JRRD at a Glance

Predictors of weight loss in overweight veterans with knee osteoarthritis who participated in a clinical trial

Sarah Wolf, MPH, RD, et al.

This study looked at factors that would predict weight loss success for obese people with osteoarthritis (OA). Factors such as having confidence in one's ability to lose weight, changing eating habits, receiving nutrition counseling, being married, or being depressed were examined as potential predictors of weight loss. Receiving nutrition counseling and not being depressed were the strongest factors that led to weight loss. Knowledge of the factors that predict weight loss could help clinicians target interventions to these individuals and maximize their weight loss success. Weight loss could benefit individuals with knee OA by reducing joint pain and improving many medical conditions.

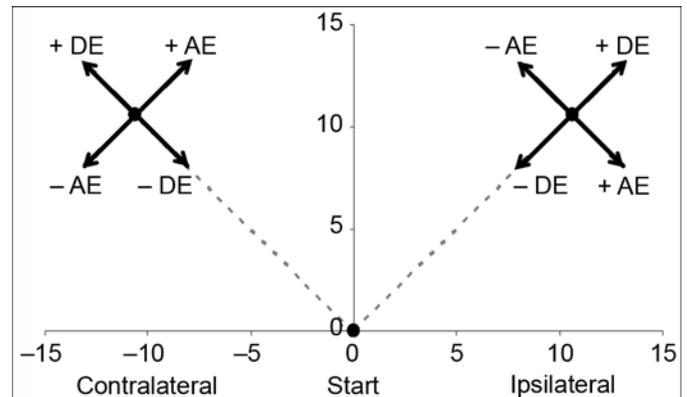## Accommodation in mild traumatic brain injury

Wesley Green, MS, et al.

Younger veterans who have had traumatic brain injury (TBI) and their families will benefit from the present research. Eye-focusing disturbances (also known as accommodative dysfunction), which are commonly found in individuals with mild TBI, can have adverse consequences with respect to both vocational and avocational goals. In addition, such focusing problems can adversely affect progress in other rehabilitation areas. Fortunately, these eye-focusing problems can be treated with good success with optometric vision therapy.

Feedforward control strategies of subjects with transradial amputation in planar reaching

Anthony J. Metzger, MBE, et al.

Amputation care has long been a signature feature of care provided to veterans. The recent influx of new patients with upper-limb amputation from ongoing military actions emphasizes the need for the best possible care. By understanding the reaching behaviors of patients with amputation, researchers can alter prosthetic devices and develop training protocols to improve the acceptance of prosthetic limbs.
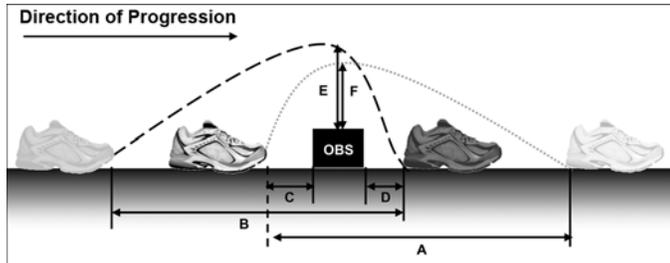
Multiple sclerosis and mobility-related assistive technology: Systematic review of literature

Ana Souza, MS, et al.

Multiple sclerosis (MS) causes different neurological problems, with walking as the most obvious cause of disability. Within 10 to 15 years of disease start, 80% of people with MS experience walking problems caused by muscle weakness, spasticity, fatigue, and loss of balance. To keep their ability to move around, people with MS frequently use mobility devices, which can range from canes to wheelchairs. We reviewed the published literature on mobility devices used by people with MS. Fifty articles provided good evidence of the benefits of mobility devices for people with MS. A strong research study design is the best way to justify prescription and reimbursement decisions.

Obstacle crossing among people with Parkinson disease is influenced by concurrent music

Lesley A. Brown, PhD, et al.

People with Parkinson disease (PD) are at high risk of falling. Falls often occur when people cross an obstacle or do something else while walking. This study looked at what happens when people with PD cross over an obstacle when they are listening to music. We found obstacle-crossing speeds to be slower with music. This result may be because music distracts people from thinking about crossing the obstacle. With practice, however, walking with music may help patients with PD during obstacle crossing. We stress the need for practice and caution should patients choose to walk with music.

Analysis of user characteristics related to drop-off detection with long cane
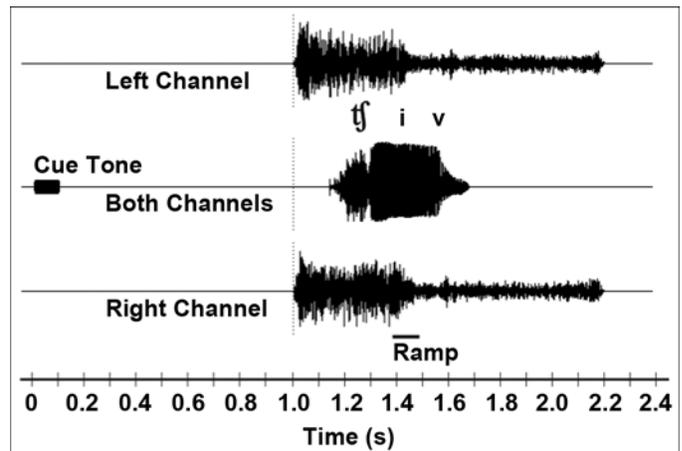
Dae Shik Kim, PhD, et al.

Most blind individuals use a long cane to detect drop-offs and other sunken surfaces. In the current study, younger cane users detected drop-offs more reliably than older cane users. Cane users who lost their vision earlier in life also detected drop-offs more reliably than those who lost their vision later in life. The findings of this study may help blind individuals select appropriate cane techniques for better drop-off detection based on how old they are and when they lost their vision.

Measuring consonant identification in nonsense syllables, words, and sentences
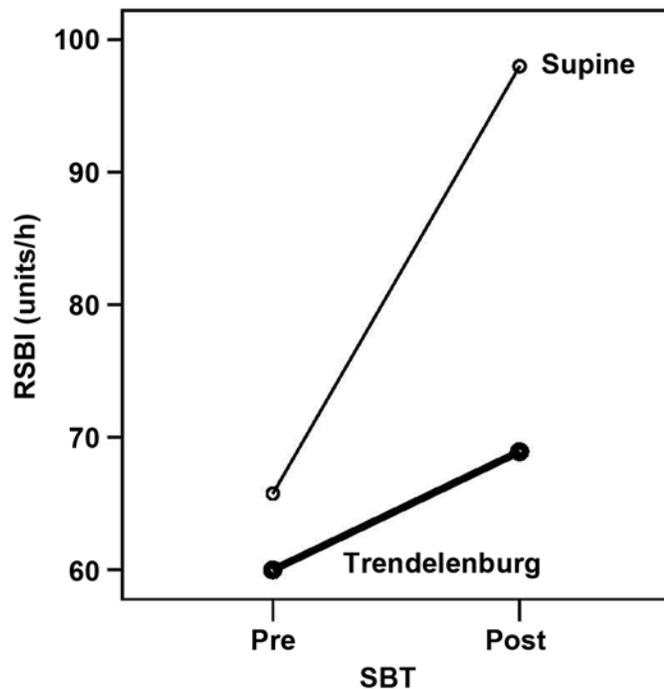
David. L. Woods, PhD, et al.

Sensorineural hearing loss (SNHL) produces deficits in speech comprehension in noise that are due primarily to impairments in identifying consonants. Here, we describe the California Syllable Test (CaST) that quantifies the identification of common American English consonants. In experiment I, 16 young subjects with normal hearing identified 720 consonant-vowel-consonant (CVC) syllables in three test sessions. Consonants were identified slightly more accurately in words than nonsense syllables, and small interactions were found between the processing of initial and final consonants. Consonant identification performance correlated strongly with sentence reception thresholds (SeRTs) measured with both the Hearing in Noise Test and QuickSIN. At SeRTs, subjects with normal hearing could identify 32.5% of consonants in isolated CVCs. In experiment II, a patient with moderate SNHL showed large elevations in consonant identification thresholds and smaller elevations in SeRTs. At SeRT levels, the patient could identify only 12.5% of consonants in isolated CVCs, indicating that sentence comprehension relied disproportionately on vowel cues and semantic constraints. Consonant-profile analysis revealed disproportionate impairments in identifying consonants dependent on high-frequency acoustic cues. Consonant confusion analysis revealed a reorganization of

consonant perception. The CaST is a promising tool for evaluating consonant-specific processing deficits in patients who are hearing impaired.

Trendelenburg chest optimization prolongs spontaneous breathing trials in ventilator-dependent patients with low cervical spinal cord injury

Charles J. Gutierrez, PhD, RRT, FAARC, et al.

Neurorespiratory care is relatively new to the national neurorehabilitative effort for our veterans. Neurologically compromised patients with ventilatory insufficiency are often referred to the Bilirakis Spinal Cord Injury Center, James A. Haley Veterans Hospital, Tampa, Florida. Few high-level studies address how best to rehabilitate and wean ventilator-dependent patients with neurological injuries. Hence, intense neurorespiratory research is needed for developing safe, efficient, and effective evidence-based guidelines for rehabilitating and weaning our veterans. The current pilot study presents data about the importance of Trendelenburg body positioning in improving lung function so that patients may gradually decrease their need for artificial ventilation.