Literature: Automated Locomotion Therapy

Author	Article	Publication	Year
Patritti BL, Straudi S, Deming LC, Benedetti MG, Nimec DL, Bonato P.	Robotic gait training in an adult with cerebral palsy: a case report.	PM R 2(1):71-75.	2010
Brutsch S, Schuler T, Koenig A, Zimmerli L, Merillat-Koeneke S, Lünenburger L, Riener R, Jäncke L, Meyer-Heim A.	Influence of virtual reality soccer game on walking performance in robotic assisted gait training for children.	Journal of NeuroEngeneering and Rehabilitation 7(15).	2010
Borggraefe I, Kiwull L, Schaefer JS, Koerte I, Blaschek A, Meyer-Heim A, et al.	Sustainability of motor performance after robotic-assisted treadmill therapy in children: an open, non-randomized baseline-treatment study.	Eur J Phys Rehabil Med. 2010 Feb 18.	2010
Borggraefe I, Klaiber M, Schuler T, Warken B, Schroeder SA, Heinen F, et al.	of robotic-assisted treadmill therapy in children and adolescents with gait impairment: a bi-centre survey.	Dev Neurorehabil. 2010;13(2):114-9.	2010
Borggraefe I, Schaefer JS, Klaiber M, Dabrowski E, Ammann-Reiffer C, Knecht B, et al.	Robotic-assisted treadmill therapy improves walking and standing performance in children and adolescents with cerebral palsy.	Eur J Paediatr Neurol. 2010 Feb 5.	2010
Klarner T, Chan HK, Wakeling JM, Lam T.	Patterns of muscle coordination vary with stride frequency during weight assisted treadmill walking.	Gait & posture. 2010 Jan 21.	2010
Kamibayashi K, Nakajima T, Fujita M, Takahashi M, Ogawa T, Akai M, et al.	Effect of sensory inputs on the soleus H-reflex amplitude during robotic passive stepping in humans.	Exp Brain Res. 2010 Apr;202(2):385-95.	2010
Duschau-Wicke A, Zitzewitz vJ, Caprez A, Lünenburger L, Riener R.	Path Control: A Method for Patient-Cooperative Robot-Aided Gait Rehabilitation.	IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING. 2010;VOL. 18(NO. 1).	2010
Dietz V, Grillner S, Trepp A, Hubli M, Bolliger M.	Changes in spinal reflex and locomotor activity after a complete spinal cord injury: a common mechanism?	Brain. 2009 Aug;132(Pt 8):2196-205. Epub 2009 May 21.	2009
Lewek MD, Cruz TH, Moore JL, Roth HR, Dhaher YY, Hornby TG.	Allowing intralimb kinematic variability during locomotor training poststroke improves kinematic consistency: a subgroup analysis from a randomized clinical trial.	Phys Ther. 2009 Aug;89(8):829-39. Epub 2009 Jun 11.	2009
Nooijen CF, Ter Hoeve N, Field-Fote EC.	Gait quality is improved by locomotor training in individuals with SCI regardless of training approach	J Neuroeng Rehabil. 2009 Oct 2;6:36.	2009
Westlake KP, Patten C.	Pilot Study of Lokomat versus Manual-Assisted Treadmill Training for Locomotor Recovery Post-Stroke.	Journal of neuroengineering and rehabilitation. 2009 Jun 12;6(1):18.	2009
Schwartz I, Sajin A, MD, Fisher I, Neeb M, Shochina M, Katz-Leurer M, Meiner Z.	The Effectiveness of Locomotor Therapy Using Robotic-Assisted Gait Training in Subacute Stroke Patients: A Randomized Controlled Trial.	Medical Association Journal 2009, Vol. 1, 516-523	2009
Kamibayashi K, Nakajima T, Takahashi M, Akai M, Nakazawa K.	Facilitation of corticospinal excitability in the tibialis anterior muscle during robot-assisted passive stepping in humans.	Eur J Neurosci. 2009 Jun 11.	2009
Sherman MF, Lam T, Sheel AW.	Locomotor-respiratory synchronization after body weight supported treadmill training in incomplete tetraplegia: a case report.	Spinal Cord advance online publication 19 May 2009; doi: 10.1038/sc.2009.50	2009
Magagnin V, Porta A, Fusini L, Licari V, Bo I, Turiel M, et al.	Evaluation of the autonomic response in healthy subjects during treadmill training with assistance of a robot-driven gait orthosis.	Gait & posture. 2009 Apr;29(3):504-8.	2009
Winchester P, Smith P, Foreman N, Mosby JM, Pacheco F, Querry R, Tansey K.	A prediction model for determining over ground walking speed after locomotor training in persons with motor incomplete spinal cord injury.	J Spinal Cord Med. 2009;32(1):63-71.	2009
Banz R, Bolliger M, Muller S, Santelli C, Riener R.	A method of estimating the degree of active participation during stepping in a driven gait orthosis based on actuator force profile matching	IEEE Trans Neural Syst Rehabil Eng. 2009 Feb;17(1):15-22.	2009
Blicher JU, Nielsen JF.	Cortical and spinal excitability changes after robotic gait training in healthy participants.	Neurorehabilitation and neural repair. 2009 Feb;23(2):143-9.	2009
Moreh E, Meiner Z, Neeb M, Hiller N, Schwartz I.	Spinal decompression sickness presenting as partial Brown-Sequard syndrome and treated with robotic-assisted body-weight support treadmill training.	J Rehabil Med. 2009 Jan;41(1):88-9.	2009
Meyer-Heim A, Ammann-Reiffer C, Schmartz A, Schaefer J, Sennhauser FH, Heinen F, Knecht B, Dabrowski ER, Borggraefe I.	Improvement of walking abilities after robotic-assisted locomotion training in children with cerebral palsy.	doi:10.1136/adc.2008.145458 Arch. Dis. Child. published online 10 Feb 2009	2009
Hidler J, Nichols D, Pelliccio M, Brady K, Campbell DD, Kahn JH, Hornby TG.	Multicenter randomized clinical trial evaluating the effectiveness of the Lokomat in subacute stroke.	Neurorehabil Neural Repair. 2009 Jan;23(1):5-13.	2009
Hidler J, Hamm LF, Lichy A, Groah SL.	Automating activity-based interventions: the role of robotics.	J Rehabil Res Dev. 2008;45(2):337-44.	2008
McCabe JP, Dohring ME, Marsolais EB, Rogers J, Burdsall R, Roenigk K, Pundik S, Daly JJ.	Feasibility of combining gait robot and multichannel functional electrical stimulation with intramuscular electrodes.	J Rehabil Res Dev. 2008;45(7):997-1006.	2008

Literature: Automated Locomotion Therapy

Author	Article	Publication	Year
Lam T, Wirz M, Lunenburger L, Dietz V.	Swing phase resistance enhances flexor muscle activity during treadmill locomotion in incomplete spinal cord injury.	Neurorehabilitation and neural repair. 2008 Sep-Oct;22(5):438-46.	2008
Beer S, Aschbacher B, Manoglou D, Gamper E, Kool J, Kesselring J.	Robot-assisted gait training in multiple sclerosis: a pilot randomized trial.	Mult Scler. 2008 Mar;14(2):231-6.	2008
Hornby TG, Campbell DD, Kahn JH, Demott T, Moore JL, Roth HR.	Enhanced gait-related improvements after therapist- versus robotic-assisted locomotor training in subjects with chronic stroke: a randomized controlled study.	Stroke. 2008 Jun;39(6):1786-92.	2008
Koenig A, Wellner M, Köneke S, Meyer-Heim A, Lünenburger L, Riener R.	Virtual gait training for children with cerebral palsy using the Lokomat gait orthosis.	Stud Health Technol Inform. 2008;132:204-9.	2008
Bolliger M, Banz R, Dietz V, Lünenburger L.	Standardized voluntary force measurement in a lower extremity rehabilitation robot	Journal of NeuroEngineering and Rehabilitation 2008, 5:23 doi:10.1186/1743-0003-5-23	2008
Albert C. Lo, Elizabeth W. Triche	Improving gait in multiple sclerosis using robot-assisted, body weight supported treadmill training.	Neurorehabil Neural Repair 2008; 22; 661	2008
Ji Sung Yoo, Chang-hyun Park, Hyun-Geun Ha, Hee Joon Shin, Jung Phil Huh, Yun-Hee Kim.	Neuroplasticity Induced by Robot-assisted Gait Training in a Stroke Patient – A case report	Brain & NeuroRehabilitation 2008; 1: 29-34	2008
Kyung Hoon Jung, Hyun-Geun Ha, Hee Joon Shin, Suk Hoon Ohn, Duk Hyun Sung, Peter K.W. Lee, Yun-Hee Kim.	Effects of Robot-assisted Gait Therapy on Locomotor Recovery in Stroke Patients	J Korean Acad Rehab Med 2008; 32: 258-266	2008
Querry RG, Pacheco F, Annaswamy T, Goetz L, Winchester PK, Tansey KE.	Synchronous stimulation and monitoring of soleus H reflex during robotic body weight-supported ambulation in subjects with spinal cord injury	JRRD, Volume 45, Number 1, 2008; 175–186	2008
Borggraefe I, Meyer-Heim A, Kumar A, Schaefer JS, Berweck S, Heinen F.	Improved Gait Parameters After Robotic-Assisted Locomotor Treadmill Therapy in a 6-Year-Old Child with Cerebral Palsy	Mov Disord. 2008 Jan 30;23(2):280-3.	2008
Hunt KJ, Jack LP, Pennycott A, Perret C, Baumberger M, Kakebeeke TH.	Control of work rate-driven exercise facilitates cardiopulmonary training and assessment during robot-assisted gait in incomplete spinal cord injury	Biomedical Signal Processing and Control 3 (2008) 19–28	2008
Wellner M, Thüring T, Smajic E, von Zitzewitz J, Duschau-Wicke A, Riener R.	Obstacle crossing in a virtual environment with the rehabilitation gait robot LOKOMAT.	Stud Health Technol Inform. 2007;125:497-9.	2007
Morrison SA, Backus D.	Locomotor training: Is translating evidence into practice financially feasible?	J Neurol Phys Ther.2007;Jun;31(2):50-4.	2007
Meyer-Heim A, Borggraefe I, Ammann-Reiffer C, Berweck S, Sennhauser FH, Colombo G, Knecht B, Heinen F.	Feasibility of robotic-assisted locomotor training in children with central gait impairment	Developmental Medicine & Child Neurology 2007, 49: 900–906	2007
Borggraefe I, Kumar A, Schaefer JS, Berweck S, Meyer-Heim A, Hufschmidt A, Heinen F	Robotergestützte Laufbandtherapie für Kinder mit zentralen Gangstörungen	Monatsschr Kinderheilkd 2007; DOI 10.1007/s00112-007-1539-0; © Springer Medizin Verlag 2007	2007
Husemann B, Muller F, Krewer C, Heller S, Koenig E.	Effects of Locomotion Training With Assistance of a Robot-Driven Gait Orthosis in Hemiparetic Patients After Stroke. A Randomized Controlled Pilot Study.	American Stroke Association; Stroke; 2007;38:349-354.	2007
Luenenburger L, Colombo G, Riener R.	Biofeedback for robotic gait rehabilitation.	Journal of NeuroEngineering and Rehabilitation; 4:1, 2007	2007
Mayr A, Kofler M, Quirbach E, Matzak H, Fröhlich K, Saltuari L.	Prospective, blinded, randomized crossover study of gait rehabilitation in stroke patients using the Lokomat gait orthosis.	Neurorehabil Neural Repair. 2007 Jul-Aug;21(4):307-14	2007
Meyer-Heim A, Reiffer C, Borggraefe I.	Robot-assisted gait training for children with central motor disorders	praxis ergotherapie, Heft 1/2007, verlag modernes lernen, D-44287 Dortmund, Germany	2007
Frey M, Colombo G, Vaglio M, Bucher R, Jörg M, Riener R.	A Novel Mechatronic Body Weight Support System.	IEEE Trans Neural Syst Rehabil Eng; 14 (3):(311-321), 2006	2006
Israel JF, Campbell DD, Kahn JH, Hornby TG.	Metabolic costs and muscle activity patterns during robotic- and terapist-assisted treadmill walking in individuals with incomplete spinal cord injury.	Physical Therapy 2006;86: 1466 - 1478	2006
Krewer C, Muller F, Husemann B, Heller S, Quintern J, Koenig E.	The influence of different Lokomat walking conditions on the energy expenditure of hemiparetic patients and healthy subjects.	Gait Posture. 2006 in press (doi:10.1016/j.gaitpost.2006.10.003)	2006
Lam T, Anderschitz M, Dietz V.	Contribution of Feedback and Feedforward Strategies to Locomotor Adaptations.	J Neurophysiol 95; 766-773, 2006.	2006
Luenenburger L, Lam T, Riener R, Colombo G.	Gait retraining after neurological disorders	Wiley Encyclopedia of Biomedical Engineering, 1-10, 2006	2006

Literature: Automated Locomotion Therapy

Author	Article	Publication	Year
Riener R, Lünenburger L, Colombo G.	Human-centered robotics applied to gait training and assessment.	J Rehabil Res Dev. 2006 Sep-Oct;43(5):679-94.	2006
Ferris D.P, Sawicki G.S, Domingo A.	Powered lower limb orthoses for gait rehabilitation	Top Spinal Cord Injury Rehabilitation; 11(2): 34-49, 2005	2005
Hidler J, Nichols D, Pelliccio M, Brady K.	Advances in the understanding and treatment of stroke impairment using robotic devices.	Top Stroke Rehabil 12: 22-35, 2005	2005
Hidler JM, Wall AE.	Alterations in muscle activation patterns during robotic-assisted walking.	Clin Biomech (Bristol, Avon). Feb;20(2):184-93, 2005	2005
Hornby TG, Zemon DH, Campbell D.	Robotic-assisted, body-weight-supported treadmill training in individuals following motor incomplete spinal cord injury.	Physical Therapy 85(1):52-66, 2005	2005
Mirbagheri MM, Tsao C, Pelosin E, Rymer WZ.	Therapeutic Effects of Robotic-Assisted Locomotor Training on Neuromuscular Properties.	Proceedings of the IEEE 9th International Conference on Rehabilitation Robotics (ICORR), Chicago USA, 561-564, 2005	2005
Riener R, Lunenburger L, Jezernik S, Anderschitz M, Colombo G, Dietz V.	Patient-cooperative strategies for robot-aided treadmill training: first experimental results.	IEEE Trans Neural Syst Rehabil 13:380-94, 2005	2005
Winchester P, McColl R, Querry R, Foreman N, Mosby J, Tansey K, Williamson J.	Changes in supraspinal activation patterns following robotic locomotor therapy in motor-incomplete spinal cord injury.	Neurorehabil Neural Repair 19: 313-24, 2005	2005
Wirz M, Zemon DH, Rupp R, Scheel A, Colombo G, Dietz V, Hornby TG.	Effectiveness of automated locomotor training in patients with chronic incomplete spinal cord injury: a multicenter trial.	Arch Phys Med Rehabil 86:672-80, 2005	2005
Alcobendas-Maestro M, López-Dolado E, Esclarín de Ruz A, Valdizán-Valledor MC.	Entrenamiento de la marcha en lesiones medulares incompletas con soporte del peso corporal.	Rev Neuro 39: 406-10, 2004	2004
Dietz V, Harkema Susan J.	Locomotor activity in spinal cord-injured persons.	J Appl Physiol 96; 1954-1960, 2004	2004
Heinzelmann E.	Ingenieurarbeit vom Feinsten: Die Laufbandtherapie der Hocoma / Du travail d'ingénieurs sophistiqué: Hocoma, la rééducation à la marche sur tapis roulant.	BBT / OFFT .	2004
Nash MS, Jacobs PL, Johnson BM, Field-Fote E.	Metabolic and cardiac responses to robotic-assisted locomotion in motor-complete tetraplegia: a case report.	J Spinal Cord Med. 27(1):78-82, 2004	2004
Reinkensmeyer David J, Emken Jeremy L, Cramer Steven C.	Robotics, motor learning, and neurologic recovery.	Annu. Rev. Biomed. Eng. 6:16.1-16.29, 2004	2004
Jezernik S, Schärer R, Colombo G, Morari M.	Adaptive robotic rehabilitation of locomotion: a clinical study in spinally injured individuals.	Spinal Cord 41:657-666, 2003	2003
Mayr A, Quirbach E, Kofler M.	First Experience with the "Lokomat" gait orthosis in post-acute brain-injured patients.	Abstract Book of the 6th Congress Of The European Federation Of Neurological Societies 2002 in European Journal of Neurology 9 (Suppl.2),	2002
Segedy A.	Futuristic gait system lets a robot do the walking.	Bio Mechanics 2002; 1.	2002
Colombo G, Wirz M, Dietz V.	Driven gait orthosis for improvement of locomotor training in paraplegic patients.	Spinal Cord 39:252-255, 2001	2001
Colombo G, Hostettler P.	Der Lokomat - eine angetriebene Geh-Orthese	Med Orth Tech 120(6):178-181, 2000	2000
Colombo G, Joerg M, Schreier R, Dietz V.	Treadmill training of paraplegic patients using a robotic orthosis	Journal of Rehabilitation Research and Development 37(6):693-700, 2000	2000
Dietz V, Müller R, Colombo G.	Locomotor activity in spinal man: significance of afferent input from joint and load receptors.	Brain. 2002 Dec;125(Pt 12):2626-34.	2000
Taub E, Gitendra U, Rama P.	Constraint-Induced Movement Therapy: A New Family of Techniques with Broad Application to Physical Rehabilitation - A Clinical Review.	Journal of Rehabilitation Research and Development 37(3), 1999	1999

Literature: Manual Locomotion Therapy

Author	Article	Publication	Year
Hunt KJ, Jack LP, Pennycott A, Perret C, Baumberger M, Kakebeeke TH.	Control of work rate-driven exercise facilitates cardiopulmonary training and assessment during robot-assisted gait in incomplete spinal cord injury	Biomedical Signal Processing and Control 3 (2008) 19–28	2008
Dobkin BH, Apple D, Barbeau H, Basso M, Behrmann A, Deforge D, Ditunno J, Dudley G, Elashoff R, Fugate L, Harkema S, Saulino M, Scott M and the Spinal Cord Injury Locomotor Trial (SCILT) Group.	Weight-supported treadmill vs over-ground training for walking after acute incomplete SCI.	Neurology; 66; 484-493, 2006	2006
Hicks AL, Adams MM, Martin Ginis K, Giangregorio L, Latimer A, Phillips SM and McCartney N	Long-term body-weight-supported treadmill training and subsequent follow-up in persons with chronic SCI: effects on functional walking ability and measures of subjective well-being.	Spinal Cord (2005) 43, 291–298	2005
Stewart BG, Tarnopolsky MA, Hicks AL, McCartney N, Mahoney DJ, Staron RS, Phillips SM.	Treadmill training-induced adaptations in muscle phenotype in persons with incomplete spinal cord injury	Muscle & Nerve, Vol. 30, 61-68, July 2004	2004
Fouad K, Pearson K.	Restoring walking after spinal cord injury	Prog Neurobiol. Jun; 73(2):107-26, 2004	2004
Barbeau H.	Locomotor training in neurorehabilitation: emerging rehabilitation concepts	Neurorehabilitation and Neural Repair 17(1): 3-11, 2003	2003
Da Cunha IT, Lim PA, Qureshy H, Henson H, Monga T, Protas.	Gait outcomes after acute stroke rehabilitation with supported treadmill ambulation training: a randomized controlled pilot study	Archives of Physical Medicine & Rehabilitation; 83(9):1258-1265, 2002	2002
Field-Fote Edelle C.	Combined use of body weight support, functional electric stimulation, and treadmill training to improve walking ability in individuals with chronic incomplete spinal cord injury	Arch Phys Med Rehabil; 82:818-824, 2001	2001
Schindl M.R., Forster C., Kern H., Hesse S.	Treadmill Training with Partial Body Weight Support in Nonambulatory Patients with Cerebral Palsy	Arch Phys Med Rehabil Vol 81, March 2000	2000
Field-Fote Edelle C.	Spinal cord control of movement: implications for locomotor rehabilitation following spinal cord injury	Physical Therapy; 80(5):477-484, 2000	2000
Behrman AL, Harkema SJ.	Locomotor training after human spinal cord injury: a series of case studies.	Physical Therapy; 80(7):688-700, 2000	2000
Wernig A, Nanassy A, Muller S.	Laufband (treadmill) therapy in incomplete paraplegia and tetraplegia	Journal of Neurotrauma; 16(8):719-726, 1999;	1999
Scheidtmann K, Brunner H, Muller F, Weinandy-Trapp M, Wulf D, Koenig E.	Sequenzeffekte in der Laufbandtherapie	Neurologie & Rehabilitation; 5(4):198-202, 1999	1999
Kwakkel G, Wagenaar RC, Twisk JW, Lankhorst GJ, Koetsier JC.	Intensity of leg and arm training after primary middle-cerebral-artery stroke: a randomised trial	Lancet; 354(9174):191-196, 1999	1999
Hesse S, Konrad M, Uhlenbrock D.	Treadmill walking with partial body weight support versus floor walking in hemiparetic subjects.	Archives of Physical Medicine & Rehabilitation; 80(4):421-427, 1999	1999
Dobkin BH.	An overview of treadmill locomotor training with partial body weight support: a neurophysiologically sound approach whose time has come	Neurorehabilitation and Neuronal Repair; 13(3):157-164, 1999	1999
Dietz V, Nakazawa K, Wirz M, Erni T.	Level of spinal cord lesion determines locomotor activity in spinal man	Experimental Brain Research; 128(3):405-409, 1999	1999
Barbeau H, Ladouceur M, Norman KE, Pepin A, Leroux A.	Walking after spinal cord injury: evaluation, treatment, and functional recovery	Archives of Physical Medicine & Rehabilitation; 80(2):225-235, 1999	1999
Wickelgren I.	Teaching the spinal cord to walk [news]	Science; 279(5349):319-321, 1998	1998
Wernig A, Nanassy A, Muller S.	Maintenance of locomotor abilities following Laufband (treadmill) therapy in para- and tetraplegic persons: follow-up studies	Spinal Cord; 36(11):744-749, 1998	1998
Van de Crommert H, Mulder T, Duysens J.	Neutral control of locomotion: sensory control of the central pattern generator and its relation to treadmill training	Gait and Posture; 7:251-263, 1998	1998
Hesse S.	Laufbandtherapie mit partieller Körpergewichtsentlastung zur Wiederherstellung der Gehfähigkeit hemiparetischer Patienten	Neurol Rehabil; 4(3-4):113-118, 1998	1998

Literature: Manual Locomotion Therapy

Author	Article	Publication	Year
Duysens J, Van de Crommert H.	Neutral control of locomotion; Part 1: The central pattern generator from cats to humans	Gait and Posture; 7:131-141, 1998	1998
Dietz V, Wirz M, Curt A, Colombo G.	Locomotor pattern in paraplegic patients: training effects and recovery of spinal cord function	Spinal Cord; 36(6):380-390, 1998	1998
Dietz V, Wirz M, Colombo G, Curt A.	Locomotor capacity and recovery of spinal cord function in paraplegic patients: a clinical and electrophysiological evaluation	Electroencephalography & Clinical Neurophysiology; 109(2):140-153, 1998	1998
Colombo G, Wirz M, Dietz V.	Effect of locomotor training related to clinical and electrophysiological examinations in spinal cord injured humans	Annals of the New York Academy of Sciences; 860:536-538, 1998	1998
Hesse S, Helm B, Krajnik J, Gregoric M, Mauritz KH.	Treadmill Training with Partial Body Weight Support: Influence of Body Weight Release of the Gait of Hemiparetic Patients	Journal of Neuro Rehab; 11(1):15-20, 1997	1997
Harkema SJ, Hurley SL, Patel UK, Requejo PS, Dobkin BH, Edgerton VR.	Human lumbosacral spinal cord interprets loading during stepping	Journal of Neurophysiology; 77(2):797-811, 1997	1997
Dietz V.	Neurophysiology of gait disorders: present and future applications	Electroencephalography & Clinical Neurophysiology; 103(3):333-355, 1997	1997
Dietz V, Wirz M, Jensen L.	Locomotion in patients with spinal cord injuries	Physical Therapy ;77(5):508-516, 1997	1997
Nene AV, Hermens HJ, Zilvold G.	Paraplegic locomotion: a review	Spinal Cord; 34:507-524, 1996	1996
Wernig A, Muller S.	Die Lokomotionstherapie am Laufband bei Querschnittlähmung - Ergebnisse einer fünfjährigen Studie	Neurol Rehabil: 16-16, 1995	1995
Wernig A, Muller S, Nanassy A, Cagol E.	Laufband therapy based on 'rules of spinal locomotion' is effective in spinal cord injured persons	[published erratum appears in Eur J Neurosci 1995 Jun 1;7(6):1429] European Journal of Neuroscience; 7(4):823-829, 1995	1995
Rossignol IS, Barbeau H.	New approaches to locomotor rehabilitation in spinal cord injury	Annals of Neurology; 37(5):555-556, 1995	1995
Hesse S, Malezic M, Schaffrin A, Mauritz KH.	Restoration of gait by combined treadmill training and multichannel electrical stimulation in non-ambulatory hemiparetic patients	Scand J Rehab Med; 27:199-204, 1995	1995
Hesse S, Bertelt C, Jahnke MT, Schaffrin A, Baake P, Malezic M, et al.	Treadmill Training with Partial Body Weight Support Compared With Physiotherapy in Nonambulatory Hemiparetic Patients	Stroke; 26(6):976-981, 1995	1995
Dobkin BH, Harkema SJ, Requejo PS, Edgerton VR.	Modulation of Locomotor-Like EMG Activity in Subjects with Complete and Incomplete Spinal Cord Injury	Journal Neuro Rehab; 9(4):183-190, 1995	1995
Dietz V, Colombo G, Jensen L, Baumgartner L.	Locomotor capacity of spinal cord in paraplegic patients	Annals of Neurology; 37(5):574-582, 1995	1995
Hesse S, Bertelt C, Schaffrin A, Malezic M, Mauritz KH.	Restoration of gait in nonamulatory hemiparetic patients by treadmill training with partial body-weight support	Arch Phys Med Rehabil ;75:1087-1093, 1994	1994
Erzer F, Schacher O.	Laufbandtherapie: Neues Entlastungssystem bringt wesentliche Vorteile.	REHAB	1994
Dietz V, Colombo G, Jensen L.	Locomotor activity in spinal man	Lancet; 344(8932):1260-1263, 1994	1994
Calancie B, Needham-Shropshire B, Jacobs P, Willer K, Zych G, Green BA.	Involuntary stepping after chronic spinal cord injury. Evidence for a central rhythm generator for locomotion in man	Brain; 117(Pt 5):1143-1159, 1994	1994
Barbeau H, Rossignol S.	Biofeedback for robotic gait rehabilitation	Opinion in Neurology; 7(6):517-524, 1994	1994
Wernig A, Muller S.	Laufband locomotion with body weight support improved walking in persons with severe spinal cord injuries	Paraplegia; 30(4):229-238, 1992	1992
Finch L, Barbeau H, Arsenault B.	Influence of body weight support on normal human gait: development of a gait retraining strategy	Physical Therapy; 71(11):842-855; discussion 855-856, 1991	1991
Waagfjörd J, Levangie P, Certo C.	Effects of Treadmill Training on Gait in a Hemiparetic Patient	Physical Therapy; 70(9):549-559, 1990	1990

Literature: Manual Locomotion Therapy

Author	Article	Publication	Year

Literature: Erigo

Author	Article	Publication	Year
Wieser M, Haefeli J, Butler L, Jancke L, Riener R, Koeneke S.	Temporal and spatial patterns of cortical activation during assisted lower limb movement.	Exp Brain Res 203(1):181-191.	2010
Chernikova L, Umarova R, Trushin I, Domashenko M.	The Early Activization of Patients With Acute Ischemic Stroke Using Tilt-Table "Erigo": The Prospective Randomized Blinded Case-Control Study	Neurorehabiltitation and Neutral Repair 22 (5), p. 556	2008
Lukowicz M, Kuczma W, Hoffmann J.	Active tilting a patient to erect position within a very early period of neurorehabilitation	Acta Bio-Optica et Informatica Medica 3/2008, vol. 14 p. 328-331	2008
Luther MS, Krewer C, Müller F, Koenig E.	Comparison of orthostatic reactions of patients still unconscious within the first three months of brain injury on a tilt table with and without integrated stepping. A prospective, randomized crossover pilot trial.	Clin Rehabil 2008; 22; 1034	2008
Chi L, Masani K, Miyatani M, Adam Thrasher T, Wayne Johnston K, Mardimae A, Kessler C, Fisher JA, Popovic MR.	Cardiovascular response to functional electrical stimulation and dynamic tilt table therapy to improve orthostatic tolerance.	J Electromyogr Kinesiol. 2008 Dec;18(6):900-7.	2008
Luther M.S, Krewer C, Müller F, Koenig E.	Orthostatic circulatory disorders in early neurorehabilitation: A case report and management overview	Brain Injury, June 2007; 21(7): 763–767	2007
Muller F.	New Technologic Approach to Minimizing Immobilization Effects of Patients with Brain Injury	International Brain Injury Association, Issue 01/2007	2007
Colombo G, Schreier R, Plewa H, Rupp R.	Novel Tilt Table with integrated robotic stepping mechanism: Design Principles and Clinical Application	Proceedings of the IEEE 9th International Conference on Rehabilitation Robotics (ICORR), Chicago USA, 2005 submitted	2005
Thrasher TA, Keller T, Lawrence M, Popovic MR.	Effects of isometric FES and dynamic FES on cardiovascular parameters on an active tilt-table stepper	10th Annual Conference of the International FES Society July 2005 – Montreal, Canada	2005
Czell D, Schreier R, Rupp R, Eberhard S, Colombo G, Dietz V.	Influence of passive leg movements on blood circulation on the tilt table in healthy adults.	Journal of NeuroEngineering and Rehabilitation, 1:4 doi:10.1186/1743-0003-1-4, 2004	2004
Rupp R, Eberhard S, Schreier R, Colombo G.	Reha-Stepper locomotion therapy in early rehabilitation of paraplegic patients.	Biomed Tech (Berl). 47 Suppl 1 Pt 2:708-11. German, 2002	2002

Tilt Table

Author	Article	Publication	Year
Chang AT, Boots R, Hodges PW, Paratz J.	Standing with assistance of a tilt table in intensive care: a survey of Australian physiotherapy practice.	Aust J Physiother. 50(1):51-4, 2004	2004
Chang AT, Chang AT, Boots RJ, Hodges PW, Thomas PJ, Paratz J.	Standing with the assistance of a tilt table improves minute ventilation in chronic critically ill patients.	Arch Phys Med Rehabil. 85(12):1972-6, 2004	2004
Bohannon RW.	Tilt table standing for reducing spasticity after spinal cord injury.	Archives of physical medicine and rehabilitation, Vol. 74 (10), p: 1121-2, 1993.	1993

Passive Movement Devices

Author	Article	Publication	Year
Brown DA, Nagpal S, Chi S.	Limb-loaded cycling program for locomotor intervention following stroke.	Phys Ther., 85(2):159-68, 2005	2005
Nuyens GE, De Weerdt WJ, Spaepen AJ Jr, Kiekens C, Feys HM.	Reduction of spastic hypertonia during repeated passive knee movements in stroke patients.	Archives of physical medicine and rehabilitation, Vol. 83 (7), p: 930-5, 2002.	2002
Muraki S, Ehara Y, Yamasaki M.	Cardiovascular responses at the onset of passive leg cycle exercise in paraplegics with spinal cord injury.	Eur J Appl Physiol 81: 271-274, 2000.	2000
Rosche J, Paulus C, Maisch U, Kaspar A, Mauch E, Kornhuber HH.	The effects of therapy on spasticity utilizing a motorized exercise-cycle.	Spinal cord : the official journal of the International Medical Society of Paraplegia, Vol. 35 (3), p: 176-8, 1997	1997

Others

Author	Article	Publication	Year

Literature: Erigo

Author	Article	Publication	Year
Odeen I, Knutsson E.	Evaluation of the effects of muscle stretch and weight load in patients with spastic paraplegia.	Scand J Rehabil Med., 13(4):117-21, 1981	1981

Literature: ArmeoSpring

Author	Article	Publication	Year
Housman SJ, Scott KM, Reinkensmeyer DJ.	A Randomized Controlled Trial of Gravity-Supported, Computer-Enhanced Arm Exercise for Individuals With Severe Hemiparesis.	Neurorehabilitation and Neural Repair, February 23, 2009, doi:10.1177/1545968308331148	2009
Hunt KJ, Jack LP, Pennycott A, Perret C, Baumberger M, Kakebeeke TH.	Control of work rate-driven exercise facilitates cardiopulmonary training and assessment during robot-assisted gait in incomplete spinal cord injury	Biomedical Signal Processing and Control 3 (2008) 19–28	2007
Sanchez RJ, Liu J, Rao S, Shah P, Smith R, Rahman T, Cramer SC, Bobrow JE, Reinkensmeyer DJ.	Automating Arm Movement Training Following Severe Stroke: Functional Exercises With Quantitative Feedback in a Gravity-Reduced Environment	IEEE Transactions on neural systems and rehabilitation engineering, Vol.14,No.3, Sept. 2006	2006

Literature: ArmeoBoom

Author	Article	Publication	Year
Prange GB, Jannink MJ, Hermes H, Krabben, T.Renzenbrink G. J., de Broer J.	An explorative study into changes in reach performance after gravity compensation training in chronic stroke patients	11th International Conference on Rehabilitation Robotics. Kyoto, Japan	2009
Prange GB, Jannink MJ, Stienen AH, van der Kooij H, Ijzerman MJ, Hermens HJ.	Influence of gravity compensation on muscle activation patterns during different temporal phases of arm movements of stroke patients	Neurorehabil Neural Repair. 2009 Jun;23(5):478-85. Epub 2009 Feb 3.	2009
Stienen A.H.	Novel devices for upper extremity rehabilitation	PhD Thesis, University of Twente, The Netherlands	2009