

Post-Concussion: Recovery Recommendations

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Critical appraisal of a topic examining concussion recovery options.

Background

About 3 million concussion cases are reported in the U.S. annually.¹ Concussions can be difficult to diagnose and manage, and are a growing public health concern. Common post-concussion symptoms include: headaches, dizziness, nausea, cognitive impairment, visual impairment, vestibular impairment, academic problems, psychosocial problems, and recovery times can range from days to months. There is a significant impact on daily functioning.

Oregon State Senate Bill 1547 was recently denied. Bill 1547 included OT on a list of healthcare professions eligible to release individuals for return to school and/or return to play. As experts in activities of daily living and occupational functioning, it is important for OT practitioners to be competent in treating individuals following a mild traumatic brain injury (mTBI)/concussion.

This CAT was developed in conjunction with an evidence-based practice course. It is not designed to represent a systematic review or claim definitive expertise on this topic. It is intended to stimulate discussion and our intention is that this critical appraisal may be refuted or revised at any time.

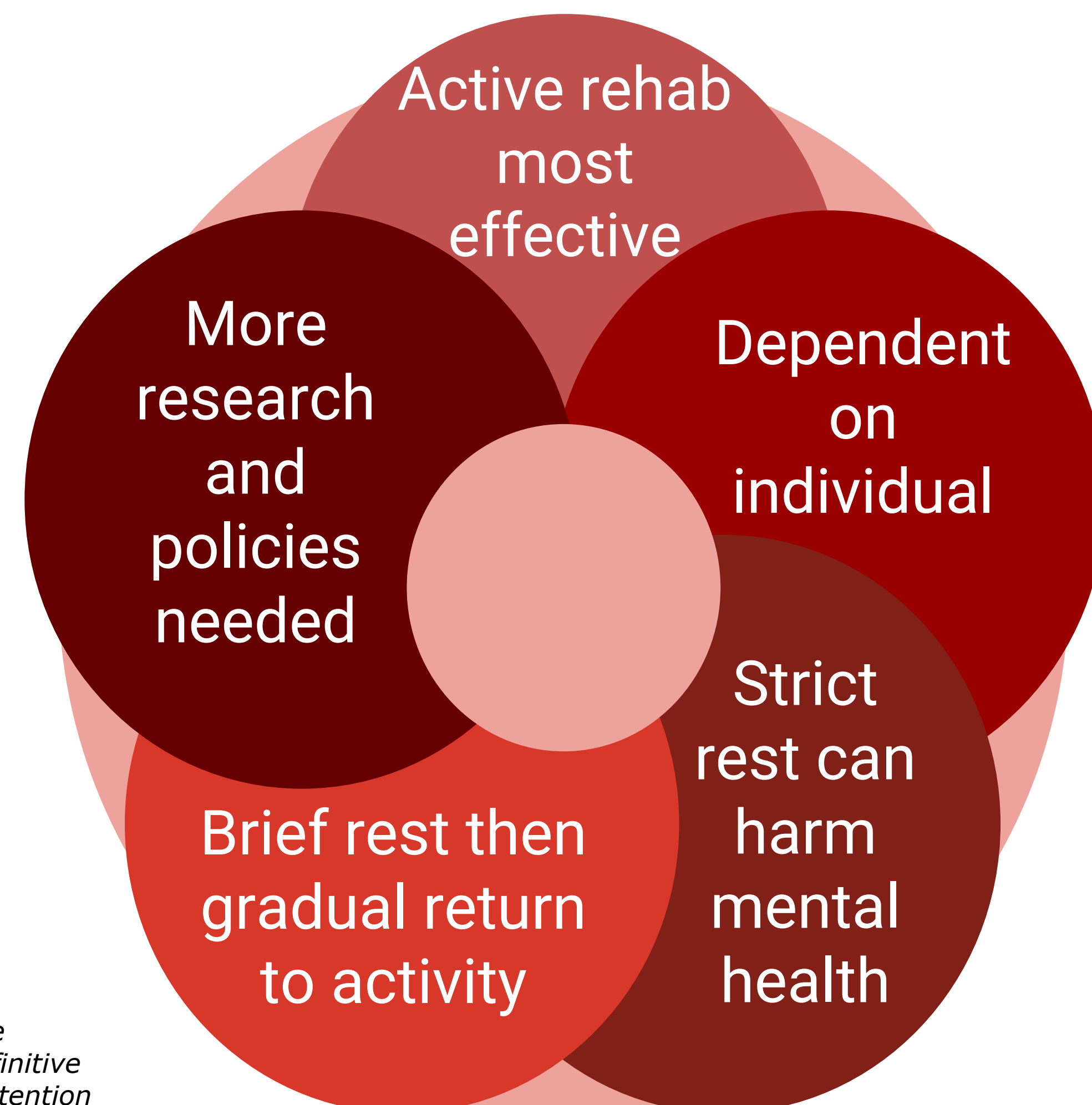
Clinical Question

After a mild traumatic brain injury (mTBI)/concussion, is rest or activity during the acute phase of recovery most beneficial for safely returning to meaningful occupations?

Systematic Search

- 4 Databases
- Some search terms:
 - Concussion treatment
 - Mild TBI treatment
 - Recovery protocol
 - Rest or activity
 - Acute phase management

Summary of Literature



Clinical Bottom Line

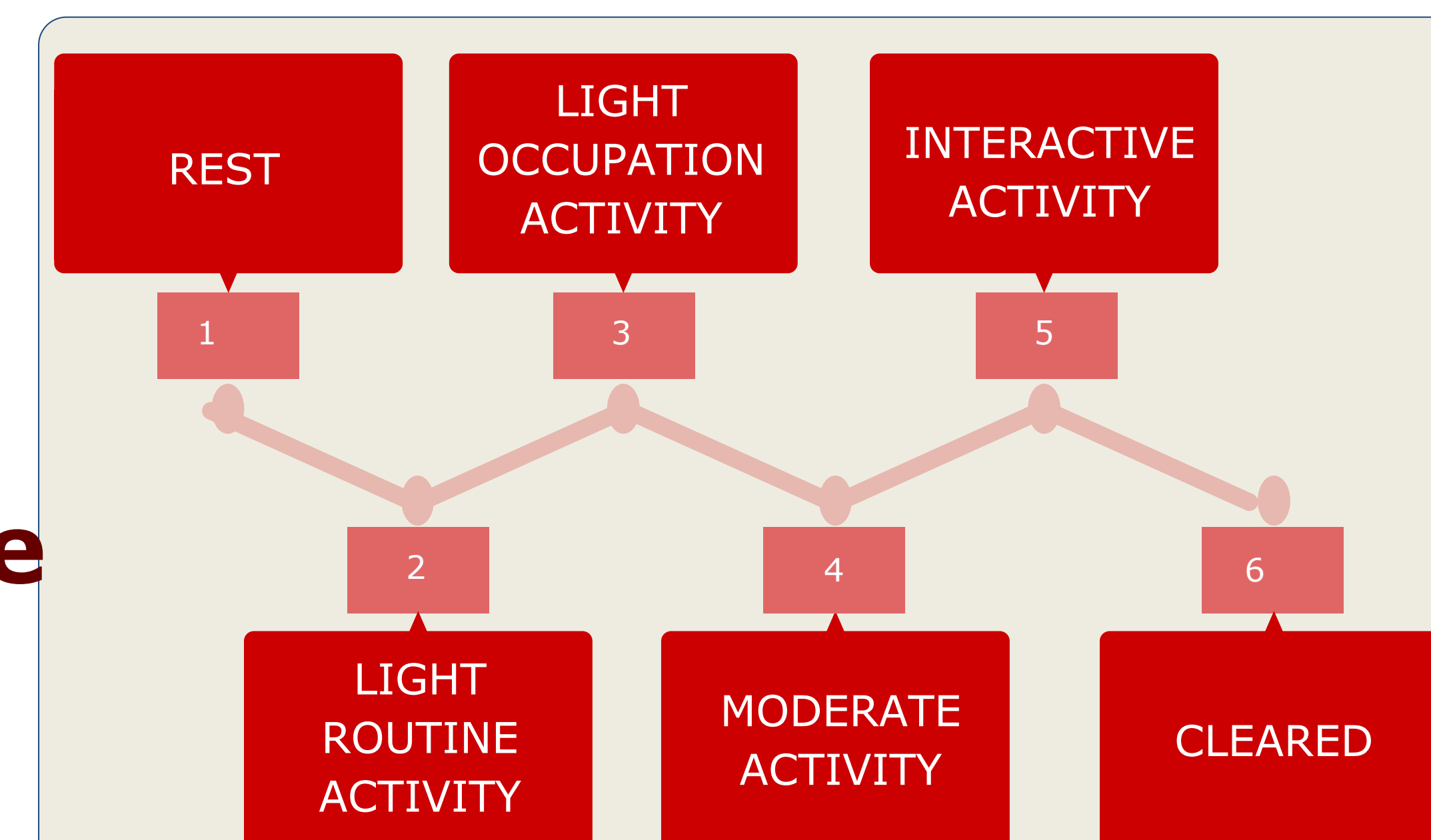
Cognitive and physical rest is the safest practice immediately after sustaining an mTBI. Following this rest period of undetermined optimum length, a gradual return to daily activities is recommended, though there are inconsistent guidelines for post-concussion activity participation. There is a need for further research to enhance knowledge surrounding recovery time, safe and healthy gradual return to activities, and ultimately to establish a universal and standardized protocol.

Implications for Practice

- Research-practice gap
- Client-centered treatment: rest then monitor symptoms while gradually increasing activity
- OT practitioners uniquely qualified to make mTBI recommendations due to expertise in grading physical and cognitive activities
- Psychosocial and neurological symptoms can influence occupational performance during recovery and thereafter if not treated properly
- Prescribed rest is cheapest intervention

Proposed Future Study

- Randomized controlled trial comparing concussion recovery protocols with impact on recovery times
- 60 children (K-12) with diagnosed concussion, scored on Neurobehavioral Symptom Inventory (NSI) by OT practitioners
- Rehabilitation Progressive Return to Activity (RPRA) vs. "Treatment as usual"



Graphic: Stages of recovery according to the RPRA, including: physical, cognitive, and vestibular domains. Each individual self-reported concussion symptoms on the NSI to evaluate progression of stages. The RPRA protocol was developed by the Defense and Veterans Brain Injury Center.²

References

¹ DiFazio, M., Silverberg, N. D., Kirkwood, M. W., Bernier, R., Iverson, G. L. (2016) Prolonged activity restriction after concussion: Are we worsening outcomes? *Clinical Pediatrics*, 55(5), 443-451. doi:10.1177/0009922815589914

² Defense Centers of Excellence, Defense and Veterans Brain Injury Centers. (2014) Progressive return to activity following acute concussion/mild traumatic brain injury: Guidance for the rehabilitation provider in deployed and non-deployed settings. Retrieved from <http://www.dtic.mil/dtic/tr/fulltext/u2/a592691.pdf>