

**Validity of activity monitors in wheelchair users:
A systematic review**

KaLai Tsang, BS, et al.

Portable physical activity monitors have become popular for measuring daily activity among the general public. Devices have been evaluated in the ambulatory population, and they show fair accuracy. However, the performance of these monitors in manual wheelchair users remains unknown. There are many manual wheelchair users in the United States who do not engage in regular physical activity because of their physical limitations and, as a result, are more likely to develop secondary health problems, such as obesity and diabetes. Accurate measurement of physical activity in manual wheelchair users could help providers and users evaluate the effectiveness of physical activity programs. Therefore, the validity of the portable physical activity monitors in tracking wheelchair-related activities needs to be examined.

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**Iraq/Afghanistan-era Veterans with back pain:
Characteristics and predictors of compensation
and pension award**

Carine J. Sakr, MD, MPH, et al.

Back conditions are common among younger Veterans, and many receive disability compensation for them. In this study, we reviewed the medical records of Veterans applying for compensation for back conditions at the Department of Veterans Affairs Connecticut Healthcare System. Approximately 74 percent of Veterans were awarded compensation, and 62 percent had backs that did not function properly. Receiving service connection was associated with having an impaired back and not with depression or substance use or whether the Veteran worked for pay. These Veterans had considerable pain and other conditions that might benefit from treatment, and the

service-connection evaluation may be an opportunity to engage these Veterans in needed services.

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**Caring for our wounded warriors: A qualitative
examination of health-related quality of life in
caregivers of individuals with military-related
traumatic brain injury**

Noelle E. Carlozzi, PhD, et al.

Caring for wounded warriors with traumatic brain injury is a complex experience and can both positively and negatively affect caregiver health-related quality of life (HRQOL). Focus groups were conducted to identify the diverse aspects of HRQOL that are most relevant to these caregivers. Areas of discussion that were somewhat unique to this population (relative to other caregiving populations) included anger regarding barriers to physical and mental health services (for caregivers and servicemembers), emotional suppression (putting on a brave face for others, even when things are not going well), and hypervigilance (controlling one's behavior/environment to prevent upsetting the servicemember). Future work is needed to address the complicated issues that face these caregivers and the servicemembers for whom they provide care.

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**Perceived health, caregiver burden, and qual-
ity of life in women partners providing care to
Veterans with traumatic brain injury**

Karen L. Saban, PhD, APRN, RN, CNRN, FAHA, et al.

Females providing informal care to Veteran partners/spouses with traumatic brain injury (TBI) reported moderately low levels of quality of life (QOL) as well as symptoms associated with stress, such as

fatigue and sleep disturbances. The most commonly reported health problems were low back pain and high blood pressure. Stress related to financial problems contributed to lower QOL. However, women who placed greater value on their roles as caregivers reported higher levels of QOL. These findings have implications for development of family-centered interventions to enhance the QOL of informal caregivers of Veterans with TBI.

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A conceptual model for vision rehabilitation

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Vision impairments can occur after various degrees of stroke and/or brain injury. Many stroke patients will have some form of vision dysfunction. While the negative effects can be extensive and potentially disabling, the clinical presentation can be subtle and take time to diagnose correctly. Additionally, the functional implications of visual deficits may limit recovery during standard rehabilitation and decrease overall quality of life. A conceptual model to guide clinicians and rehabilitation professionals in vision assessment and treatment could help in generating accurate diagnoses, making appropriate referrals, and providing timely care to Veterans.

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Chronic effects of exposure to high-intensity blasts: Results of tests of central auditory processing

Frederick J. Gallun, PhD, et al.

Recently blast-exposed patients have been found to perform abnormally on tests of central auditory processing. This report extends these results to Veterans who have been exposed to high-intensity blasts at least 4 yr prior to testing. Results indicated that this blast-exposed group, like those tested previously,

was significantly more likely to perform in the abnormal range than was an age- and hearing-matched control group. This pattern of results suggests that auditory processing dysfunction may be a chronic effect of blast exposure even in the absence of significant peripheral hearing loss.

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Prosthesis management of residual-limb perspiration with subatmospheric vacuum pressure

Glenn K. Klute, PhD, et al.

Sweat can pool in the bottom of lower-limb prostheses when the users are out in hot weather or performing vigorous activities. When this happens, the prosthesis may become loose and insecure. We demonstrate the use of a novel prosthesis that can expel sweat but otherwise works like a currently available prosthesis.

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Coping with tinnitus

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Tinnitus (ringing or hissing in the ears not produced by external sound) has been the top service-connected disability in the Department of Veterans Affairs for the past 8 years. In this article, we focused on coping with tinnitus. Fundamentally, coping can be regarded as a person's efforts to manage stress. Multiple research studies and interventions have been created to help individuals with tinnitus. However, these studies are flawed in several important ways. We suggest ways to improve research on coping with tinnitus in order to develop better interventions for Veterans with tinnitus. Coping is an important aspect of tinnitus research because most types of tinnitus are not curable, and helping individuals learn how to better cope with it may bring relief to those who experience significant distress because of their tinnitus.

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Relationship between symptoms and family relationships in Veterans with serious mental illness

Morgan Haselden, BA, et al.

Veterans with serious mental illnesses (SMI) can benefit from family support; families can also be a source of stress. This study asked how different types of mental health symptoms correlate with how well Veterans report getting along with their families. Among 226 Veterans with SMI, those with more depression reported greater family distress and conflict and poorer family communication and problem solving. Psychotic symptoms such as hearing voices or having unusual thoughts did not uniquely contribute to the Veterans' perceptions of family. Depression may be especially important in understanding family relationships and requires that clinicians, Veterans, and families anticipate its effect.

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Functional performance differences between the Genium and C-Leg prosthetic knees and intact knees

CPT M. Jason Highsmith, PhD, DPT, CP(USAR), et al.

Persons with transfemoral amputation (TFA) have impaired function that can potentially be improved with interventions including microprocessor knees (MPKs). The Genium offers an advanced sensory array and processing algorithms but has not been tested in functional activities. This study tested 20 persons with TFA using the Genium and C-Leg and compared them with 5 nondisabled control subjects using the Continuously Scaled Physical Functional Performance-10 assessment. The performance of persons with TFA improved with the Genium versus C-Leg and did not differ significantly from nondisabled control subjects. Nonetheless, regardless of knee, persons with TFA did not equal or surpass nonamputees in any functional domain, suggesting room for improvements in MPK functional performance.

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