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## Neurorehabilitation and Neuropsychiatry

### Current Awareness Bulletin July 2024



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### Guidance

#### **Natalizumab for the treatment of adults with highly active relapsing–remitting multiple sclerosis**

NICE Technology appraisal guidance (TA127)

#### **Alemtuzumab for treating highly active relapsing–remitting multiple sclerosis**

NICE Technology appraisal guidance (TA312)

#### **Cladribine for treating relapsing–remitting multiple sclerosis**

NICE Technology appraisal guidance (TA616)

Updated guidance.

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### Recently Published Research

#### **Brain Injuries**

##### **Mental and Physical Health Comorbidities in Traumatic Brain Injury: A Non-TBI Controls Comparison**

*Archives of Physical Medicine and Rehabilitation, July 2024*

*Access with your OpenAthens account*

In this Australian cohort study with 559 participants, TBI was associated with greater mental, but not physical, health comorbidities in the decades after injury.

##### **Outcomes of Six Specific Types of Post-Hospital Brain Injury Rehabilitation Programs**

*Journal of Head Trauma Rehabilitation, June 2024* *Access with your OpenAthens account*

Evaluates outcomes for 2120 participants of intensive posthospital brain injury rehabilitation programs compared to supported living programs; explores variations in outcome by diagnostic category (traumatic brain injury, stroke, and other acquired brain injury [ABI]) and specific program type.

##### **Assessing cognitive communication skills for returning to work following acquired brain injury: a systematic scoping review**

*Disability and Rehabilitation, June 2024* *Request a copy from the [library](#)*

Assessment of cognitive communication skills for returning to work following ABI requires an individualised and contextualised approach. This study highlights a gap between key clinical models and measures reported in the current literature.

### **Cardiorespiratory fitness assessment and training in the early sub-acute phase of recovery following traumatic brain injury: a systematic review**

*Brain Injury, June 2024* [Access with your OpenAthens account](#)

There is no evidence to suggest that CRF assessment and training is unsafe in the early sub-acute phase of recovery following moderate-to-extremely severe TBI. However, despite the low AE and symptom exacerbation rates identified, a timeframe for safe commencement was unable to be established.

### **Genetic Variants and Persistent Impairment Following Mild Traumatic Brain Injury: A Systematic Review**

*Journal of Head Trauma Rehabilitation, June 2024* [Access with your OpenAthens account](#)

Assesses primary research publications on known genetic variants, which modify the risk for symptoms or dysfunction persisting 30 days or more following mild traumatic brain injury.

### **Impact of Early Personal Resources on Long-Term Psychosocial Outcomes After Moderate-to-Severe Traumatic Brain Injury: A Systematic Review**

*Journal of Head Trauma Rehabilitation, May 2024* [Access with your OpenAthens account](#)

Self-reported preinjury or early personal resources, including productive coping, higher self-esteem and resilience, and lower neuroticism, were associated with better psychosocial outcomes. Evidence examining the stability of personal resources over time was generally mixed, with personality changes more evident from informant ratings than self-ratings.

### **Meta-analysis of Cognitive Rehabilitation Interventions in Veterans and Service Members With Traumatic Brain Injuries**

*Journal of Head Trauma Rehabilitation, 2024 39(4): 258-272*

[Access with your OpenAthens account](#)

There is evidence of cognitive improvement in V/SMs with TBI histories after participation in cognitive rehabilitation. Clinician-administered interventions focusing on teaching strategies may yield the greatest cognitive improvement in this population.

### **The reliability and validity of brief cognitive screening tools used in traumatic brain injury: A systematic review**

*Neuropsychological Rehabilitation, June 2024* [Open access](#)

The MoCA and the MMSE were the most widely validated cognitive screening tools for use in TBI. The MoCA had the most promising evidence of its psychometric properties.

### **Thriving in the wake of a storm: A systematic qualitative review & meta-synthesis on facilitating post-traumatic growth in patients living with Acquired Brain Injury**

*Neuropsychological Rehabilitation, June 2024* [Open access](#)

Identifies the main factors contributing to post-traumatic growth following acquired brain injury, and what potential barriers to its development are perceived by ABI survivors.

## **Multiple Sclerosis**

### **Postural behaviour in people with multiple sclerosis: A complexity paradox**

*Gait & Posture, March 2024* [Open access](#)

Increasing the complexity of postural tasks reduces the complexity of postural behaviour in pwMS. This paradox may reflect reduced adaptability of the sensorimotor integration processes at early stages of MS. Complexity index can provide a different perspective on balance deficits and could potentially be a more sensitive biomarker of MS progression and an early indicator of balance deficit.

## **Couples' experiences of coping with Multiple Sclerosis: a qualitative systematic review and metasynthesis**

*Disability and Rehabilitation*, June 2024 *Open access*

Communication attunement was perceived as key for couples to maintain cohesion in the relationship. Framing MS as a shared challenge helps couples to co-ordinate their coping response, engage in collaborative disease management and rehabilitation, and jointly undertake lifestyle adaptations.

## **Effectiveness of repeated injections of botulinum toxin A on gait and fatigue in adults with spastic paraparesis secondary to multiple sclerosis**

*Neurorehabilitation*, 2024 54(4):663-675 *Request a copy from the [library](#)*

A real-world, multicenter, prospective, open-label low-intervention trial including 84 patients assessed the response to abobotulinumtoxinA in improving walking ability and fatigue in patients with spastic paraparesis caused by MS.

## **ALERT study: Attitudes, Lived Experience and Treatment in MS bladder and bowel**

*British Journal of Neuroscience Nursing*, April 2024 *Free Access*

Looks at real-world lived experience of neurogenic bladder and bowel among people with multiple sclerosis.

## **Determinants and Biomarkers of Progression Independent of Relapses in Multiple Sclerosis**

*Annals of Neurology*, April 2024 *Open access*

Provides an overview of the state of the art of neuropathological, immunological, and imaging knowledge about the mechanisms underlying the smouldering disease activity, focusing on possible early biomarkers and their translation into clinical practice.

## ***Prolonged Disorder of Consciousness***

### **Prognosis and enhancement of recovery in disorders of consciousness**

*Neurorehabilitation*, 2024 54(1):43-59 *Open access*

Provides an overview of the current clinical landscape surrounding prognosis and optimizing recovery in disorders of consciousness and the current and future research that could improve prognostic accuracy after severe brain injury.

## ***Stroke***

### **Neurostimulation for treatment of post-stroke impairments**

*Nature Reviews Neurology*, April 2024 *Request a copy from the [library](#)*

A review of neurostimulation techniques that are now in clinical use or that have reached the stage of pivotal trials and show considerable promise for the treatment of post-stroke impairments.

### **Adapting the stroke therapy outcome measure for use by Multidisciplinary Teams: considering reliability**

*Disability and Rehabilitation*, May 2024 *Open access*

The MDT Stroke TOM Scale was developed by combining and rewording four profession-specific adapted TOM scales following iterative trials and discussions leading to an agreed version. This study found that it is psychometrically robust and should assist with improving team work in the rehabilitation of stroke patients and their carers.

### **Machine learning applied to gait analysis data in cerebral palsy and stroke: A systematic review**

*Gait & Posture, April 2024 [Request a copy from the library](#)*

The literature offers numerous machine learning methods for clustering gait data from cerebral palsy and stroke patients. However, the clinical significance of the proposed methods is still lacking, limiting their translation to real-world applications.

### **A systematic review of vestibular stimulation in post-stroke visual neglect**

*Neuropsychological Rehabilitation, June 2024 [Open access](#)*

Reviews the effects of vestibular stimulation on outcomes of neglect and activities of daily living (ADL) for people with visual neglect.

### **Remotely Assessing Motor Function and Activity of the Upper Extremity After Stroke: A Systematic Review of Validity and Clinical Utility of Tele-Assessments**

*Clinical Rehabilitation, June 2024 [Open access](#)*

None of the 11 tele-assessments included currently meets the criteria of clinical utility to be recommended for clinical practice without restriction.

### **The effectiveness of early interventions for post-stroke spasticity: a systematic review**

*Disability and Rehabilitation, June 2024 [Request a copy from the library](#)*

Provides evidence for early applied (<3 months) BoNT to effectively reduce spasticity and probable effectiveness of electrical stimulation. Establishing effects of interventions in the acute/hospitalization phase (<7 days) needs further work.

### **Does SLT combined with NIBS enhance naming recovery in post-stroke aphasia? A meta-analysis and systematic review**

*Neurorehabilitation, 2024 54(4):663-675 [Open access](#)*

This study suggested that non-invasive brain stimulation combined with speech and language therapy can effectively promote the recovery of naming function in patients with post-stroke aphasia (PSA) and that the effects are long lasting.

### **Noninvasive cerebellar stimulation and behavioral interventions: A crucial synergy for post-stroke motor rehabilitation**

*Neurorehabilitation, 2024 54(4):663-675 [Request a copy from the library](#)*

Noninvasive cerebellar stimulation enhances recovery of upper extremity impairments, balance and walking after stroke. Physiologically-informed synergies between NiCBS and behavioral interventions have the potential to enhance recovery.

## **Other Neurological Diseases and Disorders**

### **Delphi Analysis: Anatomy and Botulinum Neurotoxin Type-A (BoNT-A) Injection Training for Spasticity and Dystonia**

*Parkinsonism & Related Disorders, May 2024 [Request a copy from the library](#)*

This research provides expert consensus on best practices for anatomy teaching and training on ultrasound-guided BoNT-A injection for specialists who treat patients with spasticity and dystonia.

### **Acceptance and Commitment Therapy plus usual care for improving quality of life in people with motor neuron disease (COMMEND): a multicentre, parallel, randomised controlled trial in the UK**

*The Lancet, May 2024 [Open access](#) **CNTW Input***

Evaluates the effectiveness of ACT plus usual care, compared with usual care alone, for improving quality of life in people with motor neuron disease.

## *Neurorehabilitation*

### **Sexual dysfunction and commonly used drugs in neurology**

*Practical Neurology, May 2024* [Access with your OpenAthens account](#)

Focuses on medications commonly prescribed to neurological patients that may contribute to altered sexual function, and discusses how they may differ in men and women.

### **Hypersexuality in neurological disorders: A systematic review**

*BMJ Mental Health, May 2024* [Open access](#)

A systematic review to identify studies that reported hypersexuality in neurological disorders. Hypersexuality was defined as a condition characterized by excessive and persistent preoccupation with sexual thoughts, urges, and behaviors that cause significant distress or impairment in personal, social, or occupational functioning.

### **The confidence and competence of speech language pathologists in augmentative and alternative communication: a scoping review**

*Augmentative and Alternative Communication, April 2024* [Open access](#)

Overall, confidence and competence levels varied based on the specific clinical task and etiology of the client in addition to being influenced by prior training, clinician age, workplace and AAC caseload.

### **A targeted review of prosodic production in agrammatic aphasia**

*Neuropsychological Rehabilitation, June 2024* [Open access](#)

Examines the evidence regarding the capacity of speakers with agrammatic aphasia to produce prosody. Findings indicate that even speakers with severe aphasia show a degree of preserved prosody in functional communication.

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## **CNTW Journal Collection Contents Pages**

*Click on the titles below to view the contents of the most recent journal issues. Full text of articles should be available with an OpenAthens password unless a delay is indicated.*

**Archives of Physical Medicine & Rehabilitation**

**Augmentative & Alternative Communication**

**Brain Injury**

**British Journal of Neuroscience Nursing**

**Clinical Rehabilitation**

**Disability & Rehabilitation**

**International Journal of Therapy and Rehabilitation**

**Journal of Head Trauma Rehabilitation**

**Movement Disorders**

**Neuropsychological Rehabilitation**

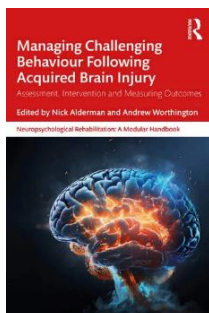
**Neurorehabilitation**

**Neurorehabilitation and Neural Repair**

**Topics in Stroke Rehabilitation**

*If an article you would like to read is not available online please order a copy from the library using [online request form](#) (access from Trust intranet only).*

## New Books added to CNTW Libraries



### **Managing challenging behaviour following acquired brain injury: assessment, intervention and measuring outcomes**

Takes a holistic case formulation approach, incorporating functional assessment procedures arising from the operant learning tradition that underpins the design of treatment interventions. Provides a single resource to enable practitioners to implement evidence-based methods to better manage ABI behaviour disorders. The chapters provide a step-by-step approach to assessment, formulation, intervention and evaluation of behaviour support plans, and feature examples for specific challenging behaviours in a variety of different contexts.



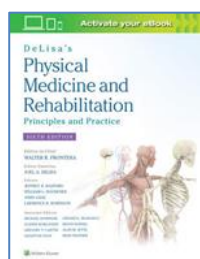
### **Stroke care: a practical manual**

Looks into a holistic approach to the care of patients with transient ischaemic attacks (TIA) and stroke. It acknowledges stroke as a major health concern across the world that is common but complicated to manage. The book elaborates on the skills needed to address the issues around a stroke patient's journey from diagnosis and life at home. Practice recommendations involve evidence supporting prevention, acute care, rehabilitation, and long-term care in line with the changes in the field of stroke medicine and the latest clinical trials.



### **Stroke medicine (2<sup>nd</sup> ed)**

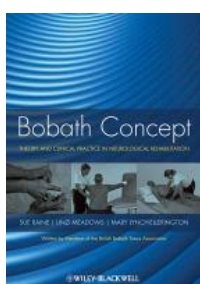
This handbook provides rapid access to up-to-date, practical information on how to look after stroke patients. It covers diagnosis and investigation of the stroke patient, as well as treatment ranging from primary and secondary prevention to acute care and rehabilitation. It also covers rarer causes of stroke and the increasingly important area of vascular cognitive impairment. It supports the syllabus of the UK stroke specialist training programme and other similar programmes worldwide. Part of the Oxford Specialist Handbooks series, available in print and electronically via OpenAthens account.



### **DeLisa's physical medicine and rehabilitation: principles and practice**

Presents both the scientific fundamentals and the latest clinical treatments and rehabilitation techniques for a broad array of conditions, disabilities, and diseases. Now in a one volume and four-colour format, for more precise, accurate, and easier reading.

Focuses on current evidence and therapies, and includes the most recent changes and updates in the field.



### **Bobath concept: theory and clinical practice in neurological rehabilitation** **Now available as an e-book.**

A practical, illustrated guide that offers a detailed exploration of the theoretical underpinning and clinical interventions of the Bobath Concept. Presents a holistic, 24-hour approach to functional recovery. Focuses on efficient movement and motor learning, to maximise function. Reading online includes the ability to make notes, search within the text, and save and print sections. Available via OpenAthens account. [Register](#) using CNTW details.