

## Scientific Publications



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### A1 Validity / Reliability / Objectivity

A1.15	<p>Ruthard, K., Raabe-Oetker, A., Ruthard, J., Oppermann, T., Duran, I., &amp; Schönau, E.</p> <p><b>Reliability of a radiation-free, noninvasive and computer-assisted assessment of the spine in children with cerebral palsy.</b></p> <p><i>European Spine Journal</i>, 29(5), 937–942., 2020</p>
A1.14	<p>A Livanelioglu, F Kaya, V Nabiyev, G Demirkiran, T Firat</p> <p><b>The validity and reliability of "Spinal Mouse" assessment of spinal curvatures in the frontal plane in pediatric adolescent idiopathic thoraco-lumbar curves</b></p> <p>Department of Physiotherapy and Rehabilitation, Faculty of Health Science, Hacettepe University, Ankara, Turkey</p> <p><i>Eur Spine J</i>, [Epub ahead of print] Apr 22, 2015</p>
A1.13	<p>A Topalidou, G Tzagarakis, X Souvatzis, G Kontakis, P Katonis</p> <p><b>Evaluation of the reliability of a new non-invasive method for assessing the functionality and mobility of the spine</b></p> <p>Department of Anaesthesiology, University Hospital of Heraklion, Crete, Greece</p> <p><i>Acta Bioeng Biomech</i>, 16 (1):117-24, 2014</p>
A1.12	<p>E Barrett, K McCreesh, J Lewis</p> <p><b>Reliability and validity of non-radiographic methods of thoracic kyphosis measurement: A systematic review</b></p> <p>Department of Clinical Therapies, Faculty of Education and Health Sciences, University of Limerick, Limerick, Ireland</p> <p><i>Manual Therapy</i>, 19 (1):10-7, 2014</p>
A1.11	<p>BS Russel, KA Muhlenkamp, KT Hoiriis, CM Desimone</p> <p><b>Measurement of lumbar lordosis in static standing posture with and without high heeled shoes</b></p> <p>Office of Sponsored Research and Scholarly Activity, Life University, Marietta, GA, USA</p> <p><i>J Chiropr Med</i>, 11 (3):145-59, 2012</p>
A1.10	<p>E Kellis, G Adamou, G Tzilios, M Emmanouilidou</p> <p><b>Reliability of spinal range of motion in healthy boys using a skin-surface device</b></p> <p>Physical Education and Sports and Sciences at Serres, Aristotle University Thessaloniki, Serres, Greece</p> <p><i>J Manipulativ Physiol Ther</i>, 31: 570 – 576, 2008</p>
A1.09	<p>M Guerhazi, S Ghroubi, M Kassis, O Jaziri, H Keskes, W Kessomtini, I Ben Hammouda, MH Elleuch</p> <p>Article in French</p> <p><b>Validity and reliability of Spinal Mouse to assess lumbar flexion</b></p> <p>Service de Médecine Physique et Réadaptation fonctionnelle de l'Hôpital Habib-Bourguiba, Université du Sud, Sfax, Tunisie</p> <p><i>Ann Readapt Phys</i>, 49 (4): 172 – 177, 2006</p>

## Scientific Publications

A1.08	<p>RB Post, VJM Leferink</p> <p><b>Spinal mobility: sagittal range of motion measured with the SpinalMouse, a new non-invasive device</b></p> <p>Department of Surgery, University Hospital Groningen, Netherlands</p> <p><i>Arch Orthop Trauma Surg, 124: 187 – 192, 2004</i></p>
A1.07	<p>AF Mannion, K Knecht, G Balaban, J Dvorak, D Grob</p> <p><b>A new skin-surface device for measuring the curvature and global and segmental ranges of motion of the spine: reliability of measurements and comparison with the data reviewed from the literature</b></p> <p>Institute of Physical Medicine and Rehabilitation, University Hospital Zurich, Switzerland</p> <p><i>Eur Spine J, 13 (2):122 – 136, 2004</i></p>
A1.06	<p>E Bistritschan, S Delank, G Winnekendonk, P Eysel</p> <p>Article in German</p> <p><b>Oberflächenmessverfahren (MediMouse) versus Röntgenfunktionsaufnahmen zur Beurteilung der lumbalen Wirbelsäulenbeweglichkeit</b></p> <p>Klinik und Poliklinik für Orthopädie, Klinik der Universität Köln, Germany</p> <p><i>Orthopädie, 141 (S1), 2003</i></p>
A1.05	<p>S Keller, AF Mannion, D Grob</p> <p><b>Reliability of a new measuring device („spinalmouse“) in recording the sagittal profile of the back</b></p> <p>Schulthess Clinic, Zurich, Switzerland</p> <p><i>Eur Spine J, 9 (4), 2000</i></p>
A1.04	<p>RK Meier, D Gutensohn, R Dracheneder, N Seichert</p> <p>Article in German</p> <p><b>Objektive Evaluation der Rückenform und Veranschaulichung der WS-Aufrichtung im Rahmen der Patientenschulung</b></p> <p>Orthopädische Abteilung der Bad Colberg Kliniken, Bad Colberg, Germany</p> <p><i>Phys Med Rehab Kuror, 10 (4), 2000</i></p>
A1.03	<p>S Steinbeis, G Stucki</p> <p>Article in German</p> <p><b>Alters- und geschlechtsspezifische Normwerte von Rückenform und – beweglichkeit gemessen mit der Rückenmaus</b></p> <p>Medizinische Fakultät der Ludwig-Maximilians-Universität München, Germany</p> <p><i>Dissertation, 1999</i></p>
A1.02	<p>N Seichert</p> <p><b>Measurement of shape and mobility of the spinal column: Validation of the SpinalMouse® by comparison with functional radiographs</b></p> <p>Ludwig-Maximilians-Universität München, Germany</p> <p><i>Summary of dissertation of S Schulz, 1999</i></p>

## Scientific Publications

A1.01	<p>S Schultz, E Senn, G Stucki</p> <p>Article in German</p> <p><b>Messung von Form und Beweglichkeit der Wirbelsäule: Validierung der „Rückenmaus“ durch Vergleich mit Röntgen-Funktionsaufnahmen</b></p> <p>Medizinische Fakultät der Ludwig-Maximilians-Universität München, Germany</p> <p><i>Dissertation, 1999</i></p>
A1.00	<p>N Seichert, M Baumann, E Senn, H Zuckriegl</p> <p>Article in German</p> <p><b>Die Rückenmaus – Ein analog digitales Messgerät zur Erfassung der sagittalen Rückenkontur</b></p> <p>Klinik für Physikalische Medizin und Rehabilitation der Ludwig-Maximilians-Universität München, Germany</p> <p><i>Phys Rehab Kur Med 4: 35 – 43, 1994</i></p>

## A2 Clinical applications

A2.35	<p>Taniguchi, M., Ikezoe, T., Masaki, M., Kamitani, T., Tsuboyama, T., Ito, H., Matsuda, S., Tabara, Y., Matsuda, F., Ichihashi, N., &amp; Nagahama Study group, T.</p> <p><b>Coexistence of low back pain and lumbar kyphosis is associated with increased functional disability in knee osteoarthritis: the Nagahama Study.</b></p> <p><i>Arthritis Care &amp; Research. 2021</i></p>
A2.34	<p>Csuhai, É. A., Nagy, A. C., Váradi, Z., &amp; Veres-Balajti, I.</p> <p><b>Functional analysis of the spine with the idiag spinalmouse system among sedentary workers affected by non-specific low back pain.</b></p> <p><i>International Journal of Environmental Research and Public Health, 17(24), 1–14. 2020</i></p>
A2.33	<p>Tabara, Y., Masaki, M., Ikezoe, T., Setoh, K., Kato, T., Kawaguchi, T., Kosugi, S., Nakayama, T., Ichihashi, N., Tsuboyama, T., &amp; Matsuda, F.</p> <p><b>Small Degree of Lumbar Lordosis as an Overlooked Determinant for Orthostatic Increases in Blood Pressure in the Elderly: The Nagahama Study.</b></p> <p><i>American Journal of Hypertension, 32(1), 61–69. 2019</i></p>
A2.32	<p>Masaki, M., Ikezoe, T., Yanase, K., Ji, X., Umehara, J., Aoyama, J., Minami, S., Fukumoto, Y., Watanabe, Y., Kimura, M., &amp; Ichihashi, N.</p> <p><b>Association of Pain History and Current Pain with Sagittal Spinal Alignment and Muscle Stiffness and Muscle Mass of the Back Muscles in Middle-aged and Elderly Women.</b></p> <p><i>Clinical Spine Surgery, 32(7), E346–E352. 2019</i></p>
A2.31	<p>A Muramoto, S Imagama, Z Ito, K Hirano, N Ishiguro, Y Hasegawa</p>

## Scientific Publications

	<p><b>Spinal sagittal balance substantially influences locomotive syndrome and physical performance in community-living middle-aged and elderly women.</b></p> <p>Department of Spine Surgery, Kariya Toyota General Hospital, Japan. Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan.</p> <p><i>J Orthop Sci, [Epub ahead of print], Jan 21, 2016</i></p>
A2.30	<p>K Imhof, O Faude, V Strebler, L Donath, R Roth, L Zahner</p> <p><b>Examining the Association between Physical Fitness, Spinal Flexibility, Spinal Posture and Reported Back Pain in 6 To 8 Year Old Children</b></p> <p>Department of Sport, Exercise and Health, Medical Faculty, University of Basel, Switzerland</p> <p><i>J Nov Physiother, 5:5, 2015</i></p>
A2.29	<p>K Imhof, O Faude, L Donath, S Bean-Eisenhut, H Hanssen, L Zahner</p> <p><b>The association of socio-economic factors with physical fitness and activity behaviours, spinal posture and retinal vessel parameters in first graders in urban Switzerland.</b></p> <p>Department of Sport, Exercise and Health, Medical Faculty, University of Basel, Switzerland</p> <p><i>J Sports Sci, 7:1-10, 2015</i></p>
A2.28	<p>YD Kim, KB Lee, DG Lee</p> <p><b>Alterations of spinal range of motion while sitting in hemiplegic patients with or without gait available</b></p> <p>Department of Orthopaedic Surgery, Nagoya University, Graduate School of Medicine, Japan</p> <p><i>J. Phys. Ther. Sci. 27: 2981-83, 2015</i></p>
A2.27	<p>A Topalidou, G Tzagarakis, K Balais, K Ziogas, A Papaioannou</p> <p><b>Sagittal and Frontal Plane Evaluation of the Whole Spine and Clinical Outcomes after Vertebral Fractures</b></p> <p>Faculty of Medicine, Department of Orthopaedics and Traumatology, University Hospital of Heraklion, University of Crete, Greece</p> <p><i>Adv Orthop [Epub ahead of print], 2015</i></p>
A2.26	<p>R Tauchi, S Imagama, A Muramoto, M Tsuboi, N Ishiguro, Y Hasegawa</p> <p><b>Influence of spinal imbalance on knee osteoarthritis in community-living elderly adults</b></p> <p>Department of Orthopaedic Surgery, Nagoya University, Graduate School of Medicine, Japan</p> <p><i>Nagoya J. Med. Sci 77: 329-37, 2015</i></p>
A2.25	<p>M Masaki, T Ikezoe, Y Fukumoto, S Minami, J Aoyama, S Ibuki, M Kimura, N Ichihashi</p> <p><b>Association of walking speed with sagittal spinal alignment, muscle thickness, and echo intensity of lumbar back muscles in middle-aged and elderly women</b></p> <p>Department of Physical Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University, Japan</p> <p><i>Aging Clin Exp Res [Epub ahead of print], 2015</i></p>
A2.24	<p>JO Yoon, MH Kang, JS Kim, JS Oh</p> <p><b>The effects of gait with use of smartphone on repositioning error and curvature of the lumbar spine</b></p> <p>Department of Physical Therapy, Graduate School, Inje University, Republic of Korea</p> <p><i>J Phys Ther Sci 27: 2507-08, 2015</i></p>

## Scientific Publications

A2.23	<p>YD Kim, KB Lee, HL Roh</p> <p><b>Immediate effects of the activation of the affected lower limb on the balance and trunk mobility of hemiplegic stroke patients</b></p> <p>Human Movement Research, Republic of Korea, Department of Rehabilitation Medicine, St. Vincent's Hospital, Republic of Korea</p> <p><i>J Phys Ther Sci 27: 1555-57, 2015</i></p>
A2.22	<p>M Masakia, T Ikezoea, Y Fukumotob, S Minamic, R Tsukagoshid, K Sakumaa, S Ibukia, Y Yamadaf, M Kimurag, N Ichihashia</p> <p><b>Association of sagittal spinal alignment with thickness and echo intensity of lumbar back muscles in middle-aged and elderly women</b></p> <p>Department of Physical Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University, Kyoto, Japan</p> <p><i>Arch Gerontol Geriatr 61, 197-201, 2015</i></p>
A2.21	<p>F Benninger, A Khlebtovsky, Y Roditi, O Keret, I Steiner, E Melamed, R Djaldetti</p> <p><b>Beneficial effect of levodopa therapy on stooped posture in Parkinson's disease</b></p> <p>Department of Neurology, Rabin Medical Center, Beilinson Hospital, Petach Tikva, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel</p> <p><i>Gait Posture 42, 263-68, 2015</i></p>
A2.20	<p>YD Kim</p> <p><b>Effects of activation of the foot on trunk mobility of patients with hemiplegia</b></p> <p>Human Movement Research, Wolpyeong-dong, Daejeon, Republic of Korea</p> <p><i>J Phys Ther Sci 27: 1079-82, 2015</i></p>
A2.19	<p>B Wirt, M Amstalden, M Perk, U Boutellier, BK Humphreys</p> <p><b>Respiratory Dysfunction in patients with chronic neck pain – influence of thoracic spine and chest mobility</b></p> <p>Institute for Human Movement Sciences and Sports, Department of Health Sciences and Technology, ETH Zurich, Switzerland</p> <p><i>Manual Therapy 19(5): 440-4, 2014</i></p>
A2.18	<p>H Obayashi, Y Urabe, Yamanaka, R Okuma</p> <p><b>Effects of Respiratory-Muscle Exercise on Spinal Curvature</b></p> <p>Graduate School of Health Science, Hiroshima University, Hiroshima, Japan</p> <p><i>J Sport Rehabil. 2012 Feb; 21:63-8</i></p>
A2.17	<p>G Battaglia, M Bellafiore, G Caramazza, A Paoli, A Bianco, A Palma</p> <p><b>Changes in spinal range of motion after a flexibility training program in elderly women</b></p> <p>Department of Law, Society and Sport Sciences, Via Eleonora Duse 2,90146 Palermo, Italy</p> <p><i>Clin Interv Aging, 9:653-60, 2014</i></p>
A2.16	<p>T Terai, H Yamada, K Asano, A Nawata, T Iwasaki, T Henmi, K Sairyō</p> <p><b>Effectiveness of three types of lumbar orthosis for restricting extension motion</b></p> <p>Department of Orthopedic Surgery, Tokushima Prefecture Naruto Hospital, 32 Kotani Kurosaki Muya-cho Naruto, Tokushima, 772-8503, Japan</p> <p><i>Eur J Orthop Surg Traumatol 24, 239-43, 2014</i></p>

## Scientific Publications

A2.15	<p>JM Muyor, E Zemková, G Stefániková, M Kotyra</p> <p><b>Concurrent Validity of Clinical Tests for Measuring Hamstring Flexibility in School Age Children</b></p> <p>Faculty of Education Sciences, Nursing and Physiotherapy, Laboratory of Kinesiology, Biomechanics and Ergonomics (KIBIOMER), University of Almería, Almería, Spain</p> <p><i>Int J Sports Med</i> 35, 664-9, <b>2014</b></p>
A2.14	<p>JM Muyor, E Sánchez-Sánchez, D Sanz-Rivas, PA López-Miñarro</p> <p><b>Sagittal Spinal Morphology in Highly Trained Adolescent Tennis Players</b></p> <p>Faculty of Education Sciences, Nursing and Physiotherapy, Laboratory of Kinesiology, Biomechanics and Ergonomics (KIBIOMER), University of Almería, Almería, Spain</p> <p><i>J Sports Sci Med</i>, 12 (3): 588-93, <b>2013</b></p>
A2.13	<p>D Tsunoda, Y Iizuka, H Iizuka, M Nishinome, R Kobayashi, T Ara, A Yamamoto, K Takagishi</p> <p><b>Associations between neck and shoulder pain (called <i>katakori</i> in Japanese) and sagittal spinal alignment parameters among the general population</b></p> <p>Department of Orthopaedic Surgery, Gunma University Graduate School of Medicine, 3-39-22 Showa, Maebashi, Gunma 371-8511, Japan</p> <p><i>J Orthop Sci</i>, 18 (2): 216-19, <b>2013</b></p>
A2.12	<p>PA López-Miñarro, JM Muyor, F Belmonte, F Alacid</p> <p><b>Acute effects of hamstring stretching on sagittal spinal curvatures and pelvic tilt</b></p> <p>Department of Physical Education, University of Murcia, Spain</p> <p><i>J Hum Kin</i>, 31: 69-78, <b>2012</b></p>
A2.11	<p>S Watanabe, K Kobara, H Ishida, A Eguchi</p> <p><b>Influence of trunk muscle co-contraction on spinal curvature during sitting cross-legged</b></p> <p>Department of Rehabilitation, Faculty of Health Science and Technology, Kawasaki, Japan</p> <p><i>Electromyogr Clin Neurophysiol</i>, 50: 187-192, <b>2010</b></p>
A2.10	<p>I Bautmans, J Van Arken, M Van Mackelenberg, T Mets</p> <p><b>Rehabilitation using manual mobilization for thoracic kyphosis in elderly postmenopausal patients with osteoporosis</b></p> <p>Frailty in Ageing Research Department, Vrije Universiteit Brussel, Belgium Geriatrics, Universitair Ziekenhuis, Brussel, Belgium</p> <p><i>J Rehabil Med</i>, 42: 129 – 135, <b>2010</b></p>
A2.09	<p>Y Takihara, Y Urabe, GA Nishiwaki, K Tanaka, K Miyashita</p> <p><b>How back-muscle fatigue influences lumbar curvature</b></p> <p>Health Science Department, Hiroshima University, Hiroshima, Japan</p> <p><i>J Sport Rehabil</i>, 18: 327 – 336, <b>2009</b></p>
A2.08	<p>R Chou, R Fu, JA Carrino, RA Deyo</p> <p><b>Imaging strategies for low-back pain: systematic review and meta-analysis</b></p> <p>Oregon, Health and Science University, Portland, USA</p> <p><i>Lancet</i>, 373: 463 – 472, <b>2009</b></p>

## Scientific Publications

A2.07	<p>H Ishida, S Watanabe, H Yanagawa, M Kawasaki, Y Kobayashi, Y Amano</p> <p><b>Immediate effects of a rucksack type orthosis on the elderly with decreased lumbar lordosis during standing and walking</b></p> <p>Department of Rehabilitation, Shukumo Clinic, Okayama, Japan</p> <p><i>Electromyogr Clin Neurophysiol</i>, 48: 53 – 61, 2008</p>
A2.06	<p>G Verheyden, A Nieuwboer</p> <p><b>An exploratory study of trunk impairment in people with Parkinson’s disease</b></p> <p>School of Health Sciences, University Southampton, United Kingdom</p> <p><i>Poster (unpublished) 2007</i></p>
A2.05	<p>S Watanabe, A Eguchi, K Kobara, H Ishida</p> <p><b>Influence of trunk muscle co-contraction on spinal curvature during sitting for desk work</b></p> <p>Department of Rehabilitation, Faculty of Health Science and Technology, Kawasaki, Japan</p> <p><i>Electromyogr Clin Neurophysiol</i>, 47: 273 – 278, 2007</p>
A2.04	<p>N Miyakoshi, M Hongo, S Maekawa, Y Ishikawa, Y Shimada, E Itoi</p> <p><b>Back extensor strength and lumbar spinal mobility are predictors of QOL in patients with postmenopausal osteoporosis</b></p> <p>Division of Orthopedic Surgery, Akita University School of Medicine, Akita, Japan</p> <p><i>Osteoporos Int</i>, 18: 1397 – 1403, 2007</p>
A2.03	<p>N Miyakoshi, M Hongo, S Maekawa, Y Ishikawa, Y Shimada, K Okada, E Itoi</p> <p><b>Factors related to spinal mobility in patients with postmenopausal osteoporosis</b></p> <p>Department of Orthopedic Surgery, Akita University School of Medicine, Akita, Japan</p> <p><i>Osteoporos Int</i>, 16: 1871 – 1874, 2005</p>
A2.02	<p>AF Mannion, J Dvorak, M Müntener, D Grob</p> <p><b>A prospective study of the interrelationship between subjective and objective measures of disability before and 2 months after lumbar decompression surgery for disc herniation</b></p> <p>Schulthess Clinic Zurich, Switzerland</p> <p><i>Eur Spine J</i>, 14: 454 – 465, 2005</p>
A2.01	<p>RB Post, VJM Leferink</p> <p><b>Sagittal range of motion after a spinal fracture: does ROM correlate with functional outcome?</b></p> <p>Department of Surgery, University Hospital Groningen, Netherlands</p> <p><i>Eur Spine J</i>, 13: 489 – 494, 2004</p>
A2.00	<p>EM Liebig, R Kothe, AF Mannion, D Grob</p> <p><b>The clinical significance of the lumbar lordosis: relationship between lumbar spinal curvature and low back pain</b></p> <p>Schulthess Clinic, Zurich, Switzerland</p> <p><i>Eur Spine J</i>, 9: 286, 2000</p>

## Scientific Publications

### A3 Master thesis / practical experiences

A3.02	<p>J Piper, B Wollesen, K Mattes</p> <p>Report in German</p> <p><b>Entwicklung eines mobile Rücken-Screenings für Personen an Büro- und Bildschirmarbeitsplätzen zum Einsatz in der Betrieblichen Gesundheitsförderung</b></p> <p><i>Abteilung für Bewegungs- und Trainingswissenschaft, Fakultät für Erziehungswissenschaft, Psychologie und Bewegungswissenschaft, Universität Hamburg, Germany</i></p> <p><i>Prävention und Rehabilitation, 4: 173-84, 2011</i></p>
A3.01	<p>M Thuma</p> <p>Report in German</p> <p><b>Von der Bedeutung gesundheitspräventiver Massnahmen für Wiener Volksschulkinder, vor allem statisch und dynamische Haltung bzw. Motorik betreffend</b> [Anm: inkl. Normwerterfassung von Kindern]</p> <p><i>Body &amp; Health Academy, Vienna, Austria</i></p> <p><i>Master Thesis, 2007</i></p>
A3.00	<p>A Clemens</p> <p>Report in German</p> <p><b>Untersuchung der Effektivität eines propriozeptiven Trainingsprogramms im Bäckerhandwerk</b></p> <p><i>BSA-Private Berufsakademie, Hermann Neuberger Sportschule, Saarbruecken, Germany</i></p> <p><i>Master Thesis, 2007</i></p>

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