, improve functional outcomes, and quality of life when compared to symptomatic treatment following the onset of pain?
- (61). Following SCI, does treatment with systemic opioid analgesics reduce or eliminate neuropathic pain, improve functional outcomes, and enhance return to community activities when compared to antidepressants (or anticonvulsants, nonopioid analgesics)?
- (62). Following SCI, does interdisciplinary pain treatment reduce neuropathic pain, improve functional outcomes, and quality of life when compared to usual pharmacologic treatment?
- (63). Does a structured educational program and follow-up reduce the incidence of recurrence following initial pressure ulcer in SCI patients when compared to usual treatment?
- (64). Does influenza vaccination (pneumococcal vaccination) reduce respiratory morbidity and mortality for SCI patients?
- (65). In patients with a spinal cord injury, does a respiratory prophylaxis program (e.g., assisted cough, respiratory muscle exercises) administered at regular intervals reduce morbidity and mortality, improve respiratory function, and enhance quality of life as compared to usual treatment?
- (66). Does blood alcohol level at time of spinal cord injury correlate with recovery of neurologic function, progress in the rehabilitation program, and functional independence?
- (67). Does routine screening and pharmacologic treatment for depression in SCI patients, reduce depression and suicide attempts, improve function and productivity, and enhance satisfaction with life when compared to usual treatment?
- (68). Does the implementation of clinical practice guidelines in SCI (e.g., Consortium for Spinal Cord Medicine Clinical Practice Guidelines) reduce related secondary impairments, enhance function and community participation when compared to usual care?

(69). Are SCI-specific pressure ulcer risk assessment measures in patients with new and long term SCI, compared to standard non-SCI specific assessments, effective in predicting earlier and with more accuracy who is at risk for pressure ulcers following SCI?

(70). What is the effect of electrical stimulation of pressure ulcers to promote wound healing when compared to routine treatment in persons with spinal cord injury?

(71). For treatment of stage III and/or IV pressure ulcers in SCI patients, does myocutaneous flap surgery result in decreased inpatient and outpatient utilization and costs, more rapid return to sitting on intact skin, and more rapid return to community activities when compared to medical (nonsurgical) treatment?