

---

---

# D. CLARK DICKIN

## CURRICULUM VITAE

---

---

*Last Name:* Dickin  
*First Name:* Douglas “Clark”  
*Office Phone Number:* (765) 285-5139  
*Fax Number:* (765) 285-8762  
*E-mail Address:* [dcDickin@bsu.edu](mailto:dcDickin@bsu.edu)

### EDUCATION

---

- 2002 Ph.D., Oregon State University, Corvallis, Oregon  
Emphasis: Motor Control/Learning. Minor: Gerontology.  
Dissertation: Sensory Integration during Balance in Individuals with Differing Degrees of Senile Dementia of the Alzheimer’s Type.  
Director: Debra J. Rose
- 1996 M. S., University of Nevada Las Vegas, Las Vegas, Nevada  
Emphasis: Kinesiology (Biomechanics).  
Thesis: The effect of movement velocity and eccentric contractions on the bilateral deficit.  
Director: Danny Too
- 1993 B.P.E., University of Calgary, Calgary, Alberta  
Emphasis: Physical Education

### ACADEMIC OR PROFESSIONAL POSITIONS

---

- 2009-Present Biomechanics Laboratory Director, Assistant Professor, School of Physical Education, Sport and Exercise Science; Ball State University, Muncie, IN
- 2006-2009 Assistant Professor, Department of Health, Physical Education, Recreation, & Dance; University of Idaho, Moscow, ID.
- 2001-2006 Assistant Professor, Department of Health, Exercise, & Sport Sciences; Texas Tech University, Lubbock, TX.

### MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

---

- The Gerontological Society of America
- American Society of Biomechanics
- North American Society for Psychology of Sport and Physical Activity

**Dickin, D.C.**, McClain, M.A., Hubble, R.P., Doan, J.B., Sessford, D. (In Press) Whole Body Vibrations Effect on Measures of Postural Sway Frequency and Complexity in Altered Sensory Environments. *Human Movement Science*.

Reyes, G. F., **Dickin, D.C.**, Crusat, N., Dolny, D. (2011). Whole-body vibration effects on muscle activity of upper and lower body muscles during the baseball swing in recreational baseball hitters. *Sports Biomechanics*. 10(4), 280-293.

Dickin, D.C., Sandow, R., & Dolny, D. (2011). Bilateral and Alternating Contraction Deficit in Total and Individual Joint Powers during Multi-Joint, Closed-Chain Leg Extensions. *European Journal of Sports Sciences*. 11(6), 437-445.

Reyes, G.F., **Dickin, D.C.**, & Dolny, D. (2010). Effects of muscular strength, exercise order, and acute whole-body vibration exposure on bat swing velocity. *Journal of Strength & Conditioning Research*. 24(12), 3234-3240.

**Dickin, D.C.** (2010). Obtaining reliable performance measures on the sensory organization test: Altered testing sequences in young adults. *Clinical Journal of Sports Medicine*. 20 (4), 278-285.

Guggenheimer, J.D., **Dickin, D.C.**, Reyes, G.F., & Dolny, D.G. (2009). The effects of specific preconditioning activities on acute sprint performance. *Journal of Strength and Conditioning Research*. 23(4), 1135-39.

**Dickin, D.C.** & Doan, J.B. (2008) Postural stability in altered and unaltered sensory environments following fatiguing exercise of the lower extremity joints. *Scandinavian Journal of Medicine and Science in Sport*. 18(6), 765-72.

**Dickin, D.C.**, & Clark, S.E. (2007). Generalizability of the sensory organization test in college aged males: Obtaining a reliable performance measure. *Clinical Journal of Sports Medicine*. 17 (2), 109-115.

Brown, L.A., Cooper, S.A., Doan, J.B., **Dickin, D.C.**, Whishaw, I.Q., Pellis, S., & Suchowersky, O. (2006). Parkinsonian deficits in sensory integration for postural control: temporal response to changes in visual input. *Parkinsonism and Related Disorders*, 12, 376-381.

**Dickin, D.C.**, & Too, D. (2006). Effects of eccentric contractions and movement velocity on the bilateral deficit. *Research Quarterly for Exercise and Sport*, 77, (3), 296-303.

**Dickin, D.C.**, Brown, L.A, Doan, J.B. (2006). Age-dependent differences in the time course of postural control during sensory perturbations. *Aging Clinical and Experimental Research*.18, ( 2),94-99.

**Dickin, D.C.,** & Rose, D.J. (2004). Sensory organization abilities during upright stance in late-onset Alzheimer's type dementia. *Journal of Experimental Aging Research*, 30, (4), 373-390.

**Dickin, C.,** & Too, D. (2000) Validation of a bilateral attachment designed for a Kin-Com isokinetic dynamometer. *Physical Therapy Reviews*, 5, 166-170.

#### MANUSCRIPTS IN REVIEW

---

Guggenheimer, J.D., & Dickin, D.C. (In Review). The Effects of Postural Complexity on the Soleus H-Reflex. Paper submitted to Motor Control.

Guggenheimer, J. D., Dickin, D. C. Postural Related Changes in the H-Reflex Following Whole Body Vibration. Paper submitted to Perceptual and Motor Skills.

Silvers, W., Bressel, E., Dickin, D. C., Killgore, G., Dolny, D. Effect of Aquatic Treadmill Running on Muscle Activation in the Lower Extremities. *Medicine and Science in Sports and Exercise*.

Surowiec, R., Wang, H., Dickin, D. C. Energy Expenditure and Muscular Activation Patterns through Active Sitting on Compliant Surfaces. Paper Submitted to Applied Ergonomics.

#### CONFERENCE PRESENTATIONS & PUBLISHED ABSTRACTS

---

Dickin, C., Hubble, R., McClain, M., and Guggenheimer, J. (2012, June). Influence of postural complexity and whole body vibration on soleus H-reflex activity. *Journal of Sport and Exercise Psychology*, 34(sup), S80. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Honolulu, Hawai'i

Dickin, D. C., McClain, M., Hubble, R. P. (2011). Effects of Vibration Amplitude and Frequency of Postural Sway in Altered Sensory Environments. American Society of Biomechanics. [www.asbweb.org/conferences/2011/pdf/108.pdf](http://www.asbweb.org/conferences/2011/pdf/108.pdf)

Surowiec, R., Wang, H., Hite, A., Dickin, D. C. (2011). Energy Expenditure and Muscular Activation Patterns through Active Sitting on Compliant Surfaces. American Society of Biomechanics. [www.asbweb.org/conferences/2011/pdf/389.pdf](http://www.asbweb.org/conferences/2011/pdf/389.pdf)

Guggenheimer, J.D., & **Dickin, D.C.** (2010, May). The Effects of Postural Complexity on Modulation of the Soleus H-reflex. Conference proceedings from the 2010 Joint European Society of Movement Analysis for Adults and Children & Gait and Clinical Movement Analysis Society Meeting, Miami, FL. (International)

Slater, G., Dickin, D. C., Dishman, M. (2010). Meta-Analysis of the Effects of Exercise and Use of the Nintendo Wii for Reducing Depression among Older Adults (Supp 1 ed., vol. 50, pp. 104). *The Gerontologist*.

Doan, J. B., Sessford, K. D., Dickin, D. C., Brown, L. A. (2010, February). Cluster Analysis of Phase Plane Posturography in Perturbed and Reintegrated Parkinson's Disease Balance (1st ed., vol. 16, pp. S64-S65). *Parkinsonism & Related Disorders*.

Rose, D.J., Marsh, K., & **Dickin, D.C.** (2009, June). Is the Sensory Organization Test a Reliable Measure of Central Sensory Function in Adults with Fibromyalgia. *The Gerontologist*, 49 (Suppl 2), 403. Paper presented at the 62<sup>nd</sup> Annual Scientific Meeting of the Gerontological Society of America, Atlanta, Georgia.

**Dickin, D.C.**, Guggenheimer, J., & Caldwell, M. (2009, June). Can balance training be facilitated with whole body vibration in older adults? Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Austin, TX

Reyes, G.F., **Dickin, D.C.**, & Dolny, D. (2009, June). Effects Of Muscular Strength, Exercise Order, And Acute Whole-body Vibration Exposure On Bat Swing Velocity. Paper presented at the 56<sup>th</sup> annual meeting of the American College of Sports Medicine, Seattle, WA.

**Dickin, D.C.**, Gregg, M., & Aune, A. (2008, June). Does whole-body vibration impact postural control in altered and unaltered sensory environments? *Journal of Sport and Exercise Psychology*, 30(sup), S74. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Niagara Falls, Ontario, Canada.

Doan, J.B., Brown, L.A., **Dickin, D.C.**, & Suchowersky, O. (June 2008). Phase plane analysis of perturbed and reintegrated posture in Parkinson's disease patients. Paper presented at the Movement Disorder Society's 12th International Congress of Parkinson's Disease and Movement Disorders, Chicago, Illinois

Guggenheimer, J.D., **Dickin, D.C.**, & Dolny, D. (June 2008). The role of post-activation potentiation in acute sprint performance. *Medicine and Science in Sports and Exercise*, 40:5, (sup. 396). Paper presented at the 55th annual meeting of the American College of Sports Medicine, Indianapolis, Indiana.

**Dickin, D.C.**, & Doan, J.B. (2007 June). Postural stability in altered and unaltered sensory environments following fatiguing exercise of lower extremity joints. *Journal of Sport and Exercise Psychology*, 29(sup), S67. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, San Diego, California

Brown LA, Cooper SC, Doan, JB, **Dickin, C.**, Wishaw I, Suchowersky O. (2007, June). Parkinson's disease patients retain the capacity for postural recovery following imposed sensory incongruence. Paper presented at the Movement Disorder Society's 11th International Congress of Parkinson's Disease and Movement Disorders, Istanbul, Turkey.

**Dickin, D.C.**, Perlmutter, L.C., Myers, N.G., & Brown, R.W. (2006, June). Changes in orthostatic blood pressure alter postural sway in young adults. *Journal of Sport and Exercise Psychology*, 28(sup), S57. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Denver, Colorado.

Burrell, K.W., Sawyer, R.D., **Dickin, D.C.**, & Williams, J.S. (2006, June). Cardiorespiratory Adaptations to a Heart Rate Based High Intensity Parallel Squat Resistance Training Program. *Medicine and Science in Sports and Exercise*, 38:5, (sup.). Paper presented at the 53rd annual meeting of the American College of Sports Medicine, Denver, Colorado.

**Dickin, D.C.**, Brown, L.A., Doan, J.B. (2005, June). Time Course Changes in Postural Control During Sensory Perturbations: Age-related Decline? *Journal of Sport and Exercise Psychology*, 27(sup), S56. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, St. Pete's Beach, Florida.

**Dickin, C.** (2003, November). Reliability of Dynamic Posturography in the Elderly and Individuals with Alzheimer's Disease. *The Gerontologist*, 43 (Special Issue 1), 459. Paper presented at the 56<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America, San Diego, California.

**Dickin, C.** (2003, June). Generalizability of the Sensory Organization Test in College-Aged Participants. *Journal of Sport and Exercise Psychology*, 25(sup), S50. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Savannah, Georgia.

**Dickin, D.C.**, & Rose, D.J. (2002, June). Falling and Alzheimer's Disease: Does Disease Progression Increase the Risk of Falls? *Journal of Sport and Exercise Psychology*, 24(sup), S51. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Baltimore, Maryland.

**Dickin, C.**, & Rose, D.J. (2001, November). Influences of Age and Falls Risk in the Performance of the Step-Quick Turn Test. *The Gerontologist*, 41 (Special Issue 1), 297. Paper presented at the 54<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America, Chicago, Illinois.

Rose, D. J., Jones, C. J., **Dickin, C.**, Lemon, N, & Bories, T. (1999, August). The effect of a community-based balance and mobility training program on functional performance and balance-related self-confidence in older adults with a history of falls. *Journal of Aging and Physical Activity*, 7:5, 265-266. Paper presented at the 5<sup>th</sup> World Congress on Physical Activity, Aging and Sports, Orlando, Florida.

**Dickin, C.**, & Rose, D. J. (1999, June). Effects of Aging on Dynamic Limits of Stability. *Journal of Sport and Exercise Psychology*, 21(sup), S38. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Clearwater, Florida.

Rose, D. J., & **Dickin, C.** (1999, June). Postural Instability and Age-Related Changes in Dynamic Limits of Stability. *Journal of Sport and Exercise Psychology*, 21, S93. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Clearwater, Florida.

**Dickin, C.**, & Too, D. (1999, May). Validation of a lever arm attachment for bilateral testing on a Kin-Com isokinetic dynamometer. *Medicine and Science in Sports and Exercise*, 31:5, (sup.). Paper presented at the 46th annual meeting of the American College of Sports Medicine, Seattle, Washington.

**Dickin, C.**, & Too, D. (1996, May) Effect of eccentric contraction movement velocity on EMG activity and the bilateral deficit. *Journal of Sport and Exercise Psychology*, 19,(sup.), S47. Paper presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Denver, Colorado.

#### CONFERENCE PRESENTATIONS (ABSTRACT NOT PUBLISHED)

---

Page, S.J., Macko, R., & **Dickin, D.C.** (April 2003). Pre-Conference Workshop – Enhancing Physical Activity and Motor Skills in Aging Populations. Reducing Falls Incidence Rates in Alzheimer’s Disease. Presented at the annual meeting of the American Alliance for Health, Physical Education, Recreation and Dance, Philadelphia, Pennsylvania. (Invited presentation)

**Dickin, D.C.** (1999, April) Effects of movement velocity and eccentric contractions on the bilateral deficit. Paper presented at the Southern California Conference on Biomechanics, Pomona, California.

#### GRANT ACTIVITIES

---

**Dickin, D.C.** Determination of Foot Pressure Measures in the Development of a Gait and Mobility Monitoring System for Elders. Proposal submitted to the Global Health and Emerging Media Institutes – Ball State University. Requested \$20,000 (Funded).

**Dickin, D.C.** Efficacy of balance related computer gaming activities on physical and psychological measures of wellbeing. Proposal submitted to the Cardinal Fellow Program – Ball State University. Requested \$2,500 (Funded).

Wang, H., & **Dickin, D.C.** Energy Expenditure and Muscular Activation Patterns Associated with Active Sitting on an Automatic Abs Seat Cushion and on an Exercise Ball. Proposal submitted to License Service International Inc. Requested \$2,963 (Partially funded).

Yoder-Slater, G., & **Dickin, D.C.** Engaging Learners in the Development of Essential Research Skills [ELDERS] Wii Project: A Matched Control Trial of Exercise and Self-

Efficacy on Elder Health and Mental Health Outcomes. Proposal submitted to the John A. Hartford Foundation. Requested \$99,858 (Not Funded)

**Dickin, D.C.,** Paul, D. (2009). Facilitating engagement in physical activity of older adults through improved balance and mobility. Proposal Submitted to the National Institute of Health/National Institute of Aging. Requested \$149,300 (Not Funded).

Seegmiller, J.G., Paul, D., Scruggs, P.W., & **Dickin, D.C.** (2009). Pre and postintervention measures of bone strength among 7-13 year-old girls: Interventions and a prediction model to prevent future fragility fracture. Proposal submitted to the National Institute of Health. Requested \$851,311 (Not Funded)

**Dickin, D.C.,** & Dolny, D. (2008). Effects of orthostatic hypotension and aging on balance and postural control in healthy young and older adults. Proposal submitted to the American Heart Association, Pacific Mountain Chapter. Requested \$126,254 Not funded.

**Dickin, D.C.** (2008). University Research Office and the NSF Idaho EPSCoR Program Travel Grant. Requested \$1033 Funded

**Dickin, D.C.** (2007). Sensory Constraints on Postural Control Among Patients with Parkinson's Disease. Proposal submitted to the Research Council – University of Idaho. Requested \$10,000 Funded

**Dickin, D.C.** & Goc Karp, G. (2007). Improving the Undergraduate Exercise, Sport Science and Pedagogy Learning Experience with Computer-assisted and Video-based Motion Analysis Technology. Proposal submitted to the North West Academic Computing Consortium. Requested \$10,000 Funded

Wells, R.B. (Principal). **Dickin, D.C.** (Senior Personnel – REU student mentor). “REU Site: Summer Computational Neuroscience and Technology Research Experience for Undergraduates.” Project funded by the National Science Foundation and the Department of Defense. (March 2007- Feb 2009). \$267,351 Funded

**Dickin, D.C.** & Perlmutter, L.C. (2006). Orthostatic blood pressure regulation and psychosocial variables. Proposal submitted to the National Institute of Health – Heart, Lung, and Blood Institute. Amount Requested \$995,000 Not funded.

**Dickin, D.C.** & Perlmutter, L.C. (2006). Orthostatic blood pressure regulation and psychosocial variables. Proposal submitted to the National Institute of Health – Heart, Lung, and Blood Institute. Amount Requested \$704,051 Not funded.

Meaney, K., Hart, M., Massey-Stokes, M., Dornier, L., Lochbaum, M., Roncesvalles, N., **Dickin, C.,** Boros, R., & Carter, R. (2006). Investigating childhood obesity intervention strategies for low socio-economic children and families: A multifaceted approach. Proposal submitted to the Vice President for Research – Research Development Grant. Texas Tech University. Amount Requested \$555,068 Not funded.

**Dickin, D.C., & Hart, M.A.** (2006). Improving the Undergraduate Exercise and Sport Science Learning Experience with Computer-assisted and Video-based Motion Analysis Technology. Proposal submitted to the Teaching, Learning and Technology Center - Texas Tech University. Requested \$9,997 Funded

Cobb, S.C., & **Dickin, D.C.** (2005). Improving the Undergraduate Exercise and Sport Science Learning Experience with Computer-assisted and Video-based Motion Analysis Technology. Proposal submitted to the Teaching, Learning and Technology Center - Texas Tech University. Requested \$10,000 Not funded.

**Dickin, D.C.** (2002). Attentional capacity during upright stance in altered sensory environments: Effects of aging and senile dementia of the Alzheimer's type. Proposal submitted to the Institute for University Research: Research Enhancement Fund – College of Arts and Sciences. Requested \$3,000. Funded.

**Dickin, D.C.** (2002). Sensory integration and attentional capacity during upright stance in altered sensory environments in individuals with Alzheimer's type dementia. Proposal submitted to the Alzheimer's Association. Requested \$99,921. Not funded.

Rose, D. J., & **Dickin, D.C.** (2001) Sensory integration and attentional demands of balance in individuals with differing degrees of senile dementia of the Alzheimer's type. Proposal submitted to the Alzheimer's Disease Program: California Department of Health Services. Requested \$74,393. Withdrawn.

**Dickin, D.C.** (2000). Sensory integration and attention during upright stance in individuals with senile dementia of the Alzheimer's type. Proposal submitted to the California State Special Fund for Research, Scholarship, & Creative Activity. Requested \$5,000. Funded.

**Dickin, D.C.** (1995). Effect of movement velocity on the bilateral deficit: A comparison between concentric and eccentric contractions. Proposal submitted to the Graduate Student Association, University of Nevada Las Vegas. Requested \$500. Funded.

**Dickin, D.C.** (1994). Validation and reliability testing of a bilateral attachment designed for a Kin-Com Dynamometer. Proposal submitted to the Graduate Student Association, University of Nevada Las Vegas. Requested \$111. Funded.