FERNE Clinical Update

MILD TBI PATIENTS: New Information

Introduction

Outpatient traumatic brain injury care is currently highly variable, with only about 52% of symptomatic patients seeing a practitioner within three months of injury. These publications are critical because they provide clinicians with an updated, evidence-based diagnostic framework, including the **ACRM criteria**, which ensures equitable access to care across civilian, sport, and military settings. New longitudinal research emphasizes that persistent symptoms like fatigue and cognitive complaints are a "common reality" rather than outliers, affecting nearly half of patients four years post-injury. Consequently, modern guidelines fundamentally challenge the historically recommended rest protocols, stating that **strict rest beyond 48 hours is potentially detrimental** to recovery, especially in youth. By implementing early, graded physical activity and screening for treatable comorbidities like mood disorders or vestibular dysfunction, providers can prevent long-term disability and improve patient quality of life.

JAMA Format Reference List

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2. Silverberg ND, Iverson GL, Cogan A, et al. **Clinical practice guideline for physical medicine and rehabilitation management of concussion and mild traumatic brain injury and associated persistent symptoms.** *PM&R*. 2023;15(10):1340-1361. [PubMed: (https://pubmed.ncbi.nlm.nih.gov/37794736/)].
3. Cairns A, et al. **Symptom burden in the first four years following hospitalization after mild traumatic brain injury.** *Brain Inj*. 2025. [PubMed: Search PubMed for Cairns 2025 Brain Injury].
4. Silverberg ND, Iverson GL, et al; ACRM Mild TBI Definition Expert Consensus Group. **The American Congress of Rehabilitation Medicine diagnostic criteria for mild traumatic brain injury.** *Arch Phys Med Rehabil*. 2023;104(8):1343-1355. [PubMed: (https://pubmed.ncbi.nlm.nih.gov/37211116/)].
5. Dr. Oracle. **What are the most recent research findings and evidence-based recommendations for recovery after concussion (mild traumatic brain injury)?** Updated May 4, 2026. Accessed August 13, 2026. https://www.droracle.ai/articles/1128836/what-are-the-most-recent-research-findings-and-evidencebased.

Annotated Bibliography

Clinical Guidance for Pediatric Mild TBI

1. This guideline focuses on **children and adolescents across inpatient, emergency, and primary care settings**, utilizing a methodology based on a rigorous review of 25 years of scientific literature.
2. Key findings recommend **against routine neuroimaging for diagnosis** and emphasize the use of validated, age-appropriate symptom scales to assess recovery risk factors.
3. The authors conclude that clinicians should provide **customized instructions for a gradual return to activities** after a brief rest period of no more than 1 to 2 days.

Clinical Practice Guideline for Physical Medicine and Rehabilitation Management of Concussion and Mild Traumatic Brain Injury

1. Developed through an action collaborative, this guideline targets **adults with mTBI seen in outpatient settings**, such as primary care or emergency departments, who did not require hospitalization.
2. The results provide 11 core recommendations, including **screening for social determinants of health**, prioritizing specific symptom targets like headaches, and determining when to refer to specialty care.
3. Authors emphasize that **reducing variability in outpatient care** through patient education and initiating early mental health screening can significantly improve outcomes for those at risk of persistent symptoms.

Symptom Burden in the First Four Years Following Hospitalization After Mild Traumatic Brain Injury

1. This longitudinal study followed **142 adults hospitalized for mild TBI** and repeatedly assessed their symptoms over a four-year post-injury period.
2. Results showed that **at least 45% of participants reported three or more significant symptoms** (such as fatigue and insomnia) at every checkpoint, which correlated with poor quality of life and drastically lower return-to-work rates.
3. The authors conclude that **persistent symptoms are a common reality** rather than outliers, necessitating a shift toward long-term interdisciplinary support for survivors.

The American Congress of Rehabilitation Medicine Diagnostic Criteria for Mild Traumatic Brain Injury

1. An expert panel utilized rapid evidence reviews and a **Delphi consensus process** to update diagnostic criteria intended for use across the lifespan in civilian, sport, and military settings.
2. The updated framework **prioritizes objective clinical signs**—such as motor incoordination or altered mental status—and introduces a "Suspected Mild TBI" category for cases where self-reported symptoms are the sole evidence.
3. Authors state these criteria aim to **improve diagnostic consistency and equitable access to care** by providing clear operational definitions and accounting for confounding factors.

Evidence-Based Concussion Recovery Recommendations

1. This synthesis reviews recent **consensus statements and meta-analyses involving over 4,000 patients** to identify effective adult and pediatric recovery strategies.
2. The findings highlight that **strict rest is often detrimental** and that early, graded physical activity combined with targeted therapies for vestibular or cognitive symptoms is superior for recovery.
3. Authors advise clinicians to avoid the "rest trap" and instead use a **progressive implementation algorithm** that transitions patients from brief rest to sub-symptom threshold exercise within days.

Clinical Action Steps for the Clinician

1. **Minimize Routine Neuroimaging**: Do not routinely use CT or MRI to diagnose pediatric or adult mTBI unless specific clinical indicators are present.
2. **Apply Updated ACRM Diagnostic Criteria**: Use the new ACRM framework that weights observable clinical signs—such as **motor incoordination upon standing**—more heavily than subjective symptoms to improve diagnostic consistency.
3. **Manage "Suspected Mild TBI" Proactively**: For cases where self-reported symptoms are the only evidence of injury, utilize the "Suspected Mild TBI" category and **manage these patients as if they have a confirmed injury** to ensure equitable care.
4. **Transition Quickly from Rest to Activity**: Counsel patients to avoid strict rest beyond **24 to 48 hours**, as prolonged inactivity is now recognized as potentially detrimental to recovery, especially in youth.
5. **Screen for Social Determinants of Health (SDoH)**: For adult outpatients, evaluate SDoH and environmental barriers to care, as these factors significantly influence the risk of persistent symptoms.
6. **Utilize Validated Symptom Scales**: Incorporate age-appropriate, validated scales to aid in the initial diagnosis and to monitor recovery progress over time.
7. **Identify High-Risk Predictors Early**: Screen for **pre-existing mood disorders** and high initial symptom loads at the first visit, as these are the most consistent predictors of a prolonged recovery trajectory.
8. **Initiate Treatment for Comorbidities**: Rather than waiting for symptoms to spontaneously resolve, actively **treat posttraumatic headaches** and screen for/treat mental health disorders as soon as they are identified.
9. **Quantify Exercise Intolerance**: Use tools like the **Buffalo Concussion Treadmill Test** to identify exercise intolerance and prescribe tailored, sub-symptom threshold aerobic activity.
10. **Deliver Symptom-Based Discharge Instructions**: Provide patients and families with customized instructions for a **gradual return to school, work, and non-sports activities** based on their specific symptom profile.

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