

Curriculum Vitae

MARJORIE HINES WOOLLACOTT

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Academic Background

B. A. University of Southern California
Ph.D. University of Southern California, Cell and Molecular Biology/Neuroscience
M.A. University of Oregon, Asian Studies

RESEARCH SUMMARY

Marjorie Woollacott, Ph.D., is an Emeritus Professor and past chair of the Dept. of Human Physiology, and a member of the Institute of Neuroscience, at the University of Oregon. In addition to teaching courses on neuroscience and rehabilitation, she taught courses on complementary and alternative medicine and meditation. She is President of the Academy for the Advancement of Postmaterialist Sciences, Research Director for the International Association of Near-Death Studies (IANDS) and is a member of the Steering Group for the Galileo Commission-Expanding the Scope of Science. Dr. Woollacott graduated magna cum laude from the University of Southern California and was elected to membership in Phi Beta Kappa. She received her Ph.D. in Neuroscience from the University of Southern California and her M.A. from the University of Oregon in Asian Studies. She was also a research professor in the Department of Psychology at the University of Umea in Umea, Sweden, and in the National Center for Scientific Research in Marseille, France.

Woollacott has received over 7.2 million dollars in research funding from the National Institutes of Health and other research agencies for the past 35 years for her research in child development, aging, rehabilitation medicine and most recently, in meditation. Her areas of expertise include: 1) changes in attentional performance skills and underlying neural networks associated with the mental training of meditation and tai chi; 2) the development of balance and attentional abilities in normal children and in children with motor problems such as cerebral palsy and Down Syndrome; 3) factors leading to loss of balance function in the older adult, and in patients with motor disorders such as stroke and Parkinson's disease, in order to improve the quality of life and independence of adults well into old age; 4) the design of new assessment and treatment strategies to improve balance and attentional abilities. These include testing the efficacy of alternative forms of therapy such as tai chi and meditation for improving both attention and balance and gait abilities in patient populations; 5) the development of musical performance skills in musicians, and 6) physiological and transformational effects of mystical experiences, including near-death experiences, meditation, and after-death communication experiences. She has published more than 200 scientific articles and written or co-edited eight books. She is the co-author, with Dr. Anne Shumway-Cook of the textbook for health care professionals, titled: *Motor Control: Translating Research into Clinical Practice*, which is in its 5th edition (2017) as

well as editor of the books *Is Consciousness Primary?* (2020) and *Expanding Science* (2020). Her book, *Infinite Awareness* (2015) (winner of eight awards, including the 2017 Parapsychological Association Book Award, Eric Hoffer Book Award and the Nautilus Book Award) pairs Woollacott's research as a neuroscientist with her self-revelations about the mind's spiritual power. Between the scientific and spiritual worlds, she breaks open the definition of human consciousness to investigate the existence of a non-physical and infinitely powerful mind.

TEACHING/PROFESSIONAL EXPERIENCE

Professor Emeritus, Department of Human Physiology and Inst. of Neuroscience, University of Oregon. 2016-present

Professor, Department of Human Physiology, University of Oregon, 1980-2016

Acting Department Head, Dept. East Asian Languages and Literature, U of O, 2003-2006

Department Head, Department of Human Physiology, U of Oregon, 1996-2002

Associate Professor, Department of Exercise and Movement Science, University of Oregon, 1980-1989

Member, Institute of Neuroscience, University of Oregon, 1980-present

Senior Research Associate, Neurological Sciences Institute, 1977-1980

Asst Professor of Biology, Virginia Polytechnic Institute and State University, 1976-77

Research Associate, University of Oregon, 1973-76

PUBLICATIONS

Masters thesis, Asian Studies, Title: Unbounded potentialities of resonance –the dynamic interface between mind and brain: perspectives from neuroscience and meditative traditions, and research at their common frontiers. U. of Oregon, 2005.

Books:

Beauregard M, Schwartz G, Dyer N, **Woollacott M**. *Expanding Science*, Battleground, WA: AAPS Press, 2020.

Schwartz, SA, **Woollacott, M**, Schwartz, GE. *Is Consciousness Primary?* Battleground, WA: AAPS Press. 2020

M. Woollacott. *Infinite Awareness: The Awakening of a Scientific Mind*. Rowman and Littlefield, 2015.

A. Shumway-Cook & **M. Woollacott**. *Motor Control: Translating Research into Clinical Practice*. Baltimore: Lippincott/Williams and Wilkins. (also translated into Greek, Portuguese, Japanese, Korean, Chinese and other languages) 6th Edition, 2021

A Bronstein, T Brandt, **M Woollacott**, eds. *Clinical Aspects of Balance and Gait Disorders*. London: Edward Arnold, 1996. (**Second Edition, 2004**)

M. Woollacott and F. Horak, eds. *Posture and Gait: Control Mechanisms, Vol I & II*. Univ of Oregon Books. 1992.

M. Woollacott and A. Shumway-Cook, eds. *The Development of Posture and Gait Across the Lifespan*. Columbia S.C.: Univ. of S. Carolina Press. 1989. (Translated into Japanese by K Yabe, and published in Japan. Tokyo: Taishukan Publishing, 1993.)

M.H. Woollacott. Issue Editor. Science and Meditation. *Darshan* (Journal on Meditation). Vol 77, 1993. SYDA Foundation.

Refereed Articles:

153. Burgos P, Cruz San Martin G, Hawkes, TD, Rojas-Sepulveda I, **Woollacott MH**. [Behavioural and ERP correlates of long-term mental and physical training on a demanding switch task](#). *Front. Psychol. - Movement Science and Sport Psychology*, 2021 Feb 23;12:569025. doi: 10.3389/fpsyg.2021.569025. eCollection 2021.PMID: 33708155

152. **Woollacott M**, Roe CA, Cooper CE, Lorimer D, Elsaesser E. [Perceptual phenomena associated with spontaneous experiences of after-death communication: Analysis of visual, tactile, auditory and olfactory sensations](#). *Explore (NY)*. 2021 Feb 23:S1550-8307(21)00042-2. doi: 10.1016/j.explore.2021.02.006. Online ahead of print.

151. Tang YY, **Woollacott M** [Editorial: The Physiological and Genetic Influences of Meditation and Tai Chi on Mental, Emotional, and Movement Regulation.](#) *Front Physiol*. 2020 Oct 23;11:581841. doi: 10.3389/fphys.2020.581841. eCollection 2020.

150. **Woollacott, MH**, Kason, Y, Park. RD. Investigation of the phenomenology, physiology and impact of spiritually transformative experiences: Kundalini awakening. *Explore (NY)*. 2020 Jul 25:S1550-8307(20)30223-8. doi: 10.1016/j.explore.2020.07.005. Online ahead of print.PMID: 32753262

149. **Woollacott M**, Peyton B. [Verified account of near-death experience in a physician who survived cardiac arrest](#). *Explore (NY)*. 2020 Mar 19: S1550-8307(20)30111-7. doi: 10.1016/j.explore.2020.03.005. Online ahead of print.PMID: 32245708.

148. **Woollacott, M.**, Shumway-Cook, A. The mystical experience and its neural correlates. *Journal of Near-Death Studies*, 2020; 38: 3–25. <https://doi.org/10.17514/JNDS-2020-38-1-p3-25>.

147. Santamaria V, Rachwani J, Saussez G, Bleyenheuft Y, Dutkowsky J, Gordon AM, **Woollacott MH**. [The Seated Postural & Reaching Control Test in Cerebral Palsy: A Validation Study](#). *Phys Occup Ther Pediatr*. 2020 Jan 3:1-29. doi: 10.1080/01942638.2019.1705456.

146. Schwartz GE, **Woollacott M**, Schwartz SA, Baruss I, Beauregard M, Dossey L, Kafatos M, Miller L, Mossbridge J, Radin D, Tart C. [The Academy for the Advancement of Postmaterialist Sciences: Integrating Consciousness into Mainstream Science](#). *Explore (NY)*. 2018 Mar - Apr;14(2):111-113. doi: 10.1016/j.explore.2017.12.006.
145. Santamaria V, Rachwani J, Manselle W, Saavedra SL, **Woollacott M**. [The Impact of Segmental Trunk Support on Posture and Reaching While Sitting in Healthy Adults](#). *J Mot Behav*. 2018 Jan-Feb;50(1):51-64. doi: 10.1080/00222895.2017.1283289. [Epub ahead of print] PMID: 28350227
144. Curtis DJ, **Woollacott M**, Bencke J, Lauridsen HB, Saavedra S, Bandholm T, Sonne-Holm S. [The functional effect of segmental trunk and head control training in moderate-to-severe cerebral palsy: A randomized controlled trial](#). *Dev Neurorehabil*. 2017 Jan 3:1-10. doi: 10.1080/17518423.2016.1265603. [Epub ahead of print].
143. McGeehan M, **Woollacott M**, Dalton B. Vestibular control of standing balance is enhanced with increased cognitive load. *Exp Brain Res*. 2017 Apr;235(4):1031-1040. doi: 10.1007/s00221-016-4858-3.
142. da Costa CS, Saavedra SL, Rocha NA, **Woollacott MH**. [Effect of Biomechanical Constraints on Neural Control of Head Stability in Children With Moderate to Severe Cerebral Palsy](#). *Phys Ther*. 2017 Mar;97(3):374-385. doi: 10.2522/ptj.20150418. Epub 2016 Oct 6.
141. Bogost MD Burgos PI, Little CE, **Woollacott MH**, Dalton BH. Electro cortical sources related to whole-body surface translations during a single- and dual-task paradigm. *Frontiers in Human Neuroscience*. 2016 Oct 18;10:524. eCollection.
140. Taraban, O., Heide, F., **Woollacott, M**. et al. The Effects of a Mindful Listening Task on Mind-Wandering. *Mindfulness*. doi:10.1007/s12671-016-0615-8. 2016.
139. Santamaria V, Rachwani J, Saavedra S, **Woollacott M** [Effect of Segmental Trunk Support on Posture and Reaching in Children With Cerebral Palsy](#). *Pediatr Phys Ther*. 2016 Fall;28(3):285-93. doi: 10.1097/PEP.0000000000000273.
138. Curtis DJ, Hansen L, Luun M, Løberg R, **Woollacott M**, Saavedra S, Sonne-Holm S, Berggreen S, Bencke J. [Measuring Postural Sway in Sitting: A New Segmental Approach](#). *J Mot Behav*. 2015 Mar 2:1-9. [Epub ahead of print]
137. Rachwani J, Santamaria V, Saavedra SL, **Woollacott MH**. The development of trunk control and its relation to reaching in infancy: a longitudinal study. *Front Hum Neurosci*. 2015 Feb 24;9:94.
136. Saavedra SL, **Woollacott MH** [Segmental contributions to trunk control in children with moderate-to-severe cerebral palsy](#). *Arch Phys Med Rehabil*. 2015 Feb 2. pii: S0003-

9993(15)00092-1. doi: 10.1016/j.apmr.2015.01.016. [Epub ahead of print]

135. Little CE, **Woollacott M**. EEG Measures Reveal Dual-Task Interference in Postural Performance in Young Adults. *Exp Brain Res*. 2015 Jan;233(1):27-37.

134. Curtis DJ, Butler P, Saavedra S, Bencke J, Kallemose T, Sonne-Holm S, **Woollacott M**. [The central role of trunk control in the gross motor function of children with cerebral palsy: a retrospective cross-sectional study.](#) *Dev Med Child Neurol*. 2015 Apr;57(4):351-7. doi: 10.1111/dmcn.12641. Epub 2014 Nov 20

133. Hawkes TD, Manselle W, **Woollacott MH**. Tai Chi and meditation-plus-exercise benefit neural substrates of executive function. A cross-sectional, controlled study. *Journal of Complementary and Integrative Medicine*; 11(4):279-88. 2014.

132. Schaefer S, Schellenbach M, Lindenberger U, **Woollacott M**. Walking in High-Risk Settings: Do Older Adults Still Prioritize Gait when Distracted By a Cognitive Task? *Experimental Brain Research*, DOI 10.1007/s00221-014-4093-8, 2014.

131. Hawkes TD, Manselle W, **Woollacott MH**. Cross-sectional comparison of executive attention function in normally aging long-term T'ai chi, meditation, and aerobic fitness practitioners versus sedentary adults. *J Altern Complement Med*. 2014 Mar;20(3):178-84.

130. Verrel J, **Woollacott MH**, Lindenberger U. Articulated coordination of the right arm underlies control of bow parameters and quick bow reversals in skilled cello bowing. *Front Psychol*. 2014 Aug 19;5:885. doi: 10.3389/fpsyg.2014.00885. eCollection 2014.

129. Little C, **Woollacott M**. Effect of Attentional Interference on Balance Recovery in Older Adults. *Exp Brain Res*. 2014 Jul;232(7):2049-60. doi: 10.1007/s00221-014-3894-0. Epub 2014 Mar 18. PMID: 24639065

128. Chen J, **Woollacott M**, Pologe S, Moore GP. Stochastic aspects of motor behavior and their dependence on auditory feedback in experienced cellists. *Front Hum Neurosci*. 2013 Jul 31;7:419.

127. Pavão SL, dos Santos AN, **Woollacott MH**, Rocha NA. Assessment of postural control in children with cerebral palsy: a review. *Res Dev Disabil*. 2013 May;34(5):1367-75.

126. Cunha AB, **Woollacott M**, Tudella E. Influence of specific training on spatio-temporal parameters at the onset of goal-directed reaching in infants. *Braz J Phys Ther*. 2013 Jul-Aug;17(4):409-17.

125. Fujimoto M, Hsu W-L, **Woollacott MH**, Chou L-S. Ankle dorsiflexor strength relates to the ability to restore balance during a backward support surface translation. *Gait & Posture* 2013; 38: 812-817.

124. Rachwani, J, Santamaria, V, Saavedra S, Woods S, Porter F, **Woollacott M**. Segmental Trunk Control Acquisition and Reaching in Typical Developing Infants. *Exp Brain Res*. 2013

Jul;228(1):131-9.

123. Verrel J, Pologe S, Manselle W, Lindenberger L, **Woollacott M**. Exploiting biomechanical degrees of freedom for fast and accurate changes in movement direction: coordination underlying quick bow reversals during continuous cello bowing. *Front Hum Neurosci*. 2013. Apr 26;7:157.

122. Verrel J, Pologe S, Manselle W, Lindenberger U, **Woollacott M**. Coordination of degrees of freedom and stabilization of task variables in a complex motor skill: expertise-related differences in cello bowing. *Exp Brain Res*. 2013 Feb;224(3):323-34..

121. Hsu, W-L, Chou L-S, **Woollacott, MH**. Age-related changes in joint coordination during balance recovery. *Age (Dordr)*. 2013 Aug;35(4):1299-309.

120. Saavedra SL, Van Donkelaar P, **Woollacott MH**. Learning about gravity: Segmental assessment of upright control as infants develop independent sitting. *J Neurophysiol*. 2012 Oct;108(8):2215-29.

119. Boonyong, S, van Donkelaar P, L.S. Chou LS, **Woollacott M**. Development of postural control during gait in typically developing children: the effects of dual task conditions. *Gait Posture*. 2012; 35: 428-434. (2011 Nov 29. Epub ahead of print). PMID: 22133755 [PubMed - as supplied by publisher].

118. Hawkes, T, Siu, K-C, Silsupadol P, **Woollacott M**. Why do older adults fall when walking and performing a secondary task? Examination of attentional switching abilities. *Gait Posture*. 2012 Jan;35(1):159-63. Epub 2011 Oct 2. PMID: 21964051

117. Lamont R, Morris ME, **Woollacott MH**, Brauer SG. Community walking in people with Parkinson's Disease. *Parkinsons Dis*. 2012;2012:856237. Epub 2011 Nov 29. PMID: 22191078

116. Brauer SG, **Woollacott MH**, Lamont R, Clewett S, O'Sullivan J, Silburn P, Mellick GD, Morris ME. Single and dual task gait training in people with Parkinson's Disease: A protocol for a randomised controlled trial. *BMC Neurol*. 2011 Jul 27;11:90.PMID: 21791117 [PubMed - indexed for MEDLINE]

115. Keller T, **Woollacott MH**. Neuromuscular responses to platform perturbations in endurance versus power trained athletes. *Perceptual and Motor Skills*, 2011;112:3-20.

114. Butler PB, Saavedra S, Sofranac M, Jarvis SE, **Woollacott MH**. Refinement, reliability, and validity of the segmental assessment of trunk control. *Pediatr Phys Ther*. 2010; 22:246-57.

113. Saavedra S, **Woollacott M**, van Donkelaar P. Head stability during quiet sitting in children with cerebral palsy: effect of vision and trunk support. *Exp Brain Res*. 2010; 201:13-23 [Epub ahead of print]. PMID: PMC2821460

112. Silsupadol P, Shumway-Cook A, Lugade V, van Donkelaar P, Chou L-S, Mayr U, **Woollacott M**. Training-related Changes in Dual-task Walking Performance of Elderly Persons with Balance Impairment: A Double-blind, Randomized Controlled Trial. *Gait Posture*. 2009 Jun;29(4):634-9. Epub 2009 Feb 7. PMID: PMC2707497
111. Silsupadol P, Shumway-Cook A, Lugade V, van Donkelaar P, Chou L-S, Mayr U, **Woollacott M**. Effects of Single- vs. Dual-task training on Balance Performance in Older Adults: A Double-blind, Randomized Controlled Trial. *Arch Phys Med Rehabil*. 2009 Mar;90(3):381-7. PMID: PMC2768031
110. Siu KC, Chou LS, Mayr U, van Donkelaar P, **Woollacott MH**. Attentional mechanisms contributing to balance constraints during gait: the effects of balance impairments. *Brain Res*. 2009 Jan 12;1248:59-67. Epub 2008 Nov 12.
109. Saavedra S, Joshi A, **Woollacott MH**, van Donkelaar P, Eye Hand Coordination in Children with Cerebral Palsy. *Experimental Brain Research*, 2009; 92(2):155-65.
108. Siu KC, Chou LS, Mayr U, Donkelaar P, **Woollacott MH**. Does Inability to Allocate Attention Contribute to Balance Constraints during Gait in Older Adults? *J Gerontol A Biol Sci Med Sci*. 2008 Dec;63(12):1364-9.
107. Siu KC, Lugade V, Chou LS, van Donkelaar P, **Woollacott MH**. Dual-task interference during obstacle clearance in healthy and balance-impaired older adults. *Aging Clinical and Experimental Research*. 2008; 20:349-54. PMID: PMC2720996
106. Reilly D, **Woollacott MH**, van Donkelaar P, Saavedra S. Dual task effects on postural control in children with cerebral palsy: static stance. *Archives of Physical Medicine and Rehabilitation* 2008; 89: 834-842. PMID: 18452729.
105. Chen J, **Woollacott MH**, Pologe S Moore G. Pitch and space maps of skilled cellists: accuracy, variability and error correction. *Experimental Brain Research* 2008; 188: 493-503.
104. Brauer S, Neros C, **Woollacott MH**. Balance Control in the Elderly: Do Masters Athletes Show More efficient Balance Responses than Healthy Older Adults? *Aging Clinical and Experimental Research*, 2008; 20:406-411.
103. **Woollacott MH**, Vander Velde T. Non-visual spatial tasks reveal increased interactions with stance postural control. *Brain Research*. 2008; 1208: 95-102.
102. Reilly D, van Donkelaar P, Saavedra S, **Woollacott MH**. The effects of dual task conditions: the interaction between the development of postural control and executive attention. *Journal of Motor Behavior*, 2008; 40: 90-102.
101. Siu KC, Catena R, Chou LS, van Donkelaar P, **Woollacott MH**. Effects of Secondary Task on Obstacle Avoidance in Healthy Young Adults. *Experimental Brain Research* 2008; 184:115-

20. Epub 2007 Aug 24. PMID: PMC2556305

100. Chan D, **Woollacott M.H.** Effects of level of meditation experience on attentional focus: is the efficiency of executive or orientation networks improved? *J. Alternative and Complementary Medicine* 2007; 13:651-657.

99. Van Donkelaar P, Saavedra S, **Woollacott M.** Multiple saccades are more automatic than single saccades. *J Neurophysiology* 2007; 97:3148-3151. PMID: 17287433.

98. Saavedra S, **Woollacott M,** van Donkelaar P. Effects of postural support on eye-hand interactions across development, *Experimental Brain Research*, 2007; 180: 557-67. PMID: PMC2744857.

97. Burtner PA, **Woollacott MH,** Craft MS, Roncesvalles MN. The capacity to adapt to changing balance threats: a comparison of children with cerebral palsy and typically developing children 2007; *Dev Neurorehabil* 10:249-60. PMID: 17564865

96. Chen J, **Woollacott MH,** Lower extremity kinetics for balance control in children with cerebral palsy. *J Motor Behavior*, 2007; 39: 306-316.

95. Siu K-C, **Woollacott MH.** Attentional demands of postural control: the ability to selectively allocate information-processing resources. *Gait and Posture* 2007; 25:121-6. Epub 2006 Mar 22.

94. Gatts S, **Woollacott MH.** How Tai Chi improves balance: biomechanics of recovery to a walking slip in impaired seniors. *Gait and Posture*, 2007;25:205-14 [Epub ahead of print]

93. Chen J, **Woollacott MH,** Pologe S. Characteristics of Shifting Movements in Cellists. *Experimental Brain Research*, 2006 Oct;174:467-76. Epub 2006 Apr 27.

92. Hess JA, **Woollacott M,** Shivitz N. Ankle force and rate of force production increase following high intensity strength training in frail older adults. *Aging Clinical and Experimental Research* 18:107-15. 2006.

91. Gatts S, **Woollacott MH.** Neural mechanisms underlying balance improvements with short term Tai Chi training. *Aging Clinical and Experimental Research* 2006; 18:7-19.

90. Silsupadol P, Siu, K, Shumway-Cook A, **Woollacott MH.** Training of Balance under Single and Dual Task Conditions in Older Adults with Balance Impairment: Three Case Reports. *Physical Therapy* 2006; 86:269-281.

89. Lin S-I, **Woollacott MH.** Contributing factors to functional balance for older adults. *Age and Aging*. 2005; 34:358-63.

88. Hess, J, **Woollacott M.** Effect of high-intensity strength-training on functional measures of balance ability in balance-impaired older adults. *Journal of Manipulative and Physiological*

Therapeutics. 2005;28:582-590.

87. Roncesvalles MN, Schmitz C, Zedka M, Assaiante C, **Woollacott M**. From egocentric to exocentric spatial orientation: The development of postural control in bi-manual and trunk inclination tasks. *Journal of Motor Behavior* 2005; 37: 404-416.

86. **Woollacott M**, Shumway-Cook A, Ciol M, Price R, Kartin D. Effect of balance training on muscle activity used in recovery of stability in children with cerebral palsy: a pilot study. *Developmental Medicine and Child Neurology* 2005; 47:455-461.

85. **Woollacott MH**, Shumway-Cook A. Postural dysfunction during standing and walking in children with cerebral palsy: What are the underlying problems and what new therapies might improve balance? *Neural Plasticity* 2005; 12:211-219.

84. VanderVelde TJ, **Woollacott MH**, Shumway-Cook A. Selective utilization of spatial working memory resources during stance posture. *Neuroreport* 2005; 16:773-777.

83. Vearrier L, Langan J, Shumway-Cook A, **Woollacott M**. An intensive massed-practice approach to retraining balance post-Stroke. *Gait and Posture* 2005; 22:154-163.

82. Lin S-I, **Woollacott MH**, Jensen J. Differentiating postural responses following dynamically changing balance threats in young adults, healthy older adults and unstable older adults: Kinematics and Kinetics. *Aging Clinical and Experimental Research* 2004; 16:369-374.

81. Ferber, R., Osternig, L.R., **Woollacott, M.H.**, Wasielewski, N.J., & Lee, J-H. Bilateral accommodations to anterior cruciate ligament deficiency and surgery. *Clinical Biomechanics* 2004; 19; 136-144.

80. Shumway-Cook A, Hutchison S, Kartin D, Price R, **Woollacott M**. The effect of balance training on recovery of stability in children with cerebral palsy. *Developmental Medicine and Child Neurology*, 2003;45:591-602.

79. Roncesvalles N, **Woollacott M**, Brown N, Jensen J. An emerging postural response: Is control of the hip possible in the newly walking child? *J Motor Behavior* 2003; 36:147-159

78. Ferber, R, Osternig L, **Woollacott M**, Wasielewski N, Lee J-H. Gait perturbation response in chronic anterior cruciate ligament deficiency and repair. *Clinical Biomechanics* 2003;18:132-141.

77. Roncesvalles N, **Woollacott M**, Burtner P. Neural Factors Underlying Reduced Postural Adaptability in Children with Cerebral Palsy. *NeuroReport*, 2002, 13:2407-2410.

76. Witherington DC, Hofsten C von, Rosander K, Robinette A, **Woollacott M**, Bertenthal B. The development of anticipatory adjustments in infancy. *Infancy*, 2002, 3:495-517.

75. Ferber, R., Osternig, L.R., Wasielewski, N.J., Lee, J-H., & **Woollacott, M.H.** Reactive balance adjustments to unexpected perturbations during human walking. *Gait and Posture*, 2002, 16: 238-248.
74. Ferber, R., Osternig, L.R., Wasielewski, N.J., Lee, J-H., & **Woollacott, M.H.** Gait mechanics in chronic ACL deficiency and subsequent repair. *Clinical Biomechanics*, 17: 274-285, 2002.
73. **Woollacott M**, Shumway-Cook A. Attention and the control of posture and gait. *Gait & Posture* 2002 16: 1-14.
72. Brauer SG, **Woollacott M**, Shumway-Cook A. The influence of a concurrent cognitive task on the compensatory stepping response to a perturbation in balance-impaired and healthy elders. *Gait & Posture* 2002;15:83-95.
71. Lin S-I, **Woollacott MH**. Differentiating postural responses following dynamically changing balance threats in young adults, healthy older adults and unstable older adults: Electromyography. *Journal of Motor Behavior*, 34: 37-44, 2002.
70. **Woollacott M**, Assaiante C. Development of postural control during gait initiation: effects of perturbation. *Exp Brain Res*. 2002;144:385-396.
69. Sundermier L, **Woollacott M**, Roncesvalles N, Jensen J. The development of balance control in children: comparisons of EMG and kinetic variables and chronological and developmental groupings. *Experimental Brain Research* 2001, 136:340-350.
68. Roncesvalles N, **Woollacott M**, Jensen J. Development of lower extremity kinetics for balance control in infants and young children. *J Motor Behavior* 2001; 33:180-192.
67. Brown, LA, Jensen, JJ, Korff T, **Woollacott, MH**. The translating platform paradigm: perturbation displacement waveform alters the postural response. *Gait and Posture* 2001;14:256-263.
66. Brauer, S, **Woollacott MH**, Shumway-Cook A. The interacting effects of cognitive demand and recovery of postural stability in balance-impaired elderly. *J Gerontology*, 2001; 56: M489-M496.
65. Jensen, JL, Brown LA, **Woollacott, MH**. Compensatory Stepping: The biomechanics of a preferred response among older adults. *Experimental Aging Research*, 27: 361-376, 2001.
64. Shumway-Cook A, Brauer S, **Woollacott M**. The Effect of a secondary task on performance of Up and Go test in community dwelling older adults. *Physical Therapy*, 2000; 80:896-903.
63. McChesney JW, **Woollacott MH**. The effect of age-related declines in proprioception and total knee replacement on postural control. *J Gerontology*. 2000; 55: 658-666.

62. Rankin J, **Woollacott M**, Shumway-Cook, A, Brown L. Cognitive influence on postural stability: a neuromuscular analysis in young and older adults. *J. Gerontology* 2000; 55: 112-119.
61. Shumway-Cook A, **Woollacott M**. Attentional demands and postural control: the effect of sensory context. *J Gerontology*. 2000; 55: M10-16.
60. Assaiante C, **Woollacott M**, Amblard B. Development of postural adjustment during gait initiation: kinematic and EMG analysis. *J Motor Behavior*,32: 211-226, 2000.
59. Chong RKY, Horak FB, **Woollacott MH**. Parkinson's disease impairs the ability to change set quickly. *J Neurological Sciences* 2000; 175:57-70.
58. Roncesvalles N, Jensen J, **Woollacott M**. The development of compensatory stepping skills in children. *J Motor Behavior* 2000; 32: 100-111.
57. Gamboian N, Chatfield S, **Woollacott M**. Further effects of somatic training on pelvic tilt and lumbar lordosis alignment during quiet stance and dynamic dance movement. *J. Dance Medicine and Science* 2000; 4: 90-98.
56. Gamboian N, Chatfield S, **Woollacott M**, S Barr, G Klug. Effect of dance technique training and somatic training on pelvic tilt and lumbar lordosis alignment during quiet stance and dynamic dance movement. *J. Dance Medicine and Science* 1999; 3:5-14.
55. Burtner PA, **Woollacott MH**, Qualls, C. Stance balance control with orthoses in a group of children with spastic diplegia. *Developmental Medicine and Child Neurology* 1999;41:748-757.
54. Chong RKY, Horak FB, **Woollacott MH**. Time-dependent influence of sensorimotor set on automatic responses to perturbed stance. *Experimental Brain Research*. 1999; 124:513-519.
53. Hall CD, Jensen JL, **Woollacott MH**. Rate and magnitude of force development: implications for balance control. *J Gerontology* 1999; 54:M507-513.
52. Brown L.A., Shumway-Cook, A & **Woollacott, M**. Attentional demands and postural recovery: the effects of aging. *J Gerontology* 1999; 54:M165-171.
51. Tang PF, **MH Woollacott** Phase-dependent modulation of proximal and distal postural responses to slips in young and older adults. *J Gerontology* 1999;54:M89-102.
50. Tang PF, **MH Woollacott**. Inefficient postural responses to unexpected slips during walking in older adults. *J Gerontology*. 1998; 53:M471-480.
49. Tang PF, Moore S, **Woollacott MH**. Relationship between static and dynamic balance measures in older adults with sensory organization abilities. *J. Gerontology* 1998; 53:M140-M146.
48. Tang P-F, **Woollacott MH**, Chong RKY. Control of reactive balance adjustments in perturbed human walking: roles of proximal and distal postural muscle activity. *Exp Brain Res* 1998; 119:

141-152.

47. Sundermier L, Woollacott M. The influence of vision on the automatic postural muscle responses of newly standing and newly walking infants. *Experimental Brain Research. Exp. Brain Res* 120:537-540.1998.

46. Burtner PA, Qualls C, Woollacott MH. Muscle activation characteristics of stance balance control in children with spastic cerebral palsy. *Gait and Posture.* 1998; 8:163-174.

45. Woollacott MH, Burtner P, Jensen J, Jasiewicz J, Roncesvalles R, Sveistrup H. Development of postural responses during standing in healthy children and children with spastic diplegia. *Neuroscience and Biobehavioral Reviews* 1998;22:583-589.

44. Williams HG, Woollacott M. Characteristics of neuromuscular responses underlying postural control in clumsy children. In: *Motor Development: Res and Rev Vol 1*, J.E Clark and J.H. Humphrey, Eds, 1997, Reston, VA: NASPE, pp 8-23.

43. Sveistrup H, Woollacott M. Practice modifies the developing automatic postural response? *Experimental Brain Research.* 1997;114:33-43.

42. Woollacott M, Tang PF. Dynamic balance control in the older adult: research and its applications to assessment and treatment. *Physical Therapy.* 1997; 77:646-660.

41. Shumway-Cook A, Woollacott M, Baldwin M, Kerns K. The effects of cognitive demands on postural sway in elderly fallers and non-fallers. *J Gerontology* 1997; 52:M232-240.

40. Sveistrup H, Woollacott M. The development of sensori-motor integration underlying posture control in infants during the transition to independent stance. *J Motor Behavior* 28:58-70, 1996

39. Foster EC, Sveistrup H, Woollacott M. Transitions in visual proprioception: A cross-sectional developmental study of the effect of visual flow on postural control. *J Motor Behavior* 28: 101-112, 1996

38. McChesney J, Sveistrup H, Woollacott M. Influence of auditory precuing on automatic postural responses. *Exp Brain Res* 108:315-320, 1996.

37. Chatfield SJ, Barr S, Sveistrup H, Woollacott MH. Electromyographic and kinematic analysis of movement repatterning in dance. *Impulse: The International Journal of Dance Science, Medicine and Education* 1996; 4: 220-234.

36. Sundermier L, Woollacott M, Jensen J, Moore S. Postural sensitivity to visual flow in aging adults with and without balance problems. *J Gerontology.* 51:M45-52, 1996.

35. Woollacott M, Burtner P. Neural and musculoskeletal contributions to the development of stance balance control in typical children and in children with cerebral palsy. *Act Paediatrica.* 416:58-62, 1996.

34. Tang, PF, **Woollacott M H**, Roberts B L, Srour M., Lee J-H., Martin M J. Effects of Walking Exercise Training on Gait Characteristics of Healthy Older Adults. *Neurology Report*, 1995.
33. Hu MH, **Woollacott M**. Multisensory training of standing balance in older adults: I. Postural stability and one-leg stance balance. *J Gerontology*, 49:M52-M61, 1994.
32. Hu MH, **Woollacott M**. Multisensory training of standing balance in older adults: II. Kinematic and electromyographic postural responses. *J Gerontology*, 49:M62-M71, 1994.
31. **Woollacott M**, Manchester DL. Anticipatory postural adjustments in older adults: are changes in response characteristics due to changes in strategy? *J Gerontology*. 48:M64-70, 1993.
30. **Woollacott M**. Age-related changes in posture and movement. *J Gerontology* 48(special issue):56-60, 1993.
29. Moore S, **Woollacott M**. The use of biofeedback devices to improve postural stability. *Physical Therapy Practice* 2:1-19, 1993.
28. Sveistrup H, Burtner P, **Woollacott M**. Can motor control theories be used to understand and teach children with motor impairments? *Pediatric Exercise Science* 4: 249-269. 1992.
27. Williams H, **Woollacott M**, Ivry R. Timing and Motor Control in Clumsy children. *J Motor Behavior* 24:165-172. 1992.
26. Lundy-Ekman L, Ivry R, Keele S, **Woollacott M**. Timing and force control deficits in clumsy children. *Journal of Cognitive Neuroscience* 3: 367-381, 1992.
25. Meglin J, **Woollacott M**. The neural choreography underlying a pirouette-arabesque. *Kinesiology and Medicine for Dance*. 1992;14:95-105.
24. **Woollacott M**, Sveistrup H. Changes in the sequencing and timing of muscle response coordination associated with developmental transitions in balance abilities. *Human Movement Science*. 11:23-36. 1992.
23. **Woollacott M**, Shumway-Cook A. Changes in posture control across the lifespan: a systems approach. *Journal of Physical Therapy*, 70:799-807, 1990.
22. **Woollacott MH**. Changes in posture and voluntary control in the elderly: research findings and rehabilitation. *Topics in Geriatric Rehabilitation* 5: 1-11, 1990.
21. Manchester D, **Woollacott MH**, Zederbauer-Hylton N, Marin O. Visual, vestibular and somatosensory contributions to balance control in the older adult. *Journal of Gerontology* 44: M118-127. 1989.
20. Inglin B, **Woollacott MH**. Aging and anticipatory postural adjustments associated with

reaction time arm movements. *Journal of Gerontology*.43: M105-113. 1988.

19. Woollacott M, von Hofsten C, Rosblad B. Relation between response onset and body segmental movement during postural perturbations in humans. *Experimental Brain Research*. 72:593-604. 1988.

18. Hansen P, **Woollacott M**, Debu B. Responses to sequential postural perturbations. *Experimental Brain Research*. 73: 627-636. 1988.

17. Debu B, **Woollacott M**. Effects of gymnastics training on postural responses to stance perturbations. *Journal of Motor Behavior*. 20: 273-300. 1988.

16. Keshner EA, **Woollacott MH**, Debu B. Neck, trunk and limb muscle responses during postural perturbations in humans. *Experimental Brain Research* 71: 455-466. 1988.

15. von Hofsten C, and **Woollacott M**. Motor control is more than cognition. *European Journal of Cognitive Psychology*. 7:167-170, 1987.

14. **Woollacott M**, B Debu, M Mowatt. Neuromuscular control of posture in the infant and child: is vision dominant? *J. of Motor Behavior*. 19:167-186, 1987.

13. **Woollacott M**, Shumway-Cook A, Nashner L. Aging and posture control: changes in sensory organization and muscular coordination. *International Journal of Aging and Human Development*. 23:97-114. 1986.

12. Shumway-Cook A, **Woollacott M**. The growth of stability: postural control from a developmental perspective. *J. of Motor Behavior*. 17:131-147. 1985.

11. Shumway-Cook A, **Woollacott M**. Dynamics of postural control in the child with Down syndrome. *J. of Physical Therapy*. 65:1315-1322. 1985.

10. **Woollacott M**, Bonnet M, Yabe K. Preparatory process for anticipatory postural adjustments: modulation of leg muscle reflex pathways during preparation for arm movements in standing man. *Exp Brain Res*. 55:263-271. 1984.

9. **Woollacott M**. The effects of alcohol on the long latency response to postural perturbations in humans. *Experimental Neurology*. 80:55-68. 1983.

8. Bressan E, **Woollacott M**. A prescriptive paradigm for sequencing instruction. *J. of Human Movement Science*. 1:155-175. 1982.

7. **Woollacott M**, Nashner L. Inhibition of the Achilles tendon reflex by antagonist long latency postural responses in humans. *Experimental Neurology*. 75:426-439. 1982.

6. Rushmer D, **Woollacott M**, Robertson L, Laxer K. Somatotopic organization of climbing fiber projections from low threshold cutaneous afferents to pars intermedia of cerebellar cortex in the

cat. *Brain Research*. 181:17-30. 1980.

5. Nashner L, **Woollacott M**, Tuma G. Organization of rapid responses to postural and locomotor-like perturbations of standing man. *Experimental Brain Research*. 36:463-476. 1979.

4. **Woollacott M**, Hoyle G. Neural events underlying learning in insects: changes in pacemaker. *Proceedings of the Royal Society, B*. 195:394-415. 1977.

3. **Woollacott M**. Patterned neural activity associated with prey capture in *Navanax*. *Journal of Comparative Physiology*. 94:69-84. 1974.

2. **Woollacott M**. *Neural Correlates of the Prey Capture Response in Navanax*. Ph.D. Thesis, U.S.C., January, 1973.

1. MacBrinn M, Okada S, **Woollacott M**, Patel V, Ho M, Tappel A, O'Brien J. Beta-Galactosidase deficiency in the Hurler Syndrome. *New England Journal of Medicine*. 281:338-343. 1969.

Refereed Book Chapters:

52. **Woollacott M**. Ch. 18. *Kundalini* awakenings-Expanding science to encompass a postmaterialist perspective. In: Beauregard M, Schwartz G, Dyer N, Woollacott M, Eds. *Expanding Science*, Battleground, WA: AAPS Press, 2020.

51. **Woollacott M**. What do near-death and meditation experiences tell us about the primacy of consciousness? In: Schwartz, SA, Woollacott, M, Schwartz, GE, Eds. *Is Consciousness Primary?* Battleground, WA: AAPS Press. 2020.

50. **Woollacott, MH**. Chapter 15: Meditation, neurobiological changes, genes and health. A new paradigm for the healthcare system. In: A. Bakhru (ed). *Nutrition and Integrative Medicine: A Primer for Clinicians*. 2017.

49. **Woollacott, MH**. Anticipatory Postural Control. *Encyclopedia of Neuroscience*. (Binder M, Hirokawa N, Windhorst U, Eds.) Heidelberg: Springer, 2008.

48. **Woollacott MH**, Crenna P. Posture control in standing and walking in children with cerebral palsy. In (Hadders-Algra M, Brogren E, Latash M (eds). *Posture: A Key Issue in Developmental Disorders*. London: MacKeith Press. 2008.

47. **Woollacott, MH**, Shumway-Cook A. Postural control in the child with cerebral palsy: improvement with balance training. In: (M. Majno, ed) *Bilateral spastic cerebral palsy: the structure underlying functions and the evidence based rehabilitation*. Mariani Foundation Paediatric Neurology Series. Milan: FrancoAngeli, 2005, pp 17-26.

46. **Woollacott, MH.** Balance, Posture and Gait. In: Birren, (ed.). *Encyclopedia of Gerontology*, 2nd Edition, Amsterdam: Elsevier, 2006.
45. **Woollacott MH,** Adomaitis L, Langan J. Intensive Balance Training in Patients with Stroke: A Modification of Constraint-Induced Therapy. In: M. Latash (ed). *Progress in Motor Control IV*. 2004.
44. **Woollacott MH.** Development of Balance control in typically developing children and children with cerebral palsy: contributions and constraints of musculoskeletal vs nervous subsystems. In: M. Latash (ed). *Progress in Motor Control II*, 2002.
43. **Woollacott, M,** Tang P-F, Lin, S-I. Dynamic Balance control in older adults: does limited response capacity lead to falls? In: G.N. Gantchev, S. Mori, J. Massion (eds). *Motor Control: Today and Tomorrow*, Academic Publishing House "Prof. M. Drinov": Sofia, Bulgaria, 1999, pp. 293-305.
42. **Woollacott M,** Shumway-Cook A. Clinical and Research Methodology for the study of posture and balance. In: Sudarsky L (ed). *Gait Disorders of Aging*. Philadelphia: Lippincott-Raven.1996, pp 107-121.
41. Tang PF, **Woollacott MH.** Balance control in older adults: training effects on balance control and the integration of balance control into walking. In: N Teasdale, AM Ferrandez, eds. *Advances in Psychology, # 114: Changes in Sensorimotor behavior in aging*. Elsevier: Amsterdam. pp 339-367, 1996.
40. Tang PF, **Woollacott MH.** Balance control in the elderly. In: AM Bronstein, T Brandt, M Woollacott, eds. *Clinical Disorders of Balance Posture and Gait 2nd Edition*, London: Edward Arnold. 2004.
39. Massion J, **Woollacott M.** Normal Balance. In: A Bronstein, T Brandt, M Woollacott, eds. *Clinical Aspects of Balance and Gait disorders*. London: Edward Arnold, 1996.
38. **Woollacott M,** Assaiante C, Amblard B. Development of balance and gait control. In: A Bronstein, T. Brandt, M Woollacott, eds. *Clinical Aspects of Balance and Gait Disorders*, London: Edward Arnold, 1996.
37. Burtner P, **Woollacott M.** Theories of Motor Control. In C Fredricks, L Saladin, eds. *The Motor System: Basic Principles and Pathophysiology*. 1995.
36. **Woollacott M,** Jensen J. Posture and Locomotion. In: H Heuer, S Keele, *Handbook of Perception and Action, Vol 2*. Academic Press, 1996, pp 333-403 (also translated into German and published by: Gottingen: Hogrefe. 1994, 413-508)
35. Tang PF, Moore S, **Woollacott M.** Relationship between functional mobility and static sensory balance testing in older adults with balance problems. In: *Posture and Gait: Vestibular and Neural Front*. Taguchi K, ed. 1994.

34. Roberts BL, Srouf M, **Woollacott MH**, Tang PF. The effects of a twelve-week aerobic walking program on gait of healthy elderly. In: *Posture and Gait: Vestibular and Neural Front*. Taguchi K, ed. 1994.
33. Hu MH, **Woollacott MH**. Characteristic Patterns of gait in older persons. In: Spivack BS, ed. *Mobility and Gait*. NY: Marcel Dekker, Inc. 1994.
32. **Woollacott M**, Assaiante C, Amblard B. Initiation of gait in infants and children: integration of postural responses into the first step. In: Taguchi K, Igarashi M, Mori S, eds. *Vestibular and Neural Front*. Amsterdam: Elsevier, 1994, pp. 143-146.
31. **Woollacott M**. Changes in balance control across the lifespan: can training improve balance efficiency? In: Taguchi K, Igarashi M, Mori S, eds. *Vestibular and Neural Front*. Amsterdam: Elsevier, 1994, pp. 121-130.
30. **Woollacott M**, Shumway-Cook A. Maturation of feedback control of posture and equilibrium. In: E Fedrizzi, G Avanzini, P Crenna, eds. *Motor Development in Children*. London: John Libbey. 1994.
29. Sveistrup H, **Woollacott M**. Systems Contributing to the emergence and maturation of stability in postnatal development. In: Savelsbergh GJP, ed. *The Development of Coordination in Infancy*. Elsevier Science Publishers. 1993. pp. 319-336.
28. **Woollacott MH**, Hu MH. Age-related changes in balance: Rehabilitation strategies. In: Perry HM, Morley JE, Coe RM, eds. *Aging and Musculoskeletal Disorders: Concepts, Diagnosis and Treatment*. NY: Springer. 1993: 167-177.
27. **Woollacott MH**, Moore S, Hu MH. Improvements in balance in the elderly through training in sensory organization abilities. In: Stelmach G, Homberg V, eds. *Sensorimotor Impairment in the Elderly*. Dordrecht, Netherlands:Kluwer, 1993: 377-392.
26. **Woollacott MH**. Early postnatal development of posture control: normal and abnormal aspects. In: AF Kalverboer, B Hopkins, R Geuze, eds. *Motor Development in Early and Later Childhood: Longitudinal Approaches*. Cambridge: Cambridge Univ. Press. 1993, pp. 89-108.
25. Shumway-Cook A, **Woollacott MH**. Theoretical issues in assessing postural control. In: I. Wilhelm (Ed.) *Physical Therapy Assessment in Early Infancy*. NY: Churchill Livingstone, 1993 pp.161-171.
24. **Woollacott M**, Shumway-Cook A. Management of posture and balance disorders. In: *Care of the Geriatric Patient in the tradition of E.V. Cowdry*. St. Louis: Thomas Manning Co. 1992.
23. **Woollacott MH**, Burtner P. Sensori-motor deficits associated with posture control in children with cerebral palsy. In: M. Sussman, ed. *Priorities for Treatment of Children with Spastic Diplegia*. 1992.

22. Hu, MH, **Woollacott MH**. A training program to improve standing balance under different sensory conditions. In: Woollacott M, Horak F, eds. *Posture & Gait: Control Mechanisms*, Eugene, Oregon: U of O Books, 1992: 199-202.
21. **Woollacott MH**. Postural control in older persons. In: *Reducing Frailty and Falls in Older Persons*. R. Weindruch, E. Hadley & M. Ory, eds. Springfield, Ill.: Charles C. Thomas. pp. 454-463. 1991.
20. **Woollacott MH**. Changes in postural control and the integration of postural responses with voluntary movements with aging: is borderline pathology a contributor? In: T. Brandt, W. Paulus, W. Bles et al, eds. *Disorders of Posture and Gait*. pp. 221-228, 1990.
19. Hu M, **Woollacott M**. Neck and trunk muscle responses to platform perturbations in older adults, In: T. Brandt, W. Paulus, W. Bles et al, eds. *Disorders of Posture and Gait*. pp. 257-260, 1990.
18. **Woollacott MH**. Postural control mechanisms in the young and old. In: P. Duncan (Ed.) *Balance*. Alexandria VA.: APTA Association. pp. 23-28, 1990.
17. **Woollacott M**. Development of postural equilibrium during sitting and standing. In: Bertenthal and Bloch, eds. *Development of Motor Coordination in Children*. Dordrecht, Netherlands:Kluwer. pp. 217-320, 1990.
16. **Woollacott M**. Postural control in children with sensori-motor disorders: Cerebral palsy, Down Syndrome and Learning Impaired. In: M.Torode & R. Balnave, eds. *Motor Disturbances: Mechanisms and Implications for Therapy*. pp. 161-168. 1989.
15. **Woollacott MH**. Aging, posture control and movement preparation. In: M. Woollacott & A. Shumway-Cook, eds. *Development of Posture & Locomotion Across the Lifespan*. Columbia S.C.: Univ. of S. Carolina Press. 1989.
14. **Woollacott MH**. Organization and programming of motor activity during postural control: changes in aged. In: M. Torode & R. Balnave, eds. *Motor Disturbances: Mechanisms and Implications for Therapy*. pp. 129-134. 1989.
13. **Woollacott M**. The assessment of postural control using a moveable platform. In (M. Torode & R. Balnave, eds.) *Motor Disturbances: Mechanisms and Implications for Therapy*. pp. 55-61. 1989.
12. **Woollacott MH** , Shumway-Cook A, Williams H. The development of posture and balance control in children. In: M. Woollacott & A. Shumway-Cook, eds. *Development of Posture & Locomotion Across the Lifespan*. Columbia, S.C.: Univ. of S. Carolina Press. 1989.
11. Debu B, Werner L, **Woollacott MH**. Development of postural stability: influence of athletic

training. In: M. Woollacott & A. Shumway-Cook, eds. *Development of Posture & Locomotion Across the Lifespan*. Columbia, S.C.: Univ. of S. Carolina Press. 1989.

10. **Woollacott M**, Inglin B, Manchester D. Response preparation and posture control: neuromuscular changes in the older adult. In: *Central Determinants of Age Related Declines in Motor Function*, J. Joseph, ed., The New York Academy of Sciences Press, 1988, pp. 42-53.

9. **Woollacott MH**. Posture and gait from Newborn to Elderly. In: B. Amblard, ed. *Development, Adaptation and Modulation of Posture and Gait*. Amsterdam: Elsevier. 1988, pp. 3-12.

8. Debu B, **Woollacott M**, Mowatt M. Development of postural control in children: effects of gymnastics training. In: J. Clark & J. Humphrey, eds. *Advances in Motor Development Research, II*. AMS Press, NY, 1987. pp.41-69.

7. **Woollacott M**. Postural control and development. In: M. Wade and H. Whiting, eds. *Themes in Motor Development*. North-Holland Publishing Co., Amsterdam. 1987, 3-19.

6. **Woollacott M**, B. Debu, and A. Shumway-Cook. Children's development of posture and balance control: changes in motor coordination and sensory integration. In: D. Gould and M. Weiss, eds. *Advances in Pediatric Sport Sciences, V. II: Behavioral Issues*. Human Kinetics Publishers, Champaign, Ill. 1987, pp. 211-233.

5. **Woollacott M**, Bressan E. The development of sensori-motor integration: some implications from eye-hand coordination and balance control. *Advances in Motor Development Research, I*. J. Clark & J. Humphrey, eds. AMS Press, NY, 1986, pp. 135-151.

4. **Woollacott M**, Shumway-Cook A. The development of the postural and voluntary motor control systems in Down's Syndrome children. In: M. Wade, ed. *Motor Skill Acquisition of the Mentally Handicapped: Issues in Research and Training*. Amsterdam: North- Holland, 1986. pp. 45-71.

3. **Woollacott MH**. Gait and postural control in the aging adult. In: W. Bles & T.Brandt, eds. *Disorders of Posture and Gait*. Elsevier, Amsterdam, 1986. pp. 325-336.

2. **Woollacott MH**, Shumway-Cook A, Nashner L. Postural reflexes and aging. In: J. Mortimer, F. Pirozzolo, & G. Maletta, eds. *The Aging Motor System*. Advances in Neurogerontology, Vol. 3. Praeger, NY. 1982. pp. 98-119.

1. Nashner L, **Woollacott M**. The organization of rapid postural adjustments of standing humans: an experimental conceptual model. In: R. Talbot & D. Humphrey, eds. *Posture and Movement* Raven Press, NY. 1979, pp. 243-257.

GRANTS AND CONTRACTS

2011-2015: Spinal Segmental Contributions to Sitting and Reaching in Cerebral Palsy.
National Institutes of Health; total award: \$1,000,000. M. Woollacott, PI.

- 2008-2011. NHMRC Grant, Australia. Training Dual Task Performance during Gait in Parkinson's Disease. S. Brauer, PI, M. Woollacott, Co-investigator. \$336,000.
- 2007-2010 Mind-Life Institute Varela Award: A Randomized Controlled Single-Blinded Pilot Trial to Compare Effects of Concentrative Sitting Meditation to Moving Meditation (Tai Chi) Training on Attentional Network Efficiency (\$15,000). (To: T. Hawkes and M. Woollacott).
- 1985-2002; 2005-2010 Age-related changes in posture and movement (M. Woollacott, PI); National Institutes of Health, National Institute on Aging; total award \$562,108 for 1991-1995. Total award \$915,293 for 1995-2001. Renewal for 2005-2009: \$1,948,032.
- 1999-2009 National Institutes of Health (M. Woollacott, PI). Title: Constraints on dynamic balance control in children with cerebral palsy. Total award: \$551,072 for 1999-2002; \$1,225,000 for 2003-2009.
- 2004-2006 Grammy Award Application: The Development of Pitch Performance in Cellists (M Woollacott, PI), \$45,000, 2 years.
- 2001-2002 Northwest Health Foundation (M Woollacott, PI). Title: High Intensity Strength Training to Enhance Balance in Frail Older Adults. Total Award: \$1825.
- 2000-2001 Northwest Health Foundation (M. Woollacott, PI). Title: A Systems-based Forced-use Approach to Retraining Balance after Stroke. Total Award: \$44,231.
- 1996-2001 National Science Foundation Collaborative grant with the CNRS of Marseille, France. Woollacott, PI) Title: Is the refinement of the neural control of balance critical to the emergence of mature locomotion? Total award: \$21,900
- 1998-99 Medical Research Foundation. (M.Woollacott, PI). Title: Chick Postural Control: A Possible Model for Human Posture Control, Total requested: \$ 24,700.
- 1991-1999 National Science Foundation Grant. Title: Critical Transitions in Posture and Locomotor Development in Children. M. Woollacott, PI. Initial award: \$239,000. Continuing award: \$180,000, for 1996-1999.
- 1995-1997 Foundation for Physical Therapy Grant. (M. Woollacott, Co-investigator). Title: The Clinical Implications of Attentional Demands and Postural Control in Older Adults. Total award: \$45,309
- 1988-1992 Systems Physiology Training Program. National Institutes of Health. J. Weeks, PI. Members of Institute of Neuroscience, including Woollacott, Advisors)
- 1993-1998 Systems Physiology Training Program. National Institutes of Health. J. Weeks, PI.

(Members of Institute of Neuroscience, including Woollacott, Advisors)
\$1,182,280.

- 1992-1993 International Symposium of Posture and Gait: Control Mechanisms; National Institutes of Health, National Institute on Aging. M. Woollacott, PI. Total Award: \$36,350.
- 1982-83 Automation and cognitive factors in postural response control: an electromyographic and reflexologic study in humans, Fyssen Foundation, France; total award \$6,000.
- 1983 The functional reorganization of motor structures before movement; new reflex approaches in man (J. Requin, PI; M. Woollacott, investigator); CNRS; total award 150,000 French francs.
- 1981-82 Dynamics of Posture and Voluntary Movement in Children with Down's Syndrome (M. Woollacott, PI); Medical Research Foundation of Oregon; total award \$12,000.
- 1978-80 Studies on Control of Human Posture (L. Nashner, PI, M. Woollacott, co-investigator); NIH; total award \$178,179.

ACADEMIC HONORS

Elected to Phi Beta Kappa

Graduated Magna Cum Laude, University of Southern California,

Honors Extraordinary in Organic Chemistry, Pasadena City College

National Institutes of Health Postdoctoral Fellowship, Neurophysiology, University of Oregon

Alfred P. Sloan Postdoctoral Research Associate, Neurophysiology, University of Oregon

Nominee for the Recognition Award for Young Scholars, by American Association of University Women, University of Oregon

Certificate of Appreciation, American Physical Therapy Association

Fellow, AAHPERD Research Consortium

Research Professor, Dept. of Psychology, University of Umea, Umea, Sweden, 1986-87

Research Prof, Neurobiol of Movement, National Center for Scientific Research, Marseille, France, 1993-94.

Oen Fellow Award, 2017, Luther College, Decorah, Iowa Award: \$4000 (invited to present a public lecture and lead class discussions on my book *Infinite Awareness: The Awakening of a Scientific Mind*.)

Esther Larson McGinnis Scholar for 2003, Illinois State University (A prominent woman scholar is selected and invited to the campus each year to share her expertise with students and faculty and given a \$1000 award) Talk Title: Preventing Falls in the Older Adult: Effect of Tai Chi Training.

Invited Keynote speaker, International Conference on Cerebral Palsy, Quebec City, Canada, April 30-May 3, 2003. Presentation title: The effect of reactive balance training on postural control in children with cerebral palsy.

Invited Speaker, Progress in Motor Control-IV, Motor Control and Learning over the Life Span, University of Caen Basse-Normandie, France, August 20-23, 2003.

Invited Speaker, Conference titled “Posture in the Picture”, on rehabilitation of children with cerebral palsy, Groningen, Netherlands, 2004

Invited Speaker, Neuro-rehabilitation Course on Basic Principles of Therapeutic Exercise in Brain Injured Children, sponsored by the Pediatric Neuro-Rehabilitation Division, Children’s Hospital “Bambino Gesù”- Palidoro-Rome, Italy, May 5-6, 2005; Talk title: Balance control in children with cerebral palsy: evidence-based methods of assessment and treatment

Given the “Senior Scholar in Motor Development” Award from NASPSA (North American Society for Sport and Physical Activity). Given a monetary award and made keynote speaker for the national meeting in St. Petersburg, Florida, June 2005. Talk title: Development of balance control in typically developing children and children with spastic diplegia: laboratory tests of methods to improve balance.

Selected as Senior Scientist: Mind-Life Summer Research Institute, Garrison, NY, June 2006; June 2007, 2009. Theme: Examining the potential role of contemplative methods for characterizing human experience and consciousness from a neuroscience and clinical intervention perspective.

Invited speaker, Conference titled: The Physiology of Motor Development: Implications for Children with Motor Disabilities: to be held at The Novartis Foundation London: 22 and 23 November 2007. Title: Postural Control in Typically Developing Children and Children with Cerebral Palsy: Do Attentional Constraints Affect Balance?

Distinguished Lecturer Award 2009, Physical Therapy Program, Department of Health Professions, University of Wisconsin, La Crosse. Title: New Therapies for Improving Balance in Older Adults: Evidence Based Practice

Invited Speaker, Danish Physiotherapy Annual Conference, Odense, Denmark, March 26-27, 2009. Title: Constraints on the Development of Sitting Balance in Children with Cerebral Palsy

Invited Senior Scientist, Max Planck Institute for Human Development, Berlin Germany. April-May, 2009.

Invited speaker: University of Leuven, Leuven, Belgium, October, 2009. Title: Attentional Factors Contributing to Balance Constraints During Stance & Gait in Older

Adults: Can These Be Reduced With Training?

Keynote Speaker. Australasian Cerebral Palsy and Developmental Medicine Meeting. Christchurch, New Zealand. International, March, 2010.

Invited Speaker. Auckland Balance Symposium. Auckland, New Zealand, 2010.
National. Talk Titles: 1. Retraining balance in neurological patients: evidence based practice. 2. Massed practice in retraining balance after stroke.

Invited Speaker. Hamburg, Germany, 3-Day Workshop on Balance Rehabilitation in the Neurological Patient. International. Fall, 2009.

Invited Speaker, Danish PT Association 3-Day Workshop, Odense, Denmark, Title: Geriatrics and Balance Rehabilitation.

Invited Speaker, Swedish National Physiotherapy Association Meeting, Gothenburg, Sweden, Fall 2009. One day workshop, Title: Balance Rehabilitation in the Neurological Patient.

Invited Keynote Speaker, Motor Behavior Society of Brazil, Londrina, Brazil, July 2010. Aging and Balance Control.

Invited Keynote Speaker, International IBITA meeting, Florianopolis, Brazil, September, 2010. One day course on Balance Rehabilitation in Stroke patients.

Our 2010 article “Refinement, Reliability, and validity of the Segmental Assessment of Trunk Control” received the **Pediatric Physical Therapy journal's Toby Long Award.** The award is given annually for the best manuscript published in *Pediatric Physical Therapy*.

Invited Keynote speaker: Manila Philippines, November, 2012 Balance and Disability in Chronic Diseases. 8th Pan Pacific Conference on Rehabilitation.

Invited Geriatric and Rehabilitation Physical Therapy Workshop presentations: Copenhagen, Denmark, April 2012 (Sponsored by the Danish Physiotherapy Association), Amsterdam, Netherlands, April, 2012 (Sponsored by Netherlands IBITA Assn), Reykjavik, Iceland, May 2012 (sponsored by Icelandic Physiotherapy Assn).

Invited Physical Therapy Workshop presentations: Neurological Rehabilitation (with A. Shumway-Cook), Copenhagen, Denmark, June, 2013 (Sponsored by the Danish Physiotherapy Association), Genoa, Italy, June, 2013, Vienna, Austria, May, 2013 (sponsored by the Austrian Physiotherapy Association).

OTHER PROFESSIONAL ACTIVITIES

Steering Group, Galileo Commission: Expanding the Scope of Science, 2021-present
President, Academy for the Advancement of Postmaterialist Sciences (AAPS), 2018-present
Research Director, International Association of Near Death Studies (IANDS), 2017-present
Human Subjects committee, Institute of Noetic Sciences, 2017-present
Vice-president, International Society for Posture and Gait Research, 1990-92
President, International Society for Posture and Gait Research, 1992-1994
Editorial Board, Journal of Aging and Physical Activity, 1992-present
Editorial Board, Gait and Posture, 1992-1998
Editorial Board, Journal of Motor Behavior, 1984-present
Member, NIH Study Section, Geriatrics and Rehabilitation, 1995-2000
National Research Council, Reviewer of Doctoral Fellowship Applications, 1988
Co-organizer, International Society for Posture and Gait Research Meetings, 1992, Portland, OR.
Co-organizer, One-day workshop for American Physical therapy Association, Las Vegas, Nevada, 1984. Title: A Developmental Perspective in Inter-sensory Integration and Motor Control

ASSOCIATIONS

Academy for the Advancement of Postmaterialist Sciences (AAPS)
International Association for Near-death Studies (IANDS)
Galileo Commission: Expanding the Scope of Science
Parapsychology Association
Scientific and Medical Network (SMN)
Society for Neuroscience
International Society for Posture and Gait Research (ISPGR)
American Gerontological Society
Society for Research on Child Development
International Brain Research Organization

Courses Taught at the U of Oregon:

Motor Control
Motor Development Across the Lifespan
Exercise and Performance
Neural Mechanisms underlying Human Movement
Neural Control of Posture and Locomotion
Research Methods in Posture Control
Systems Neuroscience (Course coordinator: team taught)
Alternative and Complementary Medicine
Meditation I and II
Hatha Yoga

SERVICE TO THE PROFESSION AND COMMUNITY

Yoga and Meditation Related Service/Activities

2008-20017: Assistant to the Academic Council and Advisor to the Board of Directors,

Muktabodha Indological Research Center.

Other Service To The Profession

Member, Geriatrics and Rehabilitation Study Section, NIH, 1995-2000 (review grants 3 times per year at NIH). Ad Hoc Reviewer 2000-2006.

Vice-president, International Society for Posture and Gait Research, 1990-92

President, International Society for Posture and Gait Research, 1992-1994

Co-organizer, International Society for Posture and Gait Research XIth International Symposium titled "Posture and Gait: Control Mechanisms", Portland, Oregon, May 23-27, 1992. (Co-sponsored by the University of Oregon, Eugene and Good Samaritan Hospital, Portland)

Editorial Board, Journal of Aging and Physical Activity

Editorial Board, Journal of Motor Behavior

National Institute on Aging - National Aeronautics and Space Administration, Invited Panel Member to Organize conference on Sensorimotor Integration and Disintegration. February 10, 1992.

North American Society for Sport and Physical Activity, member program panel for Section on Motor Control, 1992

Grant Reviewer, National Science Foundation, National Institutes of Health

Site Visitor for National Institutes of Health for Grant reviews

(Site Visit Team Member, National Institute on Aging Review Committee, Univ. of Illinois, Champaign-Urbana, Illinois, December 1992.)

(Site Visit Team Member, National Institute on Aging Review Committee, Neurological Sciences Institute, Portland Oregon, Feb. 1993.)

External examiner:

Doctoral Thesis of: Lauren Mouchino, L'Universite d'Aix-Marseille II, Luminy, France, January 14, 1994.

Doctoral Thesis of: Hamid Lekhel, L'Universite d'Aix-Marseille II, Luminy, France, March 7, 1994.

Doctoral Thesis of Christina Schmitz, L'Universite d'Aix-Marseille II, Luminy, France, March, 2001

Habilitation (required for a Professor to become the head of a laboratory in France) of Dr. Christine Assaiante, 2000, Marseille, France.

Doctoral Thesis of: Sanna Sivonen, University of Jyväskylä, Jyväskylä, Finland, September 2004.

Doctoral Thesis of: Asa Hedberg, Karolinska University Medical School, Stockholm, Sweden, 2006.

Doctoral Thesis of: A. Mansfield, University of Toronto, Canada, 2007.

List of Trainees

	Dates, University	Area of Research During Training	Present Position	Research Area [Funding as PI]
Students				
Dan Corcos	1980-82, UO	Neural Control of Reaching skills	Professor, U. Illinois, Chicago Circle	Motor Deficits Associated with Parkinson's Disease. Continuously funded by NIH since 1986 [NIH R01]
Anne Shumway-Cook	1981-1983	Neural Control of Balance in Typically Developing Children and Children with Down Syndrome	Professor, U Washington	CDC, AARP, Royalty Research Fund
Allen Burton	1981-1984	Age related changes in the ability of children to integrate individual response units into reaching skills	Was Professor, U. of Minnesota, Minneapolis. Now Deceased.	Deceased.
Nicki Zederbauer-Hylton	1986	Effects of Aging and Visual Cues on Balance Control in Upright Stance	Retired.	Deceased.
Lars McNaughton	1982-1985	Upper extremity contributions to posture control	Professor, Univ of Bath, England	JREI, England
Paul Hansen	1982-1986	Adaptation of Postural Responses to changing task conditions	Was at Univ. of Arizona. Now retired.	Retired.
Iksoo Moon	1983-1987	Serial Pattern Learning in Adults: Internal Representation and Movement Control	Professor, Korea Univ, Korea	unknown
Laurie Lundy-Ekman	1986-1990	Soft Neurological Signs in Clumsy Children:	Professor, Pacific	unknown

		Indicators of Timing and Force dysfunction	University, Portland, OR	
Diane Manchester	1986-1990	Effects of Age, velocity and added mass on postural adjustments associated with a rapid arm-raising movement	Computer Technology, Eugene School District	
Ming-Hsia Hu	1987-1991	Effects of Sensory Balanced Training in Older Adults	Assoc. Prof., Taiwan University, Tai Pei, Taiwan	Taiwan Medical Council Research Institute Grant, Co-Investigator
Heidi Sveistrup	1988-1993	Contributions of the Visual and Somatosensory Perceptual Systems to the Development of Postural Control in Infants	Prof., Univ of Ottawa, Canada	Career Scientist Award NSERC, CIHR, Canada
Patricia Burtner	1992-1996	Development of Standing Balance in Children with Cerebral Palsy	Professor, U. New Mexico	NIH, US Dept of Education
John McChesney	1992-1996	Total Knee Replacement and Age-related Declines in Proprioception: Their Effects on Postural Control	Assoc. Professor, U of Idaho	
Pei-Fang Tang	1993-1997	Balance Adjustments in Perturbed Human Walking: Neuromuscular Control Mechanisms and Effects of Aging	Assoc. Professor, Taiwan University, Tai Pei, Taiwan	Taiwan Medical Health Research Institute Grants

Raymond Chong	1992-1997	The Adaptation of Automatic Postural Responses to Changing Task Conditions: Impairment as a Result of Parkinson's Disease	Assoc. Professor, Georgia Regents Univ, Augusta	Unknown
Sang-I Lin	1993-1997	Adapting to Dynamically Changing Balance Threats: Differentiating Young, Healthy Older and Unstable Older Adults	Chair and Prof, Dept of PT, National Cheng-Kung Univ, Tainan, Taiwan	National Health Research Institute Grants, Taiwan
Jan Jasiewicz	1995-1999	Neural Mechanisms of Chick Posture Control	Res Assoc, U. of Queensland, Australia	
Lynne Sundermeier	1995-1999	Characteristics of Balance and Posture Control in Development and Aging	Dance profession	
Laura Adomaitis	1998-2002	The Effects of Massed Practice on Postural Control in Patients with Stroke	Postdoctoral Research, U of O	
Jennifer Hess	1999-2004	High Intensity Strength Training to Enhance Balance Control in Frail Older Adults	Research Assoc, Labor Education and Research Center, U of Oregon	PI, Research Grant Subcontract, U Iowa through CPWR. PI OSHA Training Grant
Dinah Reilly	2001-2005	Development of Postural Control in Typically Developing Children and	Faculty PT, Early Childhood Center, Boise	

		Children with Cerebral Palsy: Effects of Dual Task Conditions		
Tim Vander Velde	2006	The Effects of Varied Cognitive Loads on Stance Posture Control: A Study of Dual Task Performance in Young Adults	Audiologist	
Strawberry Gatts	2000-2005	Neural and Biomechanical Mechanisms Underlying Balance Improvement With Short Term Tai Chi Training In Balance-Impaired Older Adults	Emory University, and VA Hospital, Atlanta Georgia	VA Career Development Award
Jessie Chen	2000-2005	Cognitive and Motor Strategies for Pitch Performance Accuracy in Skilled Cellists	Research Asst. Prof., New York University Medical Center	NIH R01, Research Associate
Joseph Ka-Chun Siu	2002-2006	The contribution of attentional factors to balance constraints during gait in healthy and balance impaired older adults	Asst. Prof. Univ. of Nebraska Medical Center	
Aditi Joshi	2003-2007	The effects of meditation training on attentional networks: a randomized controlled trial	Res. Assoc. UCLA	

		examining psychometric and EEG measures		
Patima Silsupadol	2003-2008	Effects of individualized training on balance performance under dual task conditions in older adults with balance impairment: a randomized, controlled trial	Assistant Prof, Changmai University, Thailand	
Sandra Saavedra	2004-2010	Development of spinal control in children with CP vs Typically developing children; effects of spinal segmental training in children with CP	NIH Postdoctoral Fellow, University of Michigan	NIH Pre-doc NRSA
Sujitra Boonyong	2005-2010	Dual task control of balance during gait in typically developing children and children with cerebral palsy		NIH grant predoctoral fellow
Teresa Hawkes	2005-2012	Effects of Tai Chi, aerobic walking, & meditation training on cognitive function		NIH Systems Training Grant, NIA grant predoctoral fellow
C. Elaine Little	2006-2012	Comparison of attentional mechanisms contributing to deficits in dual		Postdoctoral Fellow. U. of Calgary

		task control of posture in older adults and TBI patients		
Jaya Rachwani	2011-15	Segmental contributions to sitting and reaching abilities in the development of typical children		Postdoctoral fellow, Dept. of Psychology, NYU
Victor Santamaria	2011-15	Segmental contributions to sitting and reaching abilities in the development of children with CP		NIH grant postdoctoral fellow, Columbia University
Post-Doctoral Fellows				
Emily Keshner	1986		Prof, Dept. Head, Temple University, Pennsylvania	NIH R01s, NIA, National Inst for Deafness and Comm. Disorders
Bettina Debu	1988-90		Prof, Univ of Grenoble, France	Fox Foundation for Parkinson's Research
Sandy Moore	1992-1995		Administrator, Fort Sanders Regional Hospital, Knoxville, Tenn.	
Lesley Anne Brown	1994-97		Prof., Lethbridge Univ, Lethbridge, Canada	Canadian Heritage Grant
Sandy Brauer	1998-2000		Prof. Univ of Queensland, Australia	NHMRC Grants, Australia
M. Nida Roncesvalles	1999-2000		Assoc. Prof, Univ of Texas	
Wei-Li Hu	2008-2009		Assistant Prof. National Taiwan University	
Faculty				
Dr. Jody Jensen	1990-1996		Professor, U of Texas	NSF grants, American Federation of Aging, NIH

Dr. Paul van Donkelaar	1998-2003		Prof. U of British Columbia	
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