

Publication list

Stuart Michael McGill

**Chief Scientific Officer, Backfitpro Inc. and
Professor**

December 2016

PUBLICATIONS

Summary: Books = 4
Chapters in books = 25
Full refereed journal papers = >235
Refereed conference papers = >140
Keynote addresses = >70
Other invited addresses = 400 plus
Self-initiated addresses = 150 plus

A) **Books**

1. **McGill, S.M., (2015)** Back Mechanic: The step-by-step McGill method to manage back pain. Backfitpro Inc, (www.backfitpro.com).
Now printed in German, Dutch, Czech, Spanish.
2. Augaitis, R. Kell, R. Kourtis, G., **McGill, S.M.**, Whitmarsh, L. Springle, N. Personal Fitness: Faster, Stronger, Smarter. Textbook for High School Curriculum, Thompson Books, Toronto, 2013
3. **McGill, S.M.** Ultimate back fitness and performance, Backfitpro Inc., Waterloo, Canada, 2004. ISBN 0-9736018-0-4 (www.backfitpro.com). Sixth edition 2017.
4. **McGill, S.M.** Low back disorders: Evidence based prevention and rehabilitation, Human

Kinetics Publishers, Champaign, IL, U.S.A., 2002. ISBN 0-7360-4241-5, Third Edition, 2016.

Now also printed in Japanese, Chinese.

B) Clinical Videos's

1. **McGill, S.M.**, Back exercises for Seniors, Univ of Waterloo, 1996.
2. **McGill, S.M.**, The Ultimate Back: Enhancing Performance (www.backfitpro.com), 2010
3. **McGill, S.M.**, Clinical Techniques for the Ultimate Back: Assessment and Therapeutic Exercise (www.backfitpro.com), 2007. Second Edition 2012.
4. Stuart McGill, Gray Cook & Craig Liebenson, Assessing Movement Video, On target publications, (<http://www.otpbooks.com>). 2014
5. Stuart McGill & Lee Brandon, New Science of Golf, (www.backfitpro.com), 2015

C) Commissioned Papers and Position Papers

1. **McGill, S.M.** There is no such thing as non-specific back pain. A position paper written for the Centre of Research Excellence: Musculoskeletal Disorders. Faculty of Applied Health Sciences, University of Waterloo, 2016.
2. **McGill, S.M.** On the link between occupationally related musculoskeletal loading and low back injury. Commissioned paper for the Commission on Behavioral and Social Sciences and Education, National Research Council and Institute of Medicine, USA, March, 2000.

D) Full Refereed Journal Papers

*Indicates first authors who were students at time of development of the paper.

1. Lee* B and **McGill SM**. (2016) The Effect of Core Training on Distal Limb Performance During Ballistic Maneuvers. J Sport Sci., <http://dx.doi.org/10.1080/02640414.2016.1236207>
2. Lee* B and **McGill SM**. (2016) The effect of short term isometric training on core/torso stiffness. J Sport Sci. <http://dx.doi.org/10.1080/02640414.2016.1235791>

3. Balkovec*, C., Vernengo, J., Stevenson, P., McGill, S.M., (accepted June 2016) Evaluation of an injectable hydrogel and PMMA in restoring mechanics to compressively fractured spine motion segments, *The Spine Journal*.
4. Balkovec*, C., Vernengo, J., McGill, S.M., (2016) Disc height loss and restoration via injectable hydrogel influences adjacent segment mechanics in-vitro *Clinical Biomechanics*, 36:1-7.
5. A Bateman, C Balkovec, M Akens, A Chan, W Oakden, R Harrison, A Yee, S McGill, (2016) Closure of the annulus fibrosus using a novel suture application device – in vivo porcine and ex-vivo biomechanical evaluation, *The SPINE Journal*. 16:889-895.
6. Giangregorio LM, Ashe MC, Shipp K, Cheung AM, Heinonen A, Papaioannou A, McGill S, Laprade J, Jain R, Leller K, MacIntyre N, Wark J. (2016) Intensity is a subjective construct", *Osteoporosis International*. *Osteoporos. Int.*, 27:2391–2392. DOI 10.1007/s00198-016-3507-9
7. Frost* DM, Beach TAC, Crosby I, McGill SM. (In Press, Jan, 2016) The cost and distribution of firefighter injuries in a large Canadian fire department, *WORK: A Journal of Prevention, Assessment & Rehabilitation*.
8. Cannon*, J., Emond, D., McGill, S.M., (2016) Evidence on the ability of a pneumatic decompression belt to restore spinal height following an acute bout of exercise. *Journal of Manipulative and Physiological Therapeutics*, 39(4):304-310.
9. Santana, J.C., Brown, L., McGill, S.M., (2015) The Anterior and Posterior Serape: The rotational core. *Strength and Conditioning Journal*.37(5):8-13.
10. Frost DM, Beach TAC, Campbell TL, Callaghan JP, **McGill SM**.(2015) An appraisal of the Functional Movement Screen grading criteria – Is the composite score sensitive to risky movement behavior? *Phys Ther Sport* 2015 Nov 17;16(4):324-30. Epub 2015 Feb 17.
11. Frost DM, Beach TAC, Callaghan JP, **McGill SM**. (2015) Exercise-based performance enhancement and injury prevention for firefighters: Contrasting the fitness- and movement-related adaptations to two training methodologies. *J Strength Cond Res* 2015 Sep;29(9):2441-59.
12. Frost DM, Beach TAC, **McGill SM**, Callaghan JP. (2015) A proposed method to detect kinematic differences between and within individuals. *J. Emg. Kinesiol*. Volume 25(3): 479–487.

13. Kushner A., M., Brent, J. L., Schoenfeld B., Hugentobler, J., Lloyd, R. S., Vermeil, A., Chu, D., Harbin, J., **McGill, S. M.**, Myer, G. D., (2015) The Back Squat Part 2: Targeted Training Techniques to Correct Functional Deficits and Technical Factors that Limit Performance, *J. Strength and Condit. Res.* 37(2):13-60.
14. **McGill SM**, Frost DM, Finlay T, et al. (2015) Can fitness and movement quality prevent back injury in elite task force police officers? A 5 year longitudinal study, *Ergonomics* 2015 Oct 8;58(10):1682-9. Epub 2015 May 8. Winner: **Liberty Mutual award for top paper in 2015.**
15. Balkovec* C, Adams M, Dolan P, **McGill SM.** (2015) Annulus fibrosus can strip hyaline cartilage endplate from subchondral bone: a study of the intervertebral disc in tension. *Global Spine J* 2015 Oct 25;5(5):360-5. Epub 2015 Feb 25. **Won the top paper of the year for 2015 in the Global Spine Journal.**
16. Frost* DM, Crosby I, **McGill SM** (2015). Firefighter injuries are not just a fireground problem. WORK. 09/2015; DOI:10.3233/WOR-152111
17. Vera-Garcia, F., Ruiz-Pérez, I., Barbado, D., Juan-Recio, C., **McGill, S.M.**, (2014) Trunk and shoulder EMG and lumbar kinematics of medicine-ball side throw and side catch and throw. *European J. Human Movement*, **33**:93-109
18. **McGill SM**, Cannon, J., Andersen J (2014). Muscle activity and spine load during pulling exercises: Influence of stable and labile contact surfaces and technique coaching. J.EMG.Kines. DOI 10.1016/j.jelekin.2014.06.002 24(5): 652-665
19. Sidorkewicz*, N., & McGill, S. M. (2014). Documenting female spine motion during coitus with a commentary on the implications for the low back pain patient. *European Spine Journal*, 1-8.
20. Frost DM, Beach TAL, Callaghan J, **McGill SM.** (2015) A proposed method to detect kinematic differences between and within individuals. *J EMG. Kin.* 03/2015; 25(3). DOI:10.1016/j.jelekin.2015.02.012.
21. **McGill, SM**, Cambridge, E., Anderson, J., (2015). A six week trial of hula hooping using a weighted hoop: Affects on skinfold, girths, weight and torso muscle endurance. *J. Strength Cond. Res.* 29(5):1279–1284.
22. Lee* B, **McGill SM.** (2014) Striking dynamics and kinetic properties of boxing and MMA gloves. RAMA. (Revista de Artes Marciales Asiaticas), 9(2): 106-115.

23. Frantzis E, Druelle P, Ross K, **McGill SM** (accepted Sept 2014). The accuracy of osteopathic adjustments of the lumbar spine: A Pilot Study. *Int. J Osteopathic Medicine* 18 (2015), pp. 33-39 DOI information: 10.1016/j.ijosm.2014.09.001
24. Balkovec* C, Carstensen M, Leung A, **McGill SM** (2014). *A Preliminary Investigation into the Morphology of Trabecular Bone Damage Associated with Intervertebral Disc Herniation. J Spine Neurosurg* 3:6 doi:10.4172/2325-9701.1000162
25. Lee*, B and **McGill, S.M.** (2015) The effect of long term isometric training on core/torso stiffness. *J. Strength Condit. Res.* 29 (6):1515-1526. doi: [10.1519/JSC.0000000000000740](https://doi.org/10.1519/JSC.0000000000000740)
26. Frost DM, Beach TAL, Callaghan J, **McGill SM** (2015). FMS scores change with performer's knowledge of the grading criteria- Are general whole body movement screens capturing "dysfunction". *J Strength Cond Res* 2015 Nov;29(11):3037-44
27. Frost DM, Beach TAL, Callaghan J, **McGill SM** (2015). The influence of load and speed on individual's movement behaviour. *J Strength Cond Res* 2015 Sep;29(9):2417-25
28. McGill SM, Cannon J, Anderson J, (2014) Muscle activity and spine load during anterior chain whole body linkage exercises: The body saw, hanging leg raise and walkout from a pushup. *J. Sport Sci.* DOI 10.1080/026 40414.2014.946 437
29. Dejanovic A, Balkovec C, McGill SM (2015). Head posture influences low back muscle endurance tests in 11 year old children. *J Mot Behav* 2015 25;47(3):226-31. Epub 2014 Nov 25.
30. Sidorkewicz* N and McGill SM (2014). Male spine motion during coitus: Implications for the low back pain patient. *SPINE* 39(20): 1633-1639.
31. Giangregorio LM, Ashe MC, Shipp K, Cheung AM, Heinonen A, Papaioannou A, McGill S, Laprade J, Jain R, Leller K, MacIntyre N, Wark J. "Is this exercise safe?" – Building consensus around responses to common questions about physical activity posed by people with osteoporosis. *J Bone Miner Res* 28 (Suppl). Available at: <http://www.asbmr.org/education/AbstractDetail?aid=ccf88652-3d98-4a0d-843fba44e6593d5f>
32. Giangregorio LM, McGill S, Wark JD, Laprade J, Heinonen A, Ashe MC, MacIntyre NJ, Cheung AM, Shipp K, Keller H, Jain R, Papaioannou A. Too Fit To Fracture: Outcomes of a Delphi consensus process on physical activity and exercise recommendations for adults with osteoporosis with or without vertebral fractures. *Osteoporosis International*, DOI 10.1007/s00198-014-2881-4, *Osteoporosis International*: Volume 26, Issue 3 (2015), Page 891-910.

33. Myer GD, Kushner AM, Brent JL, Schoenfeld BJ, Hugentobler J, Lloyd RS, Vermeil A, Chu DA, Harbin J, McGill SM. The back squat: A proposed assessment of functional deficits and technical factors that limit performance. *Strength Cond.* 2014 Dec 1;36(6): 4-27.
34. Giangregorio L, MacIntyre N, Heinonen A, Cheung A, Wark J, **McGill SM**, Shipp K, Ashe M, Laprade J, Jain R, Keller H, Papaioannou A (2014). Too fit to fracture: A consensus on future research priorities in osteoporosis and exercise. *Osteoporosis International.* 25;1465-1472. DOI 10.1007/500198-014-2652-2
35. Casthanhero R, Duarte M, **McGill SM** (2014). Corrective sitting strategies: an examination of muscle activity and spine load. *J. EMG. Kinesiol.* 24(1): 114-119.
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37. Frost, D. M., Beach, T. A., McGill, S. M., & Callaghan, J. P. (2015). The predictive value of general movement tasks in assessing occupational task performance. *Work: A Journal of Prevention, Assessment and Rehabilitation.* 06/2014; 52(1). DOI:10.3233/WOR-141902
38. Badiuk, B. W., Andersen, J. T., & **McGill, S. M.** (2014). Exercises to Activate the Deeper Abdominal Wall Muscles: The Lewit: A Preliminary Study. *The Journal of Strength & Conditioning Research*, 28(3), 856-860.
39. **McGill SM**, Cannon J, Andersen J (2014). Analysis of pushing exercises: Muscle activity and spine load while contrasting techniques on stable surfaces with labile suspension strap training system. *J. Strength Condit. Res.* 28(1): 105-116.
40. Sidorkewicz* N, Cambridge E, **McGill SM** (2014). Examining the effects of altering hip angle on gluteus medius and tensor fascia latae interplay during common non-weight bearing hip rehabilitation exercises. *Clin.Biomech.* 29(9):971-976.
41. Dejanovic, A., Cambridge, E. D., & **McGill, S.** (2013). Isometric torso muscle endurance profiles in adolescents aged 15-18: normative values for age and gender differences. *Annals of human biology*, 41(2), 153-158.
42. Frost D*, Andersen J, Lam T, Findlay T, Darby K, **McGill SM** (2013). The relationship between general measures of fitness, passive range of motion and whole body movement quality. *Ergonomics*: 1-16.

43. Dejanovic A, Cambridge EDJ, **McGill SM** (2013). Does spine posture affect isometric torso muscle endurance profiles in adolescent children? *Arch. Phys. Med. & Rehab. Advances in Phys Ed.* 3(3):111-115. DOI: 104236/ape.2013.33019
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45. **McGill SM** <Invited Commentary> (2013). On the issue of clinical test reliability, *Arch. Phys. Med. Rehab.* 94:1635-1637.
46. **McGill SM** <Invited Paper> (2013). Frost, D., Lam, T., Findlay, T., Darby, K., Andersen, J. Fitness and movement quality of emergency task force police officers: A database with comparison to populations of emergency services personnel, athletes and the general public. *Int. J. Industrial Ergonomics.* <http://dx.doi.org/10.1016/j.ergon.2012.11.013>
47. **McGill SM**, Frost D, Andersen J, Crosby I, Gardiner D (2013). Movement quality and links to measures of fitness in firefighters. *WORK* 45(3):357-66
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50. Gooyers CE*, Frost DM, **McGill SM**, Callaghan JP (2013). Partial rupture of the achilles tendon doing a simulated fireground task: Insights obtained for the prevention and reporting of musculoskeletal injury. *Clin. Biomech.* 28(4):436-440.
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52. Dejanovic A, Harvey E, **McGill SM** (2012). Are anthropometric variables linked with torso muscle endurance profiles of children 7 to 14. *Advances in Physical Education.* 2(4):187-196, doi: [10.4236/ape.2012.24032](https://doi.org/10.4236/ape.2012.24032)
53. Sidorkewicz N*, Cambridge E, **McGill SM** (2012). Can gluteus medius be targetted over TFL muscle activation during common non weight bearing hip rehabilitation exercises. *Can. J. Kinesiology.* 6(2):12-13

54. Cambridge E*, Sidorkewicz N, **McGill SM** (2012). Hip and spine motion during progressive hip rehabilitation - Implications for the low back pain patient. *Can. J. Kinesiology*. 6(2):13-14
55. Ikeda D*, **McGill SM** (2012). Can altering motions, postures and loads provide immediate low back pain relief: A study of four cases investigating spine load, posture and stability. *SPINE*. 37 (23): E1469-E1475
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63. **McGill SM**, Marshall L (2012). Kettlebell swing snatch and bottoms-up carry: Back and hip muscle activation, motion, and low back loads. *J. Strength Conditioning Res.* 26(1): 16-27.
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66. Yates JP*, **McGill SM** (2011). The effect of vibration and posture on the progression of intervertebral disc herniation. *SPINE*. 36(5) 386-392. 1-16, iFirst article.
67. Vera Garcia FJ, Moreside JM, **McGill SM** (2011). Abdominal muscle activation changes if the purpose is to control pelvis motion or thorax motion. *J EMG & Kinesiology*. 21:893-903.
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69. **McGill SM** (2011) Is a postural-structural-biomechanical model, within manual therapies, viable: AJBMT debate. Invited Response *J. Bodywork and Movement Therapy* 15(2):150-152.
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72. **McGill SM** (2010) <Invited Review> Quick Tip: Wearing a weight belt, *Journal of the National Strength and Conditioning Association*.
73. **McGill SM**, Chaimberg J, Frost D, Fenwick C (2010). The double peak: How elite MMA fighters develop speed and strike force. *Journal of Strength and Conditioning Research*. 24(2): 348-357.
74. Brown SHM*, **McGill SM** (2010). A comparison of ultrasound and electromyography measures of force and activation to examine the mechanics of abdominal wall contraction. *Clin.Biomech.* 25:115-123.
75. Yates JP*, Giangregorio L, **McGill SM** (2010). The influence of intervertebral disc shape on the pathway of posterior/posterior lateral partial herniation. *SPINE*. 35 (7): 734-739.
76. **McGill SM**, Belore, M., Crosby, I., Russell, C. (2010) Comparison of two methods to quantify torso flexion endurance. *Occup. Ergonomics*. 9:55-61

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79. Brown S*, **McGill SM** (2009). The intrinsic stiffness of the invivo lumbar spine in response to a variety of quick releases: Implications for reflexive requirements, J. EMG Kinesiol. 19(5):727-736
80. Fenwick CMJ, Brown SHM, **McGill SM** (2009). Comparison of different rowing exercises: Trunk muscle activation, and lumbar spine motion, load and stiffness. Journal of Strength and Conditioning Research. 23(5):1408-1417.
81. **McGill SM**, Karpowicz A, Fenwick C (2009). Ballistic abdominal exercises: Muscle activation patterns during three activities along the stability/mobility continuum. J. Strength and Cond. Res. 23(3): 898-905.
82. **McGill SM**, Karpowicz A, Fenwick C (2009). Exercises for the torso performed in a standing posture: Motion and motor patterns. J. Strength and Conditioning Res. 23(2): 455-464.
83. **McGill SM**, There is no such thing as non-specific back pain. A position paper written for the Centre of Research Excellence: Musculoskeletal Disorders. www.cremsd.uwaterloo.ca
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