

CURRICULUM VITAE

James (Jim) Robert Potvin

April 2008

EDUCATION BACKGROUND

<u>Designation</u>	<u>Institution</u>	<u>Department</u>	<u>Year</u>
Ph.D.	University of Waterloo	Kinesiology	1992
M.Sc.	University of Waterloo	Kinesiology	1988
B.HK.	University of Windsor	Human Kinetics	1986

PROFESSIONAL ORGANIZATIONS

American College of Sports Medicine
Association of Canadian Ergonomists
Canadian Society of Biomechanics
International Society of Biomechanics

SCHOLARLY AND PROFESSIONAL ACTIVITIES

Editorial Boards

Human Movement Science
Journal of Electromyography and Kinesiology

Grant and Personnel Committees

Personnel Committee (2004-06), Department of Kinesiology, University of Windsor

Journal Referee (latest review)

Canadian Journal of Applied Physiology (2004)
Clinical Biomechanics (2008)
Dynamic Medicine (2005)
Ergonomics (2005)
European Journal of Applied Physiology (2007)
Human Factors (2005)
Journal of Applied Biomechanics (2007)
Journal of Applied Physiology (2004)
Journal of Biomechanics (2008)
Journal of Electromyography and Kinesiology (2008)
Journal of Human Movement Science (2007)
Journal of Neuroscience Methods (2008)
Medicine and Science in Sports and Exercise (2005)
Medicine Engineering and Physics (2006)
Spine (2007)
Transactions in Biomedical Engineering (1999)

External Grant Reviews

National Science and Engineering Research Council (Canada) (2008)
Workplace Safety and Insurance Board (Ontario): Research Advisory Board (2007)
Ontario Centre for Research Expertise on Musculoskeletal Disorders: Research Advisory Board (2007)
CIHR (2008)

AREAS OF INTEREST

Biomechanics, Ergonomics, Electromyography, Muscle Fatigue, Spine Modelling, Joint Stability

SUPERVISORSHIPS

Masters: 55 completed, 5 in progress
Doctoral: 2 in progress
Supervisory Committees: 5 PhD, 15 Masters

LIFETIME PUBLICATIONS

Peer Reviewed

Book Chapters

1. Dieën JHv, Staudenmann D, Potvin JR, Kingma I, Stegeman DF (2006) Effects of EMG filtering on outcomes of trunk muscle models. In: Grieshaber R, Stadelers M, Scholle HC (eds) Prävention von arbeitsbedingten Gesundheitsgefahren und Erkrankungen, vol 12. Berufsgenossenschaft Nahrungsmittel und Gaststätten und Friedrich-Schiller-Universität, Jena, pp 319-330

Journal Articles

1. Potvin, J.R., Norman, R.W., McGill, S.M. Reduction in anterior shear forces on the L4/L5 disc by the lumbar musculature. *Clinical Biomechanics* 6:88-96, 1991.
2. Potvin, J.R., McGill, S.M., Norman, R.W. Trunk muscle and lumbar ligament contributions to dynamic lifts with varying degrees of trunk flexion. *Spine*, 16(9):1099-1107, 1991.
3. Potvin, J.R., Norman, R.W., Eckenrath, M.F., McGill, S.M., Bennett, G.W. Regression models for the prediction of dynamic L4/L5 compression forces during lifting. *Ergonomics*, 35(2):187-201, 1992.
4. Potvin, J.R., Norman, R.W. A method for quantifying erector spinae muscle fatigue during prolonged, dynamic lifting. *European Journal of Applied Physiology*, 67(6):554-562, 1993.
5. Wells, R., Moore, A., Potvin, J., Norman, R. Assessment of risk factors for development of work-related musculoskeletal disorders (RSI). *Applied Ergonomics*, 25(3):157-164, 1994.
6. Potvin, J.R., Norman, R.W., McGill, S.M. Mechanically Corrected EMG for the Continuous Estimation of Erector Spinae Muscle Loading during Repetitive Lifting. *European Journal of Applied Physiology*, 74:119-132, 1996.
7. Potvin, J.R. Effects of muscle kinematics on surface EMG amplitude and frequency during fatiguing

dynamic contractions. *Journal of Applied Physiology*, 82(1):144-151, 1997.

8. Potvin, J.R., Bent, L.R. NIOSH equation horizontal distances associated with the Liberty Mutual (Snook) lifting table box widths. *Ergonomics* 40(6):650-655, 1997.
9. Potvin, J.R., Bent, L.R. A validation of techniques using surface EMG signals from dynamic contractions to quantify muscle fatigue during repetitive tasks. *Journal of Electromyography and Kinesiology*, 7:131-139, 1997.
10. Potvin, J.R. Using NIOSH equation inputs to calculate lumbosacral compression forces. *Ergonomics*, 40(7):691-707, 1997.
11. O'Brien, P.R., Potvin, J.R. Fatigue related responses of trunk muscles to a prolonged, isometric twist exertion. *Clinical Biomechanics*, 12(5):306-313, 1997.
12. Potvin, J.R., O'Brien, P.R. Trunk muscle co-contraction increases during fatiguing, isometric lateral bend exertions to enhance spine stability. *Spine*, 23(7):774-780, 1998.
13. Krajcarski, S., Potvin, J., Chiang, J. The in vivo dynamic response of the human spine to flexion perturbations: Effects of pre-load and step input magnitude. *Clinical Biomechanics*, 14(1):54-62, 1999.
14. McIlroy, W.E., Bent, L.E., Potvin, J.R., Brooke, J.D., Maki, B.E. Preparatory balance adjustments precede withdrawal response to noxious stimulation in standing humans. *Neuroscience Letters*, 267:197-200, 1999.
15. Potvin, J.R., Chiang, J., McKean, C., Stephens, A. A psychophysical study to determine acceptable limits for repetitive hand impact severity during automotive trim installation. *International Journal of Industrial Ergonomics*. 26:625-637, 2000.
16. Chiang, J., Potvin, J.R. The in vivo dynamic response of the human spine to rapid lateral bend perturbations: Effects of pre-load and step input magnitude. *Spine* 26:1457-1464, 2001.
17. McKean, C., Potvin, J.R. Effects of a simulated industrial bin on lifting and lowering mechanics. *International Journal of Industrial Ergonomics*. 28:1-15, 2001.
18. Bent, L.R., Potvin, J.R., Brooke, J.D., McIlroy, W.E. Medio-lateral balance adjustments preceding reflexive limb withdrawal are modified by postural demands. *Brain Research*, 914: 100-105, 2001.
19. Marchand, I., Chorneyko, K., Tarnopolski, M., Hamilton, S., Shearer, J., Potvin, J., Graham, T.E. Quantification of subcellular glycogen in resting human muscle: granule size, number and location. *J Appl Physiol*. 93: 1598-1607, 2002.
20. Brown, S.H.M., Haumann, M.L., Potvin, J.R. The responses of leg and trunk muscles to sudden unloading of the hands: implications for balance and spine stability. *Clinical Biomechanics* 18(9): 812-820, 2003.
21. Goble, D.J., Marino, G.W., Potvin, J.R. The influence of horizontal velocity on interlimb symmetry in normal walking. *Human Movement Science*, 22:271-283. 2003.
22. Dickey, J., McNorton, S., Potvin, J.R. Repeated spinal flexion modulates the flexion-relaxation phenomenon. *Clinical Biomechanics* 18(9): 783-789. 2003.
23. Potvin, J.R., Brown, S.H.M. Less is more: High pass filtering out up to 99% of the surface EMG signal

power improves EMG-based biceps brachii muscle force estimates. *Journal of Electromyography and Kinesiology*, 14 389–399, 2004.

24. Potvin, J.R. Agnew, M.J., Ver Woert, C. An ergonomic comparison of pneumatic and electrical pistol grip hand tools, *International Journal of Industrial Ergonomics*, 34:467-478, 2004.
25. Brown, S.H.M., Potvin, J.R. Constraining spine stability levels in an optimization model leads to the prediction of trunk muscle co-activity and improved predictions of spine compression. *Journal of Biomechanics*, 38(4): 745-754, 2005.
26. Potvin, J.R., Brown, S.H.M., An equation to calculate individual muscle contributions to joint stability, *Journal of Biomechanics*, 38(5): 973-980, 2005.
27. Cort, J.A., Stephens, A., Potvin, J.R. A biomechanical and psychophysical examination of fastener initiations in automotive assembly. *International Journal of Industrial Ergonomics*.36: 837-845. 2006
28. Potvin, J.R. Calder, I.C., Cort, J.A, Agnew, M.J., Stephens, A. Maximal acceptable forces for manual insertions using a pulp pinch, oblique grasp and finger press. *International Journal of Industrial Ergonomics*. 36:779-787, 2006
29. Brown, S.H.M., Potvin, J.R. Exploring the geometric and mechanical characteristics of the spine musculature to provide rotational stiffness to two spine joints in the neutral posture. 26:113–123. *Human Movement Science*. 2007
30. Brown, S.H.M., Potvin, J.R. The effect of reducing the number of EMG channel inputs on loading and stiffness estimates from an EMG-driven model of the spine. *Ergonomics*. 50(5):743-751, 2007.
31. Staudenmann, D, Potvin, J.R., Kingma, I., Stegeman, D.F., van Dieën, J.H. Effects of EMG processing on biomechanical models of muscle joint systems: sensitivity of trunk muscle moments, spinal forces and stability. *Journal of Biomechanics*, 40(4):900-9, 2007.
32. Andrews, D.M., Potvin, J.R., Calder, I.C., Cort, J., Agnew, M., Stephens, A. Acceptable peak forces and impulses during manual hose insertions in the automobile industry. 38(2):193-201 *International Journal of Industrial Ergonomics*. 2008

Unpublished Technical Reports

1. Norman, R.W., Sharratt, M., Eckenrath, M., Potvin, J. "Development of tests of employee physical abilities," submitted to Mr. R. Typliski, Hudson Bay Mining and Smelting, Flin Flon, Manitoba, 1986 (74 pages).
2. McGill, S.M., Norman, R.W., Potvin, J.R. "Analysis of Biomechanical Demands of Selected Tasks Performed by Emergency Ambulance Attendees," submitted to Ergo Systems Canada Inc. 1989 (55 pages).
3. Potvin, J.R., Szlapetis, I. "Biomechanical analysis of the demands on the low back resulting from the use of two types of snow shovels: The assessment of a new shovel design", submitted to Mr. J.R. Stecyk, 1991 (34 pages).
4. Norman, R., Wells, R., Moore, A., Potvin, J., Bennett, G., Brawley, L., Gibson, E., Husted, J., Ranney, D., Sharratt, M. "The feasibility of assessing whether job modifications are cost effective in reducing work site

injuries," submitted to the Ontario Work Place Health and Safety Agency, 1992 (98 pages).

5. Potvin, J., Lambert, C. "The biomechanical assessment of low back and upper limb loads when comparing a novel snow scoop design with a traditional snow shovel, submitted to J.R. Stecyk, 1992 (21 pages). O'Brien, P.,
6. Lafortune, M., Potvin, J.R. "The traction properties of construction footwear" submitted to the Construction Safety Association of Ontario, 1994 (45 pages).
7. Chiang, J., Potvin, J.R. "The EMG responses of neck and shoulder muscles to repetitive and prolonged contractions: A normative database" submitted to the Clinic of Injury and Disease Response, 1996 (25 pages).
8. Potvin, J.R., Chiang, J., McKean, C., Drouin D. "A psychophysical study to determine acceptable limits for tasks involving repetitive hand impacts: with specific applications to the door trim panel installation process" submitted to Ford Motor Company, 1998 (39 pages)
9. Potvin, J.R., Parcero, B., Villalta, D. Quantitative analysis of the physical demands associated with Blackjack dealing: Interim report. submitted to Casino Windsor, 1999 (15 pages)
10. Potvin, J.R., Fraser, D., Murphy, M. An evaluation of the hand impact severities associated with various trim installation tasks. submitted to Ford Motor Company, 1999 (16 pages)
11. Potvin, J.R. Quantitative analysis of the physical demands associated with the buffing of bumpers at Chromeshield. submitted to Chromeshield, 1999 (12 pages).
12. Potvin, J.R. Evaluation of vibration exposure for Dualflex M12000 and M10000 model sanders. submitted to Karmax, 1999 (10 pages)
13. Potvin, J.R., Marino, G.W. Impact Characteristics of RAITA vs Standard Hockey Arena Boards. submitted to Raita Sport, 1999 (12 pages)
14. Potvin, J.R., Villalta, D. Ergonomic Analysis of the Upper Limb and Low Back Demands Associated with Craps Dealing. submitted to Casino Windsor, 2000 (20 pages).
15. Potvin, J.R. Ergonomic Analysis of the Evening Office Clerk Task. submitted to USF Holland Inc. 2000 (8 pages).
16. Potvin, J.R., Dawson, D., MacPherson, M., Jones, J. Low Force/High Frequency Work: Evaluating the ACGIH TLV Guideline. Submitted to Ford Motor Company, 2001 (60 pages).
17. Potvin, J.R., Agnew, M., Ver Woert, C., Cercone, A., Schuster, M. An Ergonomic Comparison of Air and DC Pistol Grip Hand Tools: Effects of Tool Type, Joint Hardness, Torque and Gender on Upper Extremity Muscle Loads and Hand. Submitted to Ford Motor Company, 2001 (32 pages)
18. Potvin, J.R., Agnew, M., Siffer, L. An Ergonomic Evaluation of Pistol Grip Hand Tools: Part II: Establishing Maximum Torque Limits for Dc Tools. Submitted to Ford Motor Company, 2003 (31 pages)
19. Potvin, J.R., Calder, C., Cort, J., Agnew, M.J. Tolerance Limit Values for Manual Electrical Connector Tasks. Submitted to Ford Motor Company, 2004 (27 pages)

20. Andrews, D.M., Potvin, J.R., Calder, C., Cort, J., Agnew, M.J., Loree, H. Tolerance Limits for Manual Hose Insertions. Submitted to Ford Motor Co. via Sandalwood Enterprises Inc., 2004 (25 pages)
21. Cort, J.A., Potvin, J.R., Acceptable human tolerance limits for maximal finger pull force. submitted to Ford Motor Company, 2005
22. Cort, J.A. & Potvin, J.R., Acceptable human tolerance limits for manual initiation of fasteners in automotive assembly. submitted to Ford Motor Company, 2004
23. Cort, J.A. & Potvin, J.R., Electromyography investigation of ingress & egress tasks during assembly of the Ford Econoline Van. submitted to Ford Motor Company, 2005
24. Cort, J.A., Potvin, J.R., Ergonomic analysis and recommendations for the redesign courtroom Clerk and Recorder workstations. submitted to Architecttura Inc. 2006
25. Cort, J.A., Potvin, J.R., Ergonomic analysis and design recommendation for the Superior & Ontario Court of Justice Client & Judicial Support Office. submitted to Architecttura Inc. 2006
26. Cort, J.A., Potvin, J.R., Ergonomic analysis and design recommendation for the Ontario Court of Justice Client & Court Support Office. submitted to Architecttura Inc. 2006
27. Potvin, J.R. Chiang, J., Haumman, M., McInnes, B. Houston, A., Stephens, A. Proactive Ergonomic Analyses with Virtual Reality and Static Jack and Motion Capture: A Validation Study. Submitted to Ford Motor Company, 2007 (61 pages)
28. AIAG: Automotive Industry Action Group. OHS-5: Ergonomics Guidelines for Small Lot Delivery Systems. (Committee of seven authors), 2007 (39 pages)

Presentations at Meetings

Contributed

1. Eckenrath, M.F., Norman, R.W., McGill, S.M., Bennett, G.W., Potvin, J.R. A field usable stochastic model which predicts L4/L5 disc compression. European Society of Biomechanics, Bristol, England, Sept. 1988.
2. Marino, G.W., Potvin, J.R. The effects of anaerobic fatigue on biomechanical features of the ice skating stride. VIIIth International Symposium of the Society of Biomechanics in Sports, Footscray, Australia, 1989.
3. McGill, S.M., Potvin, J.R., Norman, R.W. Estimating low back demands in ambulance attendants using a hybrid anatomical model. Proceedings of the Annual Conference of the Human Factors Association of Canada, Ottawa, Ontario, Sept. 1990.
4. Moore, A.E., Potvin, J.R., Norman, R.W., Wells, R.P. Quantifying jobs with long cycle times for ergonomic change. Human Factors Association of Canada, Hamilton, Ontario, Oct. 1992.
5. Norman, R.W., Wells, R.P., Moore, A.E., Potvin, J.R. Towards the assessment of costs and benefits of ergonomic job modification: A case study. Human Factors Association of Canada, Hamilton, Ontario, Oct. 1992.

6. Fraser, M., Norman, R.W., Wells, R., Potvin, J., Moore, A. The need to quantify the effectiveness of ergonomic interventions. Submitted to the International Ergonomics Association '94 Conference, Toronto, Ontario, Aug. 1994
7. Hivon, J.F., Potvin, J.R. Isolated erector spinae fatigue and lifting mechanics. Accepted for the American Society of Biomechanics conference, Columbus, Ohio, Oct. 1994.
8. Ursulak, D.C., Potvin, J.R. The interaction of spine flexion and pelvis rotation contributions to trunk inclination during dynamic lifting tasks, Accepted for the American Society of Biomechanics conference, Columbus, Ohio, Oct. 1994.
9. O'Brien, P.R., Potvin, J.R. Fatigue response of the trunk musculature to an isometric trunk twist exertion. American Society of Biomechanics conference, Stanford University, Aug. 1995.
10. Ursulak, D.C., Potvin, J.R. The relationship of muscle activity to the interaction of spine flexion and pelvis rotation during dynamic lifting tasks. American Society of Biomechanics conference, Stanford University, Aug. 1995.
11. Bradshaw, P.L., Potvin, J.R. Trunk extensor muscle fatigue and spine mechanics while holding a constrained load in a symmetric posture. American Society of Biomechanics conference, Stanford University, Aug. 1995.
12. O'Brien, P.R., Potvin, J.R., Lafortune, M.A. Mechanical versus subjective assessments of footwear traction. Human Factors Association of Canada, Waterloo, Ontario, Canada, Oct. 1996
13. Bent, L.R., McIlroy, W.E., Howey, J.A., Potvin, J.R., Brooke, J.D. The organization of postural adjustments in conjunction with rapid stepping elicited by noxious stimuli. Neuroscience, New Orleans, Oct. 1997
14. Chiang, J., Potvin, J.R. The in vivo dynamic response of the spine to perturbations causing rapid lateral bending: effects of pre-load and step input magnitude, North American Congress on Biomechanics, Waterloo, Aug 1998
15. Krajcarski, S.R., Potvin, J.R., Chiang, J. The in vivo dynamic response of the spine to perturbations causing rapid flexion: effects of pre-load and step input magnitude, North American Congress on Biomechanics, Waterloo, Aug 1998
16. Swales, M., Strik, T., Dutta, S., Potvin, J.R. Assigning safety functions to products during design - A cultural perspective. International Workshop on Internationalization of Products and Systems, Rochester, NY, May 1999
17. McKean, C.M., Potvin, J.R. Manual material handling to and from of a simulated industrial bin: effects on rotational contributions from the lumbar spine and pelvis. International Society of Biomechanics, Calgary, Alberta, Aug 1999
18. Sanford, J., Potvin, J.R., Villalta, D., Coughlin, R. Case study of the effects of an ergonomics intervention program on injury statistics in an automotive sub-assembly plant. Assoc. of Canadian Ergonomists, Hull, Quebec, 1999
19. Fraser, D., Potvin, J.R., Jones, J. Effects of trunk muscle fatigue on spine mechanics. Int Ergonomics

Assoc., San Diego, CA, 2000

20. McNorton, S., Potvin, J., Dickey, J. The effects of repeated spine flexion on the flexion-relaxation response. Canadian Society of Biomechanics, Montreal, Quebec, Aug 2000
21. Parcerro, B., Potvin, J. The in vivo dynamic fatigue response of the spine to sudden loading in the sagittal plane: effects of pre-load and step input magnitude. International Society of Biomechanics, Zurich, Switzerland, Aug 2001
22. Murphy, M., Potvin, J., Stephens, A. Effects of hand posture and impact gloves on maximal acceptable hand impact forces in automotive manufacturing. International Society of Occupational Ergonomics and Safety, Toronto, Ontario, June 2002
23. MaPherson, M., Grondin, D., Potvin, J. Determination of the optimal forearm muscles to monitor with EMG in ergonomic studies. World Congress on Biomechanics, Calgary, Alberta, August 2002.
24. Marino, W. & Potvin, J. Impact Characteristics of Two Types of Hockey Arena Boards. ISBS XX. Caceres, Spain, 2002
25. Haumann, M., Brown, S., Potvin, J. Whole-body postural control and trunk stability during sudden hand loading. World Congress on Biomechanics, Calgary, Alberta, August 2002
26. Brown, S., Haumann, M., Potvin, J. Effects of expectation during sudden unloading of the hand. World Congress on Biomechanics, Calgary, Alberta, August 2002.
27. Longo, N., Potvin, J.R., Stephens, A. A psychophysical analysis to determine acceptable forces for repetitive thumb insertions. Association of Canadian Ergonomist. Banff, 2002.
28. Shephard, D.J., Potvin, J.R., A system to incorporate ergonomics into product design and processes for manufacturing assembly, Assoc. of Canadian Ergonomists, London, Ontario, 2003
29. Tolmie, S., Potvin, J.R. An evaluation of the validity and reliability of an ergonomic risk factor checklist, Assoc. of Canadian Ergonomists, London, Ontario, 2003
30. Agnew, M.J., Andrews, D.M., Potvin, J.R., Callaghan, J.P. Dynamic 2-D measurements of cumulative spine loading using an electromagnetic tracking device, Assoc. of Canadian Ergonomists, London, Ontario, 2003
31. Callaghan, J.P., Jackson, J.A., Albert, W.J., Andrews, D.M., Potvin, J.R. The design and preliminary validation of '3D-Match' – a posture matching tool for estimating three dimensional cumulative loading on the low back. Assoc. of Canadian Ergonomists, London, Ontario, 2003
32. Brown, S.H.M., Potvin, J.R. Stabilizing potential of trunk muscles. American Society of Biomechanics, Toledo, Ohio, September 2003
33. Brown, S.H.M., Potvin, J.R. Importance of selecting an appropriate q value for analyses of spine stability. International Society of Electromyography and Kinesiology 15th Congress, Boston, Mass, June 2004.
34. Brown, S.H.M., Potvin, J.R. Antagonist muscle forces predicted by an optimization model of the spine using stability as a constraint factor. Canadian Society of Biomechanics Conference, Halifax, Nova Scotia, August 2004
35. Fox, M., Sarno, S., Potvin, J.R. A Biomechanical evaluation of child safety seat installation: Rear and forward facing. Canadian Society of Biomechanics Conference, Halifax, Nova Scotia, August 2004

36. Grondin, D.E., Potvin, J.R. Effects of trunk muscle fatigue and load timing on spine mechanics during sudden hand loading. Canadian Society of Biomechanics Conference, Halifax, Nova Scotia, August 2004
37. Derouin, A., Potvin, J.R., Knee stability: mechanical contributions of individual muscles. International Society of Biomechanics, Cleveland, Ohio, August 2005
38. Cort, J.A., Potvin, J.R., Stephens, A., An electromyographic and psychophysical examination of fastener initiations in automotive assembly. International Society of Biomechanics, Cleveland, Ohio, August 2005.
39. Andrews, D., Potvin, J.R., Calder, I.C., Cort, J.A., Loree, H., Agnew, M., Stephens, A.. Acceptable peak forces and impulses during manual hose insertions. International Society of Biomechanics, Cleveland, Ohio, August 2005.
40. Teigrob, K., Cort, J.A., Stephens, A., Potvin, J.R. Maximal hose installation force. Proceedings of International Society of Ergonomics 2006 Congress. Edited by R.N. Pikaar, E.A.P. Koningsveld and P.J.M. Settels. Elsevier Ltd.
41. Cort, J.A., Stephens, A., Potvin, J.R. Maximal finger pull strength . Proceedings of International Society of Ergonomics 2006 Congress. Edited by R.N. Pikaar, E.A.P. Koningsveld and P.J.M. Settels. Elsevier Ltd.
42. Staudenmann, D, Potvin, J.R., Kingma, I., Stegeman, D.F., van Dieën, J.H. Effects of EMG processing on outputs of EMG-driven muscle joint systems. Proceedings of International Society of Ergonomics 2006 Congress. Edited by R.N. Pikaar, E.A.P. Koningsveld and P.J.M. Settels. Elsevier Ltd. 2006
43. Cort, J.A., Cashaback, J., Potvin, J.R. Processing to improve EMG-based force estimates from fatigued muscles. XVI Int. Soc. EMG and Kinesiology Conference, Torino, Italy, 2006.
44. Godin, C., Chiang, J., Stephens, A., Potvin, J.R. Assessing the accuracy of ergonomic analyses when human anthropometry is scaled in a virtual environment. SAE Digital Human Modelling Conference, Lyon France, 2006
45. Chiang, J., Stephens, A., Potvin, J.R. Retooling Jack's Static Strength Prediction tool. SAE Digital Human Modelling Conference, Lyon France, 2006
46. Derouin, A., Potvin, J.R. Muscle contributions to knee joint stability: Effects of ACL injury and knee brace use. American College of Sports Medicine Meeting, New Orleans, LA, 2007
47. McInnes, B. , Stephens, A., Potvin, J.R. Static Jack human simulation software for the ergonomic analysis of manufacturing tasks: within and between-subject reliability. Ontario Biomechanics Conference, Barrie, On, 2007
48. Kanne, C., Cort, J.A., Potvin, J.R. The effects of job rotational on trunk muscle activation. Prevention of Musculoskeletal Disorders Conference, Boston, MA, 2007
49. Cort, J.A., Potvin, J.R. Neuromuscular control as it relates to joint stability. Ontario Biomechanics Conference, Barrie, On, 2007

Peer Reviewed

1. Potvin, J.R., Ball, K., McGill, S.M., Norman, R.W. A test of the assumption of rigidity in a linked segment biomechanical lifting model. Proceedings of the Fifth Biennial Conference of the Canadian Society of Biomechanics, Ottawa, Ontario, Aug. 1988.
2. Potvin, J.R., Norman, R.W., McGill, S.M., Eckenrath, M.F. L4/L5 shear force reduction by low back

musculature during lifting. Proceedings of the XIIIth International Congress of Biomechanics, Los Angeles, California, June 1989.

3. Potvin, J.R., Norman, R.W., McGill, S.M., Eckenrath, M.F. Prediction of L4/L5 disc compression during dynamic stoop and squat lifts. Proceedings of the Annual Conference of the Human Factors Association of Canada, Toronto, Ontario, Nov. 1989.
4. Potvin, J.R., Norman, R.W., McGill, S.M., Eckenrath, M.E. Internal and external "lifting effectiveness" during dynamic manual materials handling tasks. Proceedings of the Sixth Biennial Conference of the Canadian Society of Biomechanics, Quebec City, Quebec, Aug. 1990.
5. Potvin, J.R., Norman, R.W., Wells, R. A field method for continuous estimation of dynamic compressive forces on the L4/L5 disc during the performance of repetitive industrial tasks. Proceedings of the Annual Conference of the Human Factors Association of Canada, Ottawa, Ontario, Sept. 1990. p 51-55.
6. Potvin, J.R., McGill, S.M., Norman, R.W. Individual trunk muscle and ligament force contributions to dynamic lifting. XIII International Congress of Biomechanics, Perth Australia, Dec. 1991.
7. Potvin, J.R., Norman, R.W. Does fatigue compromise lifting safety? NACOB II, North American Congress on Biomechanics, Chicago, USA, Aug. 1992.
8. Potvin, J.R., Norman, R.W., McGill, S.M. A method for continually estimating instantaneous bilateral erector spinae muscle loads during prolonged, dynamic lifting. International Society of Biomechanics, Paris, France, July 1993.
9. Potvin, J.R., Norman, R.W. An evaluation of trunk extensor muscle fatigue throughout prolonged, dynamic lifting tasks. Canadian Society of Biomechanics, Calgary, Alberta, Aug. 1994.
10. Potvin, J.R. A model for calculating lumbar compression forces with the NIOSH equation's "H" and "V" Factors. American Society of Biomechanics conference, Stanford University, Aug. 1995.
11. Potvin, J.R., Bent, L.R. A validation of techniques using surface EMG signals from dynamic contractions to quantify muscle fatigue during repetitive tasks. Canadian Society of Biomechanics conference, Simon Fraser University, Burnaby, B.C., Aug. 1996.
12. Potvin, J.R. Effects of muscle kinematics on surface EMG frequency during fatiguing dynamic contractions, International Society of Electromyography and Kinesiology, Montreal, June 1998.
13. Potvin, J.R., Marino, G.W. Biomechanical testing of impact severity characteristics for two types of hockey arena boards. International Society of Biomechanics, International Society of Biomechanics, Calgary, Alberta, Aug 1999
14. Potvin, J.R. Chiang, J., Stephens, A., Vitek, M. A psychophysical study to determine acceptable limits for hand impact severity during automotive trim installation. Assoc. of Canadian Ergonomists, Hull, Quebec, 1999
15. Potvin J.R., Brown S., Dowling J., Tolmie S. High pass filtering beyond 100 Hz improves surface EMG-based force predictions for the biceps brachii. Canadian Society of Biomechanics, Montreal, Quebec, Aug 2000
16. Potvin, J., Dawson, D., MacPherson, M., Joseph, B. Evaluating the ACGIH TLV guideline for low force/high frequency work, International Society of Occupational Ergonomics and Safety, Toronto, Ontario, June 2002
17. Potvin, J., Dawson, D., Jones, J., MacPherson, M., Joseph, B. Comparing Risk Scores from the ACGIH

TLV Guideline When Obtained from Live Observation and Video Records. International Society of Occupational Ergonomics and Safety, Toronto, Ontario, June 2002

18. Potvin, J., Agnew, M., Ver Woert, C. Muscle demands and torque reactions associated with air and electric hand tools. World Congress on Biomechanics, Calgary, Alberta, August 2002.
19. Potvin, J.R., Brown, S.H.M., Grondin, D., Gonzalez, M. Physical demands of installing forward facing child safety seats into vehicles. Assoc. of Canadian Ergonomists, London, Ontario, 2003
20. Potvin, J.R., Agnew, M.J., Siffer, L. The ergonomic demands of using pistol grip transducerized electric tools up to 12 Nm, Assoc. of Canadian Ergonomists, London, Ontario, 2003
21. Potvin, J.R., Brown, S.H.M. Comparing the use of signal whitening and extreme highpass filtering to improve surface EMG-based muscle force estimates. International Society of Electromyography and Kinesiology 15th Congress, Boston, Mass, June 2004.
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