

HOT Evidence

Motor Interventions for Adults With Traumatic Brain Injury

Why This Matters

- ▶ In the United States, an estimated 1.7 million adults sustain a traumatic brain injury (TBI) annually, which is equivalent to approximately one new incident of TBI every 21 seconds.
- ▶ Individuals with TBI may experience motor difficulties that impede performance in valued everyday activities.
- ▶ Occupational therapy practitioners address motor outcomes to improve occupational performance for adults with TBI.

Improving Motor Outcomes

Virtual Reality

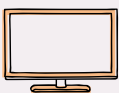
Intervention

Outcome



Virtual-reality system (Computer-Assisted Rehabilitation Environment–CAREN)

Gait, balance, fall risk, and precision arm movements



Video Game Therapy with a wide range of motor activities in standing

Static balance while performing functional movements and mobility



Virtual reality with Xbox Kinect Motion Sensor, using graded games

Fall risk, static and dynamic balance, and arm precision movements

Physical Activity

Intervention

Outcome



Vestibular rehabilitation



Cardiovascular and strength training

High-level balance and mobility



Dual-task (motor and cognitive) stability and balance exercises

Postural control for functional balance



Elliptical machine

Locomotion



Home exercise vestibular rehabilitation program and aerobic training

Activity participation

Find the Evidence

Visit <https://research.ota.org/ajot> to review the **Systematic Review Briefs** on this topic