

## Zentrum für Paraplegie (2020)

### Originalarbeiten

1. Anderson CE, Birkhäuser V, Stalder SA, Bachmann LM, Curt A, Jordan X, Leitner L, Liechti MD, Mehnert U, Möhr S, Pannek J, Schubert M, van der Lely S, Kessler TM, Brinkhof MWG. Optimizing clinical trial design using prospective cohort study data: a case study in neuro-urology. *Spinal Cord*. 2020 Nov 24. doi: 10.1038/s41393-020-00588-z. Online ahead of print.
2. Azzarito M, Kyathanahally SP, Balbastre Y, Seif M, Blaiotta C, Callaghan MF, Ashburner J, Freund P. Simultaneous voxel-wise analysis of brain and spinal cord morphometry and microstructure within the SPM framework. *Hum Brain Mapp*. 2020 Sep 29. doi: 10.1002/hbm.25218. Online ahead of print.
3. Azzarito M, Seif M, Kyathanahally S, Curt A, Freund P. Tracking the neurodegenerative gradient after spinal cord injury. *Neuroimage Clin*. 2020 Feb 25;26:102221. doi: 10.1016/j.nicl.2020.102221. [Epub ahead of print]
4. Bannwart M, Bayer SL, König Ignasiak N, Bolliger M, Rauter G, Easthope CA. Mediolateral damping of an overhead body weight support system assists stability during treadmill walking. *J Neuroeng Rehabil*. 2020 Aug 10;17(1):108. doi: 10.1186/s12984-020-00735-w.
5. Birkhäuser V, Liechti MD, Anderson CE, Bachmann LM, Baumann S, Baumberger M, Birder LA, Botter SM, Büeler S, Cruz CD, David G, Freund P, Friedl S, Gross O, Hund-Georgiadis M, Husmann K, Jordan X, Koschorke M, Leitner L, Luca E, Mehnert U, Möhr S, Mohammadzade F, Monastyrskaya K, Pfender N, Pohl D, Sadri H, Sartori AM, Schubert M, Sprengel K, Stalder SA, Stoyanov J, Stress C, Tatu A, Tawadros C, van der Lely S, Wöllner J, Zubler V, Curt A, Pannek J, Brinkhof MWG, Kessler TM. TASC-transcutaneous tibial nerve stimulation in patients with acute spinal cord injury to prevent neurogenic detrusor overactivity: protocol for a nationwide, randomised, sham-controlled, double-blind clinical trial. *BMJ Open*. 2020 Aug 13;10(8):e039164. doi: 10.1136/bmjopen-2020-039164.
6. Blasetti G, Pavese C, Maier DD, Weidner N, Rupp R, Abel R, Yorck BK, Jiri K, Curt A, Molinari M, Schubert M, Scivoletto G. Comparison of outcomes between people with and without central cord syndrome. *Spinal Cord*. 2020 Jun 2. doi: 10.1038/s41393-020-0491-x. Online ahead of print.
7. Brouwers EMJR, Meent HV, Curt A, Maier DD, Abel RF, Weidner N, Rupp R, Kriz J, de Haan AFJ, Kramer. Recovery After Traumatic Thoracic- And Lumbar Spinal Cord Injury: The Neurological Level of Injury Matters. *Spinal Cord*. 2020 May 5. doi: 10.1038/s41393-020-0463-1. Online ahead of print.
8. Buzzell A, Camargos KC, Chamberlain JD, Eriks-Hoogland I, Hug K, Jordan X, Schubert M, Brinkhof MWG. Self-reports of treatment for secondary health conditions: results from a

- longitudinal community survey in spinal cord injury. *Spinal Cord*. 2020 Dec 8. doi: 10.1038/s41393-020-00596-z. Online ahead of print.
9. Buzzell A, Chamberlain JD, Eriks-Hoogland I, Jordan X, Schubert M, Zwahlen M, Brinkhof MWG. Etiology-specific variation in survival following non-traumatic spinal cord injury: a causal inference approach using data from a population-based cohort. *Spinal Cord*. 2020 Sep 18. doi: 10.1038/s41393-020-00554-9. Online ahead of print.
  10. Buzzell A, Chamberlain JD, Schubert M, Mueller G, Berlowitz DJ, Brinkhof MWG; SwiSCI study group. Perceived sleep problems after spinal cord injury: Results from a community-based survey in Switzerland. *J Spinal Cord Med*. 2020 Jan 24:1-10. doi: 10.1080/10790268.2019.1710938. [Epub ahead of print]
  11. Caldelari P, Lemon R, Dietz V. Differential neural coordination of bilateral hand and finger movements. *Physiol Rep*. 2020 Mar;8(6):e14393. doi: 10.14814/phy2.14393.
  12. Curt A, Hsieh J, Schubert M, Hupp M, Friedl S, Freund P, Huber E, Pfyffer D, Sutter R, Jutzeler C, Wüthrich RP, Min K, Casha S, Fehlings MG, Guzman R. The Damaged Spinal Cord Is a Suitable Target for Stem Cell Transplantation. *Neurorehabil Neural Repair*. 2020 Jul 23:1545968320935815. doi: 10.1177/1545968320935815. Online ahead of print.
  13. Dietz V. Neural coordination of bilateral power and precision finger movements. *Eur J Neurosci*. 2020 Jul 18. doi: 10.1111/ejn.14911. Online ahead of print.
  14. Filli L, Schwegler S, Meyer C, Killeen T, Easthope CS, Broicher SD, Curt A, Zörner B, Bolliger M, Jung HH, Petersen JA. Characterizing cognitive-motor impairments in patients with myotonic dystrophy type 1. *Neuromuscul Disord*. 2020 May 19:S0960-8966(20)30097-3. doi: 10.1016/j.nmd.2020.04.005. Online ahead of print.
  15. Fischer T, Stern C, Freund P, Schubert M, Sutter R. Wallerian degeneration in cervical spinal cord tracts is commonly seen in routine T2-weighted MRI after traumatic spinal cord injury and is associated with impairment in a retrospective study. *Eur Radiol*. 2020 Oct 30. doi: 10.1007/s00330-020-07388-2. Online ahead of print.
  16. Fromme NP, Camenzind M, Riener R, Rossi RM. Design of a lightweight passive orthosis for tremor suppression. *J Neuroeng Rehabil*. 2020 Apr 9;17(1):47. doi: 10.1186/s12984-020-00673-7.
  17. Gammie A, Kessler TM. Half the message is just mess: judging the value of urodynamics based on partial or poor quality results. *BJU Int*. 2020 Apr 11. doi: 10.1111/bju.15063. [Epub ahead of print]
  18. Georgarakis AM, Sonar HA, Rinderknecht MD, Popp WL, Duarte JE, Lambercy O, Paik J, Martin BJ, Riener R, Klamroth-Marganska V. Age-Dependent Asymmetry of Wrist Position Sense Is Not Influenced by Stochastic Tactile Stimulation. *Front Hum Neurosci*. 2020 Mar 3;14:65. doi: 10.3389/fnhum.2020.00065. eCollection 2020.
  19. Grimmer M, Riener R, Walsh CJ, Seyfarth A. Correction to: Mobility related physical and functional losses due to aging and disease - a motivation for lower limb exoskeletons. *J Neuroeng Rehabil*. 2020 Feb 19;17(1):26. doi: 10.1186/s12984-020-0648-z.
  20. Haufe FL, Schmidt K, Duarte JE, Wolf P, Riener R, Xiloyannis M. Activity-based training with the Myosuit: a safety and feasibility study across diverse gait disorders. *J Neuroeng Rehabil*. 2020 Oct 8;17(1):135. doi: 10.1186/s12984-020-00765-4.

21. Hecker A, Aguirre J, Eichenberger U, Rosner J, Schubert M, Sutter R, Wieser K, Bouaicha S. Deltoid muscle contribution to shoulder flexion and abduction strength - An experimental approach. *J Shoulder Elbow Surg.* 2020 Jun 12:S1058-2746(20)30464-X. doi: 10.1016/j.jse.2020.05.023. Online ahead of print.
22. Huber E, Patel R, Hupp M, Weiskopf N, Chakravarty MM, Freund P. Extrapyrmidal plasticity predicts recovery after spinal cord injury. *Sci Rep.* 2020 Aug 24;10(1):14102. doi: 10.1038/s41598-020-70805-5.
23. Hubli M, Zemp R, Albisser U, Camenzind F, Leonova O, Curt A, Taylor WR. Feedback improves compliance of pressure relief activities in wheelchair users with spinal cord injury. *Spinal Cord.* 2020 Jul 21. doi: 10.1038/s41393-020-0522-7. Online ahead of print.
24. Huynh V, Rosner J, Curt A, Kollias S, Hubli M, Michels L. Disentangling the Effects of Spinal Cord Injury and Related Neuropathic Pain on Supraspinal Neuroplasticity: A Systematic Review on Neuroimaging. *Front Neurol.* 2020 Feb 5;10:1413. doi: 10.3389/fneur.2019.01413. eCollection 2019.
25. Just F, Özen Ö, Tortora S, Klamroth-Marganska V, Riener R, Rauter G. Human arm weight compensation in rehabilitation robotics: efficacy of three distinct methods. *J Neuroeng Rehabil.* 2020 Feb 5;17(1):13. doi: 10.1186/s12984-020-0644-3.
26. Jutzeler CR, Linde LD, Rosner J, Hubli M, Curt A, Kramer JLK. Single-trial averaging improves the physiological interpretation of contact heat evoked potentials. *Neuroimage.* Oct 21:117473. doi: 10.1016/j.neuroimage.2020.117473. Online ahead of print.
27. Kessler TM. Guidelines on urinary incontinence: it is time to join forces! *BJU Int.* 2020 May;125(5):625-626. doi: 10.1111/bju.15075.
28. Kessler TM. Neuro-Urology, Quo Vadis? *Eur Urol Focus.* 2020 Apr 29:S2405-4569(20)30104-8. doi: 10.1016/j.euf.2020.04.006. Online ahead of print.
29. Köchli S, Scharfenberger T, Dietz V. Coordination of bilateral synchronous and asynchronous hand movements. *Neurosci Lett.* 2020 Feb 16;720:134757. doi: 10.1016/j.neulet.2020.134757. Epub 2020 Jan 18.
30. Leitner L, Ujmajuridze A, Chanishvili N, Goderdzishvili M, Chkonia I, Rigvava S, Chkhotua A, Changashvili G, McCallin S, Schneider MP, Liechti MD, Mehnert U, Bachmann LM, Sybesma W, Kessler TM. Intravesical bacteriophages for treating urinary tract infections in patients undergoing transurethral resection of the prostate: a randomised, placebo-controlled, double-blind clinical trial. *Lancet Infect Dis.* 2020 Sep 16:S1473-3099(20)30330-3. doi: 10.1016/S1473-3099(20)30330-3. Online ahead of print.
31. Leutritz T, Seif M, Helms G, Samson RS, Curt A, Freund P, Weiskopf N. Multiparameter mapping of relaxation (R1, R2\*), proton density and magnetization transfer saturation at 3 T: A multicenter dual-vendor reproducibility and repeatability study. *Hum Brain Mapp.* 2020 Jul 8. doi: 10.1002/hbm.25122. Online ahead of print.
32. Linde LD, Haefeli J, Jutzeler CR, Rosner J, McDougall J, Curt A, Kramer JLK. Contact Heat Evoked Potentials Are Responsive to Peripheral Sensitization: Requisite Stimulation Parameters. *Front Hum Neurosci.* 2020 Jan 10;13:459. doi: 10.3389/fnhum.2019.00459. eCollection 2019.

33. Liu LJW, Rosner J, Cragg JJ. Journal Club: High-dose methylprednisolone for acute traumatic spinal cord injury: A meta-analysis. *Neurology*. 2020 Apr 8;10.1212/WNL.0000000000009263. doi: 10.1212/WNL.0000000000009263. Online ahead of print.
34. Martin Ginis KA, Úbeda-Colomer J, Alrashidi AA, Nightingale TE, Au JS, Currie KD, Hubli M, Krassioukov A. Construct validation of the leisure time physical activity questionnaire for people with SCI (LTPAQ-SCI). *Spinal Cord*. 2020 Oct 10. doi: 10.1038/s41393-020-00562-9. Online ahead of print.
35. Meyer C, Filli L, Stalder SA, Awai Easthope C, Killeen T, von Tschanner V, Curt A, Zörner B, Bolliger M. Targeted walking in incomplete spinal cord injury: Role of corticospinal control. *J Neurotrauma*. 2020 Jun 18. doi: 10.1089/neu.2020.7030. Online ahead of print.
36. Meyer C, Hofstoetter US, Hubli M, Hassani RH, Rinaldo C, Curt A, Bolliger M. Immediate Effects of Transcutaneous Spinal Cord Stimulation on Motor Function in Chronic, Sensorimotor Incomplete Spinal Cord Injury. *J Clin Med*. 2020 Nov 2;9(11):E3541. doi: 10.3390/jcm9113541.
37. Muriel Buri, Armin Curt, John Steeves, Torsten Hothorn. Baseline-adjusted proportional odds models for the quantification of treatment effects in trials with ordinal sum score outcomes. *BMC Med Res Methodol*. 2020 May 6;20(1):104. doi: 10.1186/s12874-020-00984-2.
38. Novak D, Riener R. Sensor Fusion in Assistive and Rehabilitation Robotics. *Sensors (Basel)*. 2020 Sep 14;20(18):E5235. doi: 10.3390/s20185235.
39. Pfyffer D, Vallotton K, Curt A, Freund P. Predictive Value of Midsagittal Tissue Bridges on Functional Recovery After Spinal Cord Injury. *Neurorehabil Neural Repair*. 2020 Nov 16:1545968320971787. doi: 10.1177/1545968320971787. Online ahead of print.
40. Pfyffer D, Vallotton K, Curt A, Freund P. Tissue bridges predict neuropathic pain emergence after spinal cord injury. *J Neurol Neurosurg Psychiatry*. 2020 Aug 11:jnnp-2020-323150. doi: 10.1136/jnnp-2020-323150. Online ahead of print.
41. Pfyffer D, Wyss PO, Huber E, Curt A, Henning A, Freund P. Metabolites of neuroinflammation relate to neuropathic pain after spinal cord injury. *Neurology*. 2020 Jun 26:10.1212/WNL.0000000000010003. doi: 10.1212/WNL.0000000000010003. Online ahead of print.
42. Scheuren PS, Rosner J, Curt A, Hubli M. Pain-autonomic interaction: a surrogate marker of central sensitization. *Eur J Pain*. 2020 Aug 13. doi: 10.1002/ejp.1645. Online ahead of print.
43. Scivoletto G, Torre M, Mammone A, Maier DD, Weidner N, Schubert M, Rupp R, Abel R, Yorck-Bernhard K, Jiri K, Curt A, Molinari M. Acute Traumatic and Ischemic Spinal Cord Injuries Have a Comparable Course of Recovery. *Neurorehabil Neural Repair*. 2020 Jul 13:1545968320939569. doi: 10.1177/1545968320939569. Online ahead of print.
44. Seiler A, Blum D, Hertler C, Schettle M, Zipser CM, Bode L, Gehrke S, Ernst J, Schubert M, von Känel R, Boettger S. Death in delirious palliative-care patients occurs irrespective of age: A prospective, observational cohort study of 229 delirious palliative-care patients. *Palliat Support Care*. 2020 Sep 15:1-9. doi: 10.1017/S1478951520000887. Online ahead of print.
45. Sirucek L, Jutzeler CR, Rosner J, Schweinhardt P, Curt A, Kramer JLK, Hubli M. The Effect of Conditioned Pain Modulation on Tonic Heat Pain Assessed Using Participant-Controlled

- Temperature. *Pain Med.* 2020 Mar 16. pii: pnaa041. doi: 10.1093/pm/pnaa041. [Epub ahead of print]
46. van der Lely S, Kessler TM, Mehnert U, Liechti MD. Scalp Topography of Lower Urinary Tract Sensory Evoked Potentials. *Brain Topogr.* 2020 Oct 16. doi: 10.1007/s10548-020-00796-z. Online ahead of print.
  47. van Sluijs R, Wilhelm E, Rondei Q, Omlin X, Crivelli F, Straumann D, Jäger L, Riener R, Achermann P. Gentle rocking movements during sleep in the elderly. *J Sleep Res.* 2020 Feb 15:e12989. doi: 10.1111/jsr.12989. Online ahead of print.
  48. van Sluijs RM, Rondei QJ, Schluep D, Jäger L, Riener R, Achermann P, Wilhelm E. Effect of Rocking Movements on Afternoon Sleep. *Front Neurosci.* 2020 Jan 21;13:1446. doi: 10.3389/fnins.2019.01446. eCollection 2019.
  49. Weller D, Filli L, Meyer C, Lörcincz L, Linnebank M, Weller M, Curt A, Zörner B. Impaired speed-dependent modulation of the gait pattern in multiple sclerosis. *J Neurol.* 2020 Jun 4. doi: 10.1007/s00415-020-09965-3. Online ahead of print.
  50. Werner C, Schneider S, Gassert R, Curt A, Demko L. Complementing Clinical Gait Assessments of Spinal Cord Injured Individuals using Wearable Movement Sensors. *Annu Int Conf IEEE Eng Med Biol Soc.* 2020 Jul;2020:3142-3145. doi: 10.1109/EMBC44109.2020.9175703.
  51. Zipser CM, Knoepfel S, Hayoz P, Schubert M, Ernst J, von Känel R, Boettger S. Clinical management of delirium: The response depends on the subtypes. An observational cohort study in 602 patients. *Palliat Support Care.* 2020 Feb;18(1):4-11. doi: 10.1017/S1478951519000609
  52. Zipser CM, Pfender N, Spirig JM, Betz M, Aguirre J, Hupp M, Farshad M, Curt A, Schubert M. Study protocol for an observational study of cerebrospinal fluid pressure in patients with degenerative cervical myelopathy undergoing surgical deCOMPRESSION of the spinal CORD: the COMP-CORD study. *BMJ Open.* 2020 Sep 21;10(9):e037332. doi: 10.1136/bmjopen-2020-037332.

## Reviews

1. Badhiwala JH, Ahuja CS, Akbar MA, Witiw CD, Nassiri F, Furlan JC, Curt A, Wilson JR, Fehlings MG. Degenerative cervical myelopathy - update and future directions. *Nat Rev Neurol.* 2020 Feb;16(2):108-124. doi: 10.1038/s41582-019-0303-0. Epub 2020 Jan 23
2. De Wachter S, Vaganee D, Kessler TM. Sacral Neuromodulation: Mechanism of Action. *Eur Urol Focus.* 2020 Feb online ahead
3. Finazzi-Agro E, Gammie A, Kessler TM, van Koevinge G, Serati M, Solomon E, de Wachter S, Kirschner-Hermanns R. Urodynamics Useless in Female Stress Urinary Incontinence? Time for Some Sense-A European Expert Consensus. *Eur Urol Focus.* 2020 Jan 15 6 (1), 137-145
4. Jörg E, Sartori AM, Hofer AS, Baumann CR, Kessler TM. Deep brain stimulation effects on lower urinary tract function: Systematic review and meta-analysis. *Parkinsonism Relat Disord.* 2020 Aug 26;79:65-72. doi: 10.1016/j.parkreldis.2020.08.032. Online ahead of print

5. Mehnert U, van der Lely S, Seif M, Leitner L, Liechti MD, Michels L. Neuroimaging in Neurourology. *Eur Urol Focus*. 2020 Feb 28. pii: S2405-4569(19)30384-0. doi: 10.1016/j.euf.2019.12.006. [Epub ahead of print]
6. Sartori AM, Kessler TM, Schwab ME. Methods for Assessing Lower Urinary Tract Function in Animal Models. *Eur Urol Focus*. 2020 Jan 11. pii: S2405-4569(19)30382-7. doi: 10.1016/j.euf.2019.12.004. [Epub ahead of print]