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EDUCATION and TRAINING

Visiting Research Fellow, Longitudinal Study Section, National Institute on Aging,
Baltimore, MD, USA

Ph D (Kinesiology), University of Waterloo, Faculty of Applied Health Sciences, Waterloo,
Ontario, Canada

M Sc (Rehabilitation Sciences), Queen's University, Faculty of Health Sciences, Kingston,
Ontario, Canada

TEACHING RESPONSIBILITIES

PTRS 850 Neuroscience

RESEARCH INTERESTS

Sensory integration processes underlying dynamic postural control

Impact of age-related changes in sensory function and peripheral nervous system
pathologies on functional mobility

PUBLICATIONS

Refereed articles:

N Deshpande, EJ Metter, S Bandinelli, F Lauretani, BG Windham and L Ferrucci. Psychological, physical and sensory determinants of fear of falling and consequent activity reduction in elderly: The InCHIANTI study, *American Journal of Physical Medicine and Rehabilitation*, 2007 (submitted)

N Deshpande, EJ Metter, S Ling, R Conwit and L Ferrucci. Physiological correlates of age-related decline in vibrotactile sensitivity, *Neurobiology of Aging*, Jan 2007 (Epub)

N Deshpande and AE Patla. Visual-vestibular interaction during locomotion: Effects of aging and blurring vision, *Experimental Brain Research*, 176(1):43-53, 2007

N Deshpande, A Novak and AE Patla. Determining Functional Mobility Using the Modified TUG Test: Effects of Sensory Manipulations, *Journal of American Geriatric Society*, 54(7): 1157-8, 2006

N Deshpande and AE Patla. Postural responses and spatial orientation to neck proprioceptive and vestibular inputs during locomotion in young and older adults. *Experimental Brain Research*, 167(3):468-74, 2005

N Deshpande and AE Patla. Visual-vestibular interaction during goal directed locomotion. *Experimental Brain Research*, 166(2):237-247, 2005

N Deshpande, DM Connelly, EG Culham, PA Costigan. Reliability and validity of ankle proprioceptive measures. *Archives of Physical Medicine and Rehabilitation*, 84(6): 883-9, 2003

N Deshpande, P Costigan and B Brouwer. Is individually based standardization of base of support required for the measurement of center of pressure excursion? – A pilot study. *Control of Posture and Gait*, Editors: Duysens J, Smits-Engelsman BCM and Herman K, Maastricht, the Netherlands, 95-7, 2001

N Deshpande, DM Connelly and E Culham. Ankle joint proprioception measurement during standing: A pilot study. *Control of Posture and Gait*, Editors: Duysens J, Smits-Engelsman BCM and Herman K, Maastricht, the Netherlands, 267-70, 2001

Articles in preparation:

N Deshpande and L Ferrucci. Effects of fear-induced activity-restriction on self-reported and measured physical performance – a prospective cohort study (The InCHIANTI study)

N Deshpande, E Simonsick, EJ Metter, S Satterfield, A V Schwartz and L Ferrucci. Differential association of vibration and touch sensitivity of the lower limbs with gait speed in older adults – the Health ABC study

SCIENTIFIC PRESENTATIONS

Invited Presentations:

N Deshpande. Physiological Correlates of Age-related decline in vibrotactile sensitivity. Advisory Committee Meeting, Baltimore Longitudinal Study of Aging, National Institute on Aging, Baltimore, MD, USA, 2007

N Deshpande. Influence of neck proprioceptive and vestibular inputs during locomotion in young and older adults. Ontario Physiotherapy Association meeting, Kitchener-Waterloo, Ontario, Canada, 2005

N Deshpande. Sensory integration during goal directed locomotion. Johnson Space Center, National Aeronautical Space Administration (NASA), Houston, Texas, USA, 2004

Conference Presentations:

N Deshpande, EJ Metter, S Bandinelli, F Lauretani, BG Windham and L Ferrucci. Psychological, physical and sensory determinants of fear of falling and consequent activity reduction in elderly: The InCHIANTI study. VI European Congress of International Association of Gerontology and Geriatrics, St. Petersburg, Russia, 2007 (submitted)

N Deshpande, A Novak and AE Patla. Effects of deprived sensory information on the kinetics and kinematics of sit-to-stand movement in elderly. XVIII conference of International Society for Posture and Gait Research, Burlington, VT, USA 2007

N Deshpande, L Ferrucci, EJ Metter. Age-related Decline in Vibrotactile Sensitivity: A Study of Potential Confounders. The Gerontological Society of America's 59th Annual Scientific Meeting, Dallas, TX, USA, 2006

N Deshpande, EJ Metter, S Ling, R Conwit, L Ferrucci. Physiological Correlates of Age-related Decline in Vibrotactile Sensitivity. National Institute of Health Research Festival, Bethesda, MD, USA, 2006

N Deshpande and AE Patla. Postural responses to neck proprioceptive-vestibular input interaction during goal directed locomotion: Effect of aging. XVII conference of International Society for Posture and Gait Research, Marseilles, France, 2005

N Deshpande and AE Patla. Sensory adaptation for postural control: Standing vs. walking. XVII conference of International Society for Posture and Gait Research, Marseilles, France, 2005

N Deshpande and AE Patla. Postural responses in frontal plane to stepwise monopolar anodal galvanic vestibular stimulation. 13th Biennial Conference of Canadian Society for Biomechanics, Halifax, Nova Scotia, Canada, 2004

AE Patla, L Brawly, JS Frank and N Deshpande. The efficacy of different exercise intervention programs for improving mobility in elderly. 13th Biennial Conference of Canadian Society for Biomechanics, Halifax, Nova Scotia, Canada, 2004

N Deshpande and AE Patla. Visual-vestibular input integration during goal directed locomotion. Canadian Physiological Society Conference, Silver Star Resort, British Columbia, Canada, 2004

N Deshpande and AE Patla. Visual-vestibular input integration during goal directed locomotion: a pilot study. 3rd International Posture Symposium, Smolenice Castle, Slovakia, 2003

N Deshpande, E Culham, DM Connelly. Reliability and sensitivity of ankle proprioceptive measures. International Conference on Technology and Aging, Toronto, Ontario, Canada, 2001

N Deshpande, DM Connelly, E Culham. Ankle joint proprioception measurement during standing: A pilot study. Congress of the International Society of Postural and Gait Research, Maastricht, The Netherlands, 2001

N Deshpande, P Costigan, B Brouwer. Is individually based standardization of base of support required for the measurement of center of pressure excursion? – A pilot study. Congress of the International Society of Postural and Gait Research, Maastricht, The Netherlands, 2001

N Deshpande, E Culham, DM Connelly. Reliability and sensitivity of ankle proprioceptive measures. Rehabilitation Research Colloquium, McGill University, Montreal, Quebec, Canada, 2001

N Deshpande, E Culham, DM Connelly. Reliability and sensitivity of proprioceptive measures – a proposed study. Rehabilitation Research Symposium, Queen's University, Kingston, Ontario, Canada, 2000

RECENT SIGNIFICANT CLINICAL ACTIVITIES

Rehabilitation Specialist

Eglinton-Bayview Physiotherapy Clinic, Toronto, Ontario

2001-2002

The clientele included three hundred seventy-five residents of long term care facilities. The health status of the clients ranged from 'active and independent' to 'frail and cognitively impaired'.

OTHER SCHOLARLY ACTIVITIES

Manuscript Reviewer: Internal manuscript reviewer for National Institute on Aging, Baltimore, MD, USA (2006-2007) and Journals of Gerontology: Biological and Medical Sciences (2005)

Leader of the ‘sensory integration group’: Workshop for developing Agility Exercise Program for Parkinson’s disease. Primary investigator: Dr Fay Horak, Neurological Sciences Institute of Oregon Health & Science University, Beaverton, OR, USA, 2006

Grant reviewer: Child Health Program, Janeway Children’s Health and Rehabilitation Center, St John’s. NL, Canada, 2006

SCIENTIFIC SOCIETY MEMBERSHIPS

The Gerontological Society of America
International Society of Gait and Postural Research

INTERESTS

Reading, Traveling