

# Increasing autonomy of older people through the use of computers and the internet.

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shows above the threshold value, the angle of Gatch bed is immediately statted down to zero degree. In contrast, if the vital signals do not exceed the threshold value, the patient continues to train and the angle of Gatch bed is upwards. In the preliminary study, we monitored the cardiovascular condition with the change in posture in the acute phase apoplexy patient. The system was operated without any trouble and the control mechanism worked properly, that is the angle could be controlled by pre-determined vital value.

*Key words:* monitoring, vital signs, automatic controlled bed, rehabilitation.

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*D. Gavin-Dreschnack. A New Screening Tool for Adaptive Wheelchair Seating.*

*Gerontechnology 2002; 2(1): 131.* Research has indicated that older individuals who use wheelchairs, experience the majority of wheelchair seating problems, including difficulty in chair propulsion, unsafe transfers to and from the chair, postural instability, pressure ulcers, and discomfort. Only a few studies have investigated the benefits of modification of wheelchairs and most of those have focused on children and young adults with disabling conditions. Compounding the lack of focus on the older population is the lack of appropriate screening and assessments for use in long term care facilities, i.e., nursing homes. The Minimum Data Set (MDS), the comprehensive assessment of medical, psychological, and social characteristics of nursing home residents, does not capture residents' posture nor does it provide any correlation of their size and functional ability to appropriate wheelchair selection. As a result, the present study focused on development of the Resident Ergonomic Assessment Profile (REAP) for seating. The REAP was designed for ease of use by any level of nursing/caregiver staff to enable them to observe and record residents' sitting posture, and thereby make appropriate referrals to formal seating clinics. The domains of the REAP include: observation of: foot support, height and position of knees, height of armrests and position of arms, seatbelt presence, head control, leaning, sliding, ability and method of propelling, and history of falls. Pilot testing indicated that, although some raters did not receive training on wheelchair seating, the REAP produced high interrater agreement among levels of staff with varying knowledge of adaptive seating. The REAP appears to be a brief and reliable screen for observing and recording the anthropometric characteristics and functional posture and mobility of wheelchair-confined nursing home residents.

*Key words:* screening tool, resident ergonomic assessment profile (REAP), nursing home resident.

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*K. Slegers, M. van Boxtel, J. Jolles, P. Houx. Increasing autonomy of older people through the use of computers and the Internet. Gerontechnology 2002; 2(1): 131 - 132.* The rationale and design of a randomized intervention study are presented in which the effects are studied of use of computers and Internet on cognitive functioning in older people. 240 individuals (age 65-75) will participate. Most of them are interested in computers and Internet (n=180). All interested participants are randomly assigned to one of three groups: training + computer (intervention group); training only (1st control group); no training or intervention (2nd control group). The remaining group of 60 participants with no interest in computers or Internet forms a 3rd control group. The intervention group is provided with a computer and a fast Internet connection for a one-year period. The control groups will refrain from computer use for the duration of the

study. All groups are screened twice (dual baseline) pre-training for cognitive abilities, general health, social network aspects, functional status, and quality-of-life. Reassessment is performed at month 4 and 12. In addition to a basic neurocognitive test battery, participants will be compared with respect to everyday coping strategies, mood, and anxiety. The intervention group is expected to benefit from the Internet and computer facilities by showing a relative improvement in several domains of function: basic cognitive performance (executive function, sensorimotor speed, memory, attention), autonomy and everyday problem solving. Also, it is hypothesized that the intervention group shows less difficulties with operating modern technological appliances. Some baseline results will be discussed.

*Key words:* cognitive aging, autonomy, computers, World Wide Web, intervention study.

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*F. Carlin-Rogers, J. Smither, S. Sauls, S. Samson, J. Guerrier. Evaluation of Promising Tools for Determining Fitness to Drive. Gerontechnology 2002; 2(1): 132.* Measures of various individual characteristics have been developed to determine older drivers' fitness to drive. Some of these purport to predict drivers at risk of crashes. Indeed, the research has shown some significant relationships between crashes or other critical components of driving performance and such driver characteristics as status on the Useful Field of View (UFOV) test, Trails B, as well as contrast sensitivity. Other measures of attention and memory make similar claims. The availability of effective instruments that can permit the identification of drivers at-risk is an important consideration in assisting healthcare and social service professionals, as well as licensing professionals in determining driving fitness. These tools will be particularly helpful in providing to the professionals mentioned the tools necessary to assist older drivers in identifying appropriate means for addressing their safe mobility. In this regard, under grants by the National Highway Traffic Safety Administration and the Florida Department of Transportation, Safety Office, the Tampa Bay Area Agency on Aging, the University of Central Florida, and the University of Miami are currently collaborating on a study to determine the ability of computerized measures of attention and memory, and measures of visual functioning to predict crash risk in two groups of older drivers, a high MMSE group (28+) and a low MMSE group (< or = to 27).

*Key words:* driving, fitness, older driver, mobility, safety.

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*R. Kaspar. Moderating effects of technology on the experience of loneliness in old age. Gerontechnology 2002; 2(1): 132 -133.* Accelerated implementation of technology has changed many aspects of individuals' everyday lives as well as it has altered social relationships and contributed to the development of modern society as a whole. The ability to use complex technology has become a key competence for independent and successful living. Elderly people have often been hypothesized potential losers of this modernization process, as they are more likely to lack this competence (Reichert, 2001). Modern technology has often been linked implicitly to loneliness in older adults rather than its effects have been tested explicitly. Technical appliances have been discussed as both powerful means for directly maintaining social participation (e.g. telephone, internet) as well as endangering social integration (e.g. automatic teller machines, internet), thus hindering and enhancing the experience of loneliness, respectively. The objective of