Vision Rehabilitation

Vision Rehabilitation Following Traumatic Brain Injury: Traumatic Brain Injury Consensus Statement Project 2017

A traumatic brain injury (TBI) Consensus Statement Project was initiated December 2016 by the Defense Health Agency with the goal of reviewing the current state of TBI clinical care and identifying the gaps in critical areas of TBI diagnosis, treatment, and rehabilitation. The Vision Center of Excellence (VCE) assembled a panel of subject matter experts across several specialties and organizations with expertise in visual rehabilitation. Based on the current clinical literature and expertise, the panel members reached a consensus on vision rehabilitation treatments for TBI-related visual dysfunctions, including blast-related visual dysfunctions, with the best outcomes (*Visual Rehabilitation Working Group 2017*). The seven consensus statements are:

1. Mild traumatic brain injury (mTBI)-associated visual dysfunctions are often subtle and difficult to detect, often persist despite treatment, and interfere with rehabilitation and reintegration (*Capo-Aponte et al. 2017*).

2. Optical correction of refractive error, especially at near distances, improves reading performance in patients with TBI-related visual dysfunctions (*Johansson et al. 2017*).

3. Prism spectacles are effective in symptomatic relief of vertical eye misalignment (heterophoria) (*Rosner et al. 2016*).

4. Vision therapy is effective for convergence and accommodative dysfunctions. Visual scanning exercises also benefit these and other patients with other forms of binocular dysfunction. Compliance is a limiting factor in the success of these patients (*Berger et al. 2016, Conrad, Mitchell, and Kulp 2017, Gallaway, Scheiman, and Mitchell 2017, Thiagarajan and Ciuffreda 2013, 2014, Thiagarajan et al. 2014*).

5. Visual search training supports visual environment awareness and tasks such as reading; but improvements are task-specific and may not generalize (*Schmitter-Edgecombe and Robertson 2015*).

6. Use of specialized field expanding prisms and training in the use of compensatory scanning techniques can provide adaptive improvement for patients with hemianopic field of vision loss (*de Haan et al. 2015, O'Neill et al. 2011, Schuett et al. 2012*).

7. Chromatically tinted spectacles relieve symptoms of light and glare sensitivity. Lens hues are patient specific (*Clark et al. 2017*).

Expert recommendations on the clinical management of TBI-related visual dysfunctions are available from the Department of Defense and Veterans Affairs VCE website at https://vce.health.mil/.

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