

**Aktuelle Publikationen**

1. Hofstetter, L., Häusler, M., Wirth, B. & Swanenburg, J. Instrumented Measurement of Spinal Stiffness: A Systematic Literature Review of Reliability. *Journal of manipulative and physiological therapeutics* (2019).
2. Kobelt, M., Wirth, B. & Schuster-Amft, C. Muscle Activation During Grasping With and Without Motor Imagery in Healthy Volunteers and Patients After Stroke or With Parkinson's Disease. *Frontiers in psychology* **9**, 597 (2018).
3. Langenfeld, A., Bastiaenen, C., Brunner, F. & Swanenburg, J. Validation of the Orebro musculoskeletal pain screening questionnaire in patients with chronic neck pain. *BMC research notes* **11**, 161 (2018).
4. Langenfeld, A., Bastiaenen, C., Sieben, J., Humphreys, B.K. & Swanenburg, J. Patient's Subjective Impression of Cervical Range of Motion: A Mixed-methods Approach. *Spine* **43**, E1082-E1088 (2018).
5. Langenfeld, A., Bastiaenen, C., Sieben, J. & Swanenburg, J. Development and validation of a self-administered neck mobility assessment tool (S-ROM-Neck) in chronic neck pain patients. *Musculoskeletal science & practice* **37**, 75–79 (2018).
6. Langenfeld, A., Bohlender, J.E., Swanenburg, J. & Brockmann-Bausser, M. Cervical Spine Disability in Correlation with Subjective Voice Handicap in Patients With Voice Disorders: A Retrospective Analysis. *Journal of Voice* (2018).
7. McCaskey, M.A., Wirth, B., Schuster-Amft, C. & Bruin, E.D. de. Dynamic multi-segmental postural control in patients with chronic non-specific low back pain compared to pain-free controls: A cross-sectional study. *PloS one* **13**, e0194512 (2018).
8. McCaskey, M.A., Wirth, B., Schuster-Amft, C. & Bruin, E.D. de. Postural sensorimotor training versus sham exercise in physiotherapy of patients with chronic non-specific low back pain: An exploratory randomised controlled trial. *PloS one* **13**, e0193358 (2018).
9. Meier, M.L. *et al.* Pain-Related Fear-Dissociable Neural Sources of Different Fear Constructs. *eNeuro* **5** (2018).
10. Meier, M.L., Vrana, A. & Schweinhardt, P. Low Back Pain: The Potential Contribution of Supraspinal Motor Control and Proprioception. *The Neuroscientist : a review journal bringing neurobiology, neurology and psychiatry*, 1073858418809074 (2018).
11. Potthoff, T., Bruin, E.D. de, Rosser, S., Humphreys, B.K. & Wirth, B. A systematic review on quantifiable physical risk factors for non-specific adolescent low back pain. *Journal of pediatric rehabilitation medicine* **11**, 79–94 (2018).
12. Price, R.C. *et al.* Characterization of a novel capsaicin/heat ongoing pain model. *European journal of pain (London, England)* **22**, 370–384 (2018).
13. Swanenburg, J., Meier, M.L., Langenfeld, A., Schweinhardt, P. & Humphreys, B.K. Spinal Stiffness in Prone and Upright Postures During 0-1.8 g Induced by Parabolic Flight. *Aerospace medicine and human performance* **89**, 563–567 (2018).
14. Vrana, A., Scholkmann, F., Wirth, B., Flueck, M. & Humphreys, B.K. Changes in Spinal Muscle Oxygenation and Perfusion During the Biering-Sørensen Test: Preliminary Results of a Study Employing NIRS-Based Muscle Oximetry. *Advances in experimental medicine and biology* **1072**, 103–109 (2018).
15. Wirth, B., Potthoff, T., Rosser, S., Humphreys, B.K. & Bruin, E.D. de. Physical risk factors for adolescent neck and mid back pain: a systematic review. *Chiropractic & manual therapies* **26**, 36 (2018).
16. Knecht, C., Humphreys, B.K. & Wirth, B. An Observational Study on Recurrences of Low Back Pain During the First 12 Months After Chiropractic Treatment. *Journal of manipulative and physiological therapeutics* **40**, 427–433 (2017).
17. Meier, M.L. *et al.* The impact of pain-related fear on neural pathways of pain modulation in chronic low back pain. *Pain reports* **2**, e601 (2017).
18. Wirth, B., Ehrler, M. & Humphreys, B.K. First episode of acute low back pain - an exploratory cluster analysis approach for early detection of unfavorable recovery. *Disability and rehabilitation* **39**, 2559–2565 (2017).

19. Hotz-Boendermaker, S., Marcar, V.L., Meier, M.L., Boendermaker, B. & Humphreys, B.K. Reorganization in Secondary Somatosensory Cortex in Chronic Low Back Pain Patients. *Spine* **41**, E667-73 (2016).
20. Meier, M.L. *et al.* Neural Correlates of Fear of Movement in Patients with Chronic Low Back Pain vs. Pain-Free Individuals. *Frontiers in human neuroscience* **10**, 386 (2016).
21. Vrana, A., Meier, M.L., Hotz-Boendermaker, S., Humphreys, B.K. & Scholkmann, F. Cortical Sensorimotor Processing of Painful Pressure in Patients with Chronic Lower Back Pain-An Optical Neuroimaging Study using fNIRS. *Frontiers in human neuroscience* **10**, 578 (2016).
22. Vrana, A., Meier, M.L., Hotz-Boendermaker, S., Humphreys, B.K. & Scholkmann, F. Different mechanosensory stimulations of the lower back elicit specific changes in hemodynamics and oxygenation in cortical sensorimotor areas-A fNIRS study. *Brain and behavior* **6**, e00575 (2016).
23. Wirth, B., Ferreira, T.D., Mittelholzer, M., Humphreys, B.K. & Boutellier, U. Respiratory muscle endurance training reduces chronic neck pain: A pilot study. *Journal of back and musculoskeletal rehabilitation* **29**, 825–834 (2016).
24. Wirth, B., Humphreys, B.K. & Peterson, C. Importance of psychological factors for the recovery from a first episode of acute non-specific neck pain - a longitudinal observational study. *Chiropractic & manual therapies* **24**, 9 (2016).
25. Langenfeld, A., Humphreys, B.K., Bie, R.A. de & Swanenburg, J. Effect of manual versus mechanically assisted manipulations of the thoracic spine in neck pain patients: study protocol of a randomized controlled trial. *Trials* **16**, 233 (2015).
26. Langenfeld, A., Humphreys, B.K., Swanenburg, J. & Peterson, C.K. Prognostic factors for recurrences in neck pain patients up to 1 year after chiropractic care. *Journal of manipulative and physiological therapeutics* **38**, 458–464 (2015).
27. Meier, M.L. *et al.* Fear avoidance beliefs in back pain-free subjects are reflected by amygdala-cingulate responses. *Frontiers in human neuroscience* **9**, 424 (2015).
28. Vrana, A. *et al.* Differential Neural Processing during Motor Imagery of Daily Activities in Chronic Low Back Pain Patients. *PloS one* **10**, e0142391 (2015).
29. Wirth, B. & Humphreys, B.K. Pain characteristics of adolescent spinal pain. *BMC pediatrics* **15**, 42 (2015).
30. Boendermaker, B., Meier, M.L., Luechinger, R., Humphreys, B.K. & Hotz-Boendermaker, S. The cortical and cerebellar representation of the lumbar spine. *Human brain mapping* **35**, 3962–3971 (2014).
31. Holper, L. *et al.* Physiological effects of mechanical pain stimulation at the lower back measured by functional near-infrared spectroscopy and capnography. *Journal of integrative neuroscience* **13**, 121–142 (2014).
32. Meier, M.L., Hotz-Boendermaker, S., Boendermaker, B., Luechinger, R. & Humphreys, B.K. Neural responses of posterior to anterior movement on lumbar vertebrae: a functional magnetic resonance imaging study. *Journal of manipulative and physiological therapeutics* **37**, 32–41 (2014).
33. Swanenburg, J., Humphreys, K., Langenfeld, A., Brunner, F. & Wirth, B. Validity and reliability of a German version of the Neck Disability Index (NDI-G). *Manual therapy* **19**, 52–58 (2014).