

**Curriculum Vitae
Gad Alon, Ph.D., PT
Associate Professor
Department of Physical Therapy & Rehabilitation Sciences
University of Maryland School of Medicine**

Date: September 10, 2007

Personal Information

University of Maryland,
School of Medicine,
Department of Physical Therapy
& Rehabilitation Science
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Baltimore, MD 21201
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Email: galon@som.umaryland.edu
Foreign Languages: Hebrew (native)

Education

Undergraduate:

1968	Certificate in Physical Therapy, Wingate Institute, Israel
1972	University of Maryland

Graduate:

1975	M.S. Medical College of Virginia
1979	Ph.D. University of Maryland

Post Graduate Education and Training

1977	Lower Limb Prosthetics, New York University
1978	Biofeedback, Emory University, Atlanta, Georgia
1979	Neuro-Developmental Treatment (NDT) for Adult Hemiplegia, Washington, D.C.

Medical Licensures

2008	Physical Therapy State of Maryland	#14442
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Employment History

Faculty Appointment

1975-1978	Instructor, University of Maryland, School of Medicine, Department of Physical Therapy
1978-1980	Assistant Professor, University of Maryland, School of Medicine Department of Physical Therapy
1980-1981	Acting Chairman, Physical Therapy School Chaim Sheba Medical Center, Tel-Hashomer, Israel
1983-1988	Assistant Professor, University of Maryland, School of Medicine Department of Physical Therapy

1988-present Associate Professor, University of Maryland, School of Medicine
Department of Physical Therapy & Rehabilitation Science

Clinical Appointment

1968 - 1970 Staff Physical Therapist, Leowinsein Rehabilitation Center University of
Tel-Aviv, Raanana, Israel
1970 - 1972 Chief Physical Therapist, "Gapim" Prosthetic Center, Tel-Aviv, Israel
1972 - 1977 Staff Physical Therapist (part-time), Fairfax Hospital, Falls Church,
Virginia
1981 – 1983 Deputy Director, Lewis National Prosthetic Institute, Tel-Hashomer,
Israel

Professional Memberships

1985-present Member American Physical Therapy Association
1983-present International Society Electrophysiological Kinesiology
2006-present World Federation for Neurorehabilitation

Honors and Awards

1985 Faculty of the Year Award, University of Maryland, School of Medicine,
Department of Physical Therapy
1993 Faculty of the Year Award, University of Maryland, School of Medicine,
Department of Physical Therapy
2000 Faculty of the Year Award, University of Maryland, School of Medicine,
Department of Physical Therapy
2000 Award of Excellence Electrophysiology Section, American Physical
Therapy Association
2001 Faculty of the Year Award, University of Maryland, School of Medicine,
Department of Physical Therapy
2004 Faculty of the Year Award, University of Maryland, School of Medicine,
Department of Physical Therapy & Rehabilitation Sciences
2005 Member, Phi Kappa Phi, University of Maryland teacher award

Administrative Service

Institutional Service

1983-1986 Education Committee, Department of Physical Therapy
1986-1987 Admissions Committee, Department of Physical Therapy
1987-1991 Chair, Admissions Committee, Department of Physical Therapy
1991-1994 Chair, Education Committee, Department of Physical Therapy
1992-1997 Chair, Search Committee, Department of Physical Therapy
1994-1995 Chair, Admissions Committee, Department of Physical Therapy
1995- 1999 Research Committee, Department of Physical Therapy
1995-1999 Ph.D. Committee, Department of Physical Therapy
1999-2001 PPDPT Committee, Department of Physical Therapy
2001-2003 Alternate member School of Medicine Council, University of Maryland
2003-present Admission coordinator, DscPT program, Department of Physical Therapy
2003-2006 Member School of Medicine Council, University of Maryland
2005-present Chair, Admission committee, DPT program, Department of Physical
Therapy & Rehabilitation Sciences

Local Service

National Service

1986-1992	APTA - Advisory Committee - Section of Electrophysiology
1989-1999	Editorial Board, Journal of Clinical Electrophysiology
1991-1994	Editorial Board, Physical Therapy Practice
1992-present	Reviewer, Journal of Sports Physical Therapy
1994-present	Reviewer, Physical Therapy journal
1993-	Association for the Advancement of Medical Instrumentation (AAMI) - TES Subcommittee
1996- 2000	APTA Committee for Screening Proposals/Abstracts
1998-present	Reviewer, Journal of Athletic Training
2000-present	Reviewer, Archives Physical Medicine Rehabilitation
2001-present	Reviewer, Journal Research Development Rehabilitation
2004-present	Reviewer, Developmental Medicine Child Neurology
2005-present	Reviewer, Journal Sports Science & Medicine
2006-present	Reviewer, Neurorehabilitation & Neural repair
2007-present	Reviewer, Stroke
2007-present	Reviewer, IEEE Eng Med Biol Soc
2007-present	Reviewer, American Journal Physical Medicine Rehabilitation

Teaching Service (all 3 credits unless indicated otherwise)

2007	Basic Science III (DPTE 514), 12 weeks, 42 students, Lecture/lab Medical Issues II (DPTE 521), 3 weeks, 42 students, Lecture/lab Management of Pathological Movements (DPTP 545), 7 weeks, 15 students, Distant Learning + weekend Seminar
2006	Basic Science III (DPTE 514), 12 weeks, 49 students, Lecture/lab Medical Issues II (DPTE 521), 3 weeks, 49 students, Lecture/lab Musculoskeletal I (DPTE 522), 1 day, 49 students, Lecture/lab Neuromuscular II (DPTE 525), 1 day, 49 students, lecture/lab Management of Pathological Movements (DPTP 545), 7 weeks, 12 students, Distant Learning + weekend Seminar Therapeutic technologies (DPTP 579), 7 weeks, 11 students, Distant Learning + weekend Seminar
2005	Basic Science III (DPTE 514), 12 weeks, 38 students, Lecture/lab Medical Issues II (DPTE 521), 3 weeks, 38 students, Lecture/lab Musculoskeletal I (DPTE 522), 1 day, 38 students, Lecture/lab Neuromuscular II (DPTE 525), 1 day, 38 students, lecture/lab Management of Pathological Movements (DPTP 545), 7 weeks, 18 students, Distant Learning + weekend Seminar
2004	Basic Science III (DPTE 514), 12 weeks, 46 students, Lecture/lab Medical Issues II (DPTE 521), 3 weeks, 44 students, Lecture/lab Management of Pathological Movements (DPTP 545), 7 weeks, 18 students, Distant Learning + weekend Seminar Musculoskeletal I (DPTE 522), 1 day, 46 students, Lecture/lab Neuromuscular II (DPTE 525), 1 day, 46 students, lecture/lab
2003	Pathokinesiology (PTAB 571), 8 weeks, 38 students, Lecture/lab Medical Issues II (DPTE 521), 3 weeks, 44 students, Lecture/lab

	<p>Management of Pathological Movements (DPTP 545), 7 weeks, 9 students, Distant Learning + weekend Seminar</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 40 students, Lecture/lab (2 credits)</p> <p>Basic Science III (DPTE 514), 12 weeks, 38 students, Lecture/lab</p> <p>Musculoskeletal I (DPTE 522), 1 day, 46 students, Lecture/lab</p>
2002	<p>Pathokinesiology (PTAB 571), 8 weeks, 42 students, Lecture/lab</p> <p>Management of Pathological Movements (DPTP 545), 7 weeks, 16 students, Distant Learning + weekend Seminar</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 42 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 42 students, Lecture/lab</p>
2001	<p>Pathokinesiology (PTAB 571), 8 weeks, 48 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 48 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 48 students, Lecture/lab</p>
2000	<p>Pathokinesiology (PTAB 571), 8 weeks, 54 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 54 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 54 students, Lecture/lab</p>
1999	<p>Pathokinesiology (PTAB 571), 8 weeks, 58 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 58 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 58 students, Lecture/lab</p>
1998	<p>Pathokinesiology (PTAB 571), 8 weeks, 56 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 56 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 56 students, Lecture/lab</p>
1997	<p>Pathokinesiology (PTAB 571), 8 weeks, 56 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 56 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 56 students, Lecture/lab</p>
1996	<p>Pathokinesiology (PTAB 571), 8 weeks, 55 students, Lecture/lab</p>
1996	<p>Management of Limb Amputation (PTAB 502), 14 weeks, 55 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 55 students, Lecture/lab</p>
1995	<p>Pathokinesiology (PTAB 571), 8 weeks, 56 students, Lecture/lab</p> <p>Management of Limb Amputation (PTAB 502), 14 weeks, 56 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 56 students, Lecture/lab</p>
1994	<p>Management of Limb Amputation (PTAB 502), 14 weeks, 48 students, Lecture/lab (2 credits)</p> <p>Electrotherapy/Testing (PTAB 443), 14 weeks, 48 students, Lecture/lab</p>
1993	<p>Theory & Practice III (PTAB 343), 14 weeks, 68 students, Lecture/lab</p> <p>Amputee/Prosthetics (PTAB 462), 14 weeks, 68 students, Lecture/lab</p> <p>Burn/Dermatology (PTAB 452), 14 weeks, 68 students, Lecture/lab</p>

1983 Theory & Practice III (PTAB 343), 14 weeks, 68 students, Lecture/lab
Amputee/Prosthetics (PTAB 462), 14 weeks, 68 students, Lecture/lab
Gait Analysis (PTAB 322), 14 weeks, 68 students, Lecture/lab (1 credit)

Mentoring

2000-2004 Mentor (Keith S. McBride MPT -research therapist)
2002-present Academic Advisor (Joseph Antonio Roche - Ph.D. candidate)

Grant Support

Current Grant Funding

2007-2008 Alon Gad, P.I., Thomas Donner, CO-I, Vincent Conroy, Co-I
FES Based Motorized Cycle Effects On Chronic Stroke: A Feasibility Study
Agency: Industry supported Restorative Therapies Inc. \$ 78,256.00

Completed Grant Funding

2005-2006 **Alon Gad, P.I.**
Functional Electrical Stimulation (FES) Contribution to the Recovery of
Ambulation Following Stroke: A Pilot Study.
Agency: Industry supported Bioness Inc. \$ 120,000.00

2004-2005 **Alon Gad, P.I.**
Electrical stimulation and upper limb recovery in stroke. A Pilot Study.
Agency: Industry supported Bioness Inc. \$ 100,000.00

2003-2004 **Alon Gad, P.I.**
The Handmaster for providing active range of motion and hand function
in stroke patients. Clinical trial.
Agency: Industry supported: NESS Ltd. (Extension) \$ 76,824.00

2002-2003 **Alon Gad, P.I.**
The Handmaster for providing active range of motion and hand function
in stroke patients. Clinical trial.
Agency: Industry supported: NESS Ltd. (Extension) \$ 38,412.00

2001-2002 Goldberg A, P.I.
Alon Gad (P.I. Pilot Project) Orwig D, Magaziner J : The construct of a
hip fracture-specific functional tests and the feasibility of a new training
program.
Agency: The Claude D. Pepper Older Americans Independence –
Research Development Core (NIH P60 AG12583) \$25,000.00

2000-2001 **Alon Gad, P.I.**
The Handmaster for providing active range of motion and hand function
in stroke patients. Clinical trial.
Agency: Industry supported: NESS Ltd., \$ 90,745.00

1999-2000 **Alon Gad, P.I.**
Training contract: Evaluation and Implementation of research protocols
for C5 SCI and Stroke rehabilitation.
Agency: Industry supported: NESS Ltd., \$72,304.00

- 1999
Magaziner J, P.I.
Alon G, Colvin P, McQuade KJ, Stanley R, Orwig D. Pilot study to identify functional limitations of patients recovering from hip fracture.
Agency: Claude D. Pepper Older American Independence Center, Pilot Project. \$4,100.00
- 1998
Magaziner J, P.I.
Scott-Okafor HR, Gardner AW, **Alon G**, et al. Exercise rehabilitation in a community-dwelling older population.
Agency: Claude D. Pepper Older American Independence Center, Pilot Project. \$10,000.00
- 1997
Goldberg A, P.I.
Smith GV, **Alon G**, et al. Electromagnetic Motor Evoked Potentials (MEPs) as a prognostic measure of functional outcomes in stroke patients.
Agency: Claude D. Pepper Older American Independence Center, Pilot Project. \$15,000.00
- 1997
Magaziner J, P.I.
Colvin P, **Alon G**, et al. Effect of exercise on recovery of function following hip fracture.
Agency: Claude D. Pepper Older American Independence Center, Pilot Project. \$20,000.00
- 1995
Alon Gad, P.I.
Antibiotics enhancement by transcutaneous electrical stimulation.
Agency: Industry supported: Stayodynamics Corp. Inc. \$35,400.00
- 1993
Alon Gad, P.I.
Alon G. Tolerance and Conditioning As a Prerequisite for the Evaluation of Transcutaneous Neuromuscular Electrical Stimulation Devices.
Agency: Food and Drug Administration. \$15,000.00
- 1992
Alon Gad, P.I.
Transformation of the Latisimus Dorsi to a slow twitch fiber muscle.
Agency: Food and Drug Administration. \$ 10,000.00.
- 1991
Alon Gad, P.I.
The Effects of Electrode Size on Threshold Excitation of Human Sensory and Motor Nerves.
Agency: Food and Drug Administration. \$20,000.00
- 1990
Alon Gad, P.I.
Threshold Excitation of Human Sensory and Motor Nerves.
Agency: Food and Drug Administration. \$15,000.00
- 1990
Alon Gad, P.I.
The Effect of Pulsatile Current on Pressure Ulcers Healing.
Agency: Industry supported: Stayodynamics Corp. Inc. \$74,512.00
- 1989
Alon G, Tepper S. The Effect of Neuromuscular Stimulation on Body Metabolism. UMAB P.T. Alumni Association Grant.. \$3,500.00

Grant Consultant

- 2005-2009 American heart Association (0575060) "Electrical stimulation dosing and neural mechanisms of recovery in subacute stroke" Stephen J. Page PI.
- 2007-2012 NIH R01 CA120950-01A1 "Efficacy of electrical stimulation for dysphagia in Head & Neck cancer patients". Susan E. Langmore PI.

Patent, Inventions & Copyrights

- 2004 PCT/US2004/022715 Lower Leg Orthosis (pending)

Publications

Journals (Peer Reviewed)

Benjamin SJ, Flood JN, Bechtel R, **Alon G**. Measurement of soft tissue temperature and impedance following the application of transdermal direct current. *Physiotherapy* 2007;93:114-120.

Alon G, Levitt AF, McCarthy PA. Functional electrical stimulation (FES) enhancement of upper extremity functional recovery during ischemic stroke rehabilitation: A pilot study. *Neurorehabil Neural Repair* 2007;21:207-215.

Alon G, Smith GV. Tolerance and conditioning to neuro-muscular electrical stimulation within and between sessions and gender. *Journal Sports Science & Medicine* 2005;4:395-405.

Gullapalli RP, Maitra R, Roys SR, Smith GV, **Alon G**, Greenspan J. Reliability estimation of grouped functional imaging data using penalized maximum likelihood. *Magn Reson Med* 2005;53:1126-1134.

Alon G. Training dosage and timing of electrical stimulation may be the key for maximizing the effects of NMES in neuro-rehabilitation. In: Soroker N, Ring H, editors. *Advances in Physical and Rehabilitation Medicine*: Monduzzi Editore; 2003. p. 441-447.

Alon G, Ring H. Gait and hand function enhancement following training with a multi-segment hybrid-orthosis stimulation system in stroke patients. *J Stroke & Cerebrovascular Disease* 2003;12(5):209-216.

Alon G, Stibrant-Sunnerhagen K, Geurts ACH, Ohry A. A home-based, self-administered stimulation program to improve selected hand functions of chronic stroke. *NeuroRehabilitation* 2003;18:215-225.

Smith GV, **Alon G**, Roys SR, Gullapalli RP. Functional MRI determination of a dose-response relationship to lower extremity neuromuscular electrical stimulation in healthy subjects. *Exp Brain Res* 2003;150(1):33-9.

Alon G, McBride S. Selected functional gains for subjects with C5 tetraplegia using the NESS Handmaster neuroprosthesis. *Arch Phys Med Rehabil* 2003;84:119-124.

Alon G, McBride S, Ring H. Improving selected hand functions using upper extremity noninvasive neuroprosthesis in persons with chronic stroke. *J Stroke & Cerebrovascular Disease* 2002;11:99-106.

Laufer Y, Ries J, Leininger P, **Alon G**. Comparison of Quadriceps Femoris Muscle Torque and Fatigue Generated by Neuromuscular Electrical Stimulation with Three Different Waveforms. *Phys Ther* 2001;81:1307-1316.

Targan RS, **Alon G**, Kay SL. Effect of long-term electrical stimulation on motor recovery and improvement of clinical residuals in patients with unresolved facial nerve palsy. *Otolaryngol Head Neck Surg* 2000;122(2):246-52.

Alon G, Kantor G, Smith GV. Peripheral nerve excitation and plantar flexion force elicited by electrical stimulation in males and females. *J Orthop Sports Phys Ther* 1999;29(4):208-14; discussion 215-7.

Alon G, Syron SC, Smith GV. Is transcranial electrical stimulation (TCES) a safe intervention for children with cerebral palsy? *J Neuro Rehabil* 1998;12:65-72.

Alon G, Dar A, Katz-Behiri Dea. Efficacy of a hybrid upper limb neuromuscular electrical stimulation system in lessening selected impairments and dysfunctions consequent to cerebral damage. *J Neuro Rehabil* 1998;12:73-80.

Fisher WW, Bowman LG, Thompson RH, Contrucci SA, Burd L, **Alon G**. Reductions in self-injury produced by transcutaneous electrical nerve stimulation. *J Appl Behav Anal* 1998;31(3):493-6.

Alon G, Taylor DJ. Electrically elicited minimal visible tetanic contraction and its effect on abdominal muscles strength and endurance. *Eur J Phys Med Rehabil* 1997;7:2-6.

Alon G, Kantor G, Ho HS. The effect of three types of surface electrodes on threshold excitation of human motor nerve. *J Clin Electrophysiology* 1996;8:2-8.

Alon G, Kantor G, Ho HS. Effects of electrode size on basic excitatory responses and on selected stimulus parameters. *J Orthop Sports Phys Ther* 1994;20(1):29-35.

Kantor G, **Alon G**, Ho HS. The effects of selected stimulus waveforms on pulse and phase characteristics at sensory and motor thresholds. *Phys Ther* 1994;7:951-962.

Rolle WC, **Alon G**, Nirschl RP, Sobel J. Comparison of subliminal and placebo stimulation in the management of elbow tendinitis. *J Clin Electrophysiol* 1994; 6: 4-9.

Gentzkow, GO, **Alon, G**, Taler GA, Eltorai IM, Montroy RE. Healing of refractory Stage III and IV pressure ulcers by a new electrical stimulation device. *Wounds* 1993;5:160-172.

Alon G, Frederickson R, Gallagher L, Rehwoldt CT, Guillen M, Pement ML, et al. Electrical stimulation of the abdominals: The effects of three versus five weekly treatments. *J Clin Electrophysiology* 1992;4:5-11.

Cosgrove KA, **Alon G**, Bell SF, Fischer SR, Fowler NR, Jones TL, et al. The electrical effect of two commonly used clinical stimulators on traumatic edema in rats. *Phys Ther* 1992;72(3):227-33.

Venable M, Collins M, O'Bryant H, Denegar C, Sedivec M, **Alon G**: Effect of Transcutaneous Stimulation on the Development of Strength, Vertical Jump Performance, Power and Time to Peak Power. *J App Sports Sci Res* 1991;5:139-143.

Alon G, McCombe SA, Koutsantonis S, Stumphauzer LJ, Burgwin KC, Parent MM, Bosworth RA. Comparison of the Effects of Electrical Stimulation and Exercise on Abdominal Musculature. *J Orthop Sports Phys Ther* 1987;8:567-573.

Alon G. High voltage stimulation. Effects of electrode size on basic excitatory responses. *Phys Ther* 1985;65(6):890-5.

Alon G, Allin J, Inbar GF. Optimization of pulse duration and pulse charge during transcutaneous electrical nerve stimulation. *Australian J Physiotherapy* 1983;29:195-201.

Hanson CT, Joslow B, Danoff JV, **Alon G.** Electromyographic response of the elbow flexors to a changing, dislocating force. *Arch Phys Med Rehabil* 1981;62(12):631-4.

Books

Alon G, DeDomenico G. High Voltage Stimulation: An Integrated Approach to Clinical Electrotherapy. Chattanooga, TN: Chattanooga Corporation, 1987.

Book Chapters

Gorman PH, **Alon G,** Kornhauser SH. Electrotherapy: Medical Treatment Using Electrical Currents. In O'Young BJ, Young MA, Stiens SA: *Physical Medicine & Rehabilitation Secrets*, 3rd ed. Mosby-Elsevier, 2007, pp.226-232.

Gorman PH, **Alon G,** Peckham, PH. Functional Electrical Stimulation in Neurorehabilitation. In: Selzer ME: *Neural Repair and Rehabilitation.* Cambridge University Press, Chapter 43, 2006.

Alon G. Principles of Electrical Stimulation. In: Nelson RM, Hayes KW, Currier DP. (eds): Clinical Electrotherapy, 3rd Ed. Connecticut: Appleton & Lange, 1999, pp. 55-139.

Alon, G., Evaluation of Clinical Stimulators In: Physical Therapy Practice, Guest Editor, Andover Medical Publishers, Inc., Stoneham, MA 02180, 1992; Vol 1, pp. 7-19

Alon G. Principles of Electrical Stimulation. In: Nelson RM, and Currier DP. (eds.): Clinical Electrotherapy, 2nd Ed. Connecticut: Appleton & Lange, 1991, pp. 35-103.

Alon G. Electro-orthopedics: A Review of Present Electrophysiological Responses and Clinical Efficacy of Transcutaneous Stimulations. In Grana WA (ed); Advances in Sports Medicine and Fitness. Chicago: Year Book Vol 2, 1989. pp. 295-323

Alon G. Principles of Electrical Stimulation. In: Nelson RM, and Currier DP. (eds): Clinical Electrotherapy. Connecticut: Appleton & Lange, 1987.

Alon G. High Voltage Stimulation, Chattanooga, TN: Chattanooga Corporation, 1984.

Proceedings

Alon G, McBride K, Levitt AF. Feasibility of randomised clinical trial of early initiation and prolonged, home-based FES training to enhance upper limb functional recovery following stroke. 9th Annual Conference of the International FES Society, Bournemouth, UK Sept 6-9, 2004.

Alon G, McBride K, Levitt AF. Exploratory data in support of the upper limit values and reproducibility of the Box & Block and Jebsen-Taylor tests following stroke. 9th Annual Conference of the International FES Society, Bournemouth, UK Sept 6-9, 2004.

Smith GV, **Alon G,** Estrada LM, Lewis M, Gullapalli RP. Dose-response relationship between peripheral nerve stimulation and fMRI data of selected brain loci. Poster 3rd World Congress in Neurological Rehabilitation, Venice, Italy April 2-6, 2002.

Alon G, McBride SK, Ring H. Improving hand functions using the NESS Handmaster™ neuroprosthesis in persons with chronic hemiparesis. Poster 3rd World Congress in Neurological Rehabilitation, Venice, Italy April 2-6, 2002.

Alon G, McBride SK. Selected Functional Gains for Subjects with C5 Tetraplegia Using the NESS Handmaster Neuroprosthesis. Proceedings: International Society of Physical and Rehabilitation Medicine. Peek WJ, Lankhorst GJ. Editors. Amsterdam, July 7-13, 2001. pp. 571-577.

Alon G. The Effect of High Voltage Pulsed Direct Current on Kidney Function, Proceedings: The IX: International Congress of World Confederation for Physical Therapy, Stockholm, Sweden, 1982.

Alon G, Danoff JV. Relationship between Torque and Muscle EMG at the Elbow Joint, Proceedings: Annual Meeting of American Alliance of Health, Physical Education and Recreation, Detroit, MI: 1980.

Alon G, Lamb RL, Hobart DJ. Electromyographic Analysis of Acquisition of a Novel Closed Motor Skill. Proceedings: International Society of Electrophysiological Kinesiology, Boston, MA, 1979.

Danoff JV, **Alon G**. The Effect of Electronic Processing on the Quantitative EMG Signal. Proceedings: International Society of Electrophysiological Kinesiology, Boston, MA, 1979.

Alon G. Electromyographic Comparison of Muscular Activity During Normal and Reverse Actions," In: Hobart DJ, Simard TG, Danoff JV. (Editors) Proceedings: International Society of Electrophysiological Kinesiology, North American Regional Meeting. Baltimore, MD, 1978.

Abstracts

Alon G, Levitt AF, McCarthy PM. Functional Electrical Stimulation Enhancement of Upper Extremity Functional Recovery During Stroke Rehabilitation: A Pilot Study. 4th World Congress International Society of Physical & rehabilitation Medicine, Seoul, Korea June, 2007

Alon G, Levitt AF, McCarthy PM. Compliance of acute/subacute stroke survivors with a 12-week FES training of the paretic upper limb. 4th World Congress for NeuroRehabilitation 12-16 February, Hong Kong 2006

Alon G, Levitt AF, McCarthy PM. Acute stroke survivors' residual deficits of upper limb function following 12 weeks of physical rehabilitation training and FES. 4th World Congress for NeuroRehabilitation 12-16 February, Hong Kong 2006

Alon G, McCarthy P, Levitt AF. Upper limit values and reproducibility of the Box & Block and Jebsen-Taylor tests following stroke. ACMR-ASNR annual meeting, September 28 October 1, 2005.

Alon G, Levitt AF. Is There Credible Medical Evidence to Delay Functional Electrical Stimulation (FES) in Stroke Rehabilitation? ACMR-ASNR annual meeting, September 28 October 1, 2005.

Alon G, Levitt AF. Upper limb functional and motor control deficits following task-specific training during the acute/subacute rehabilitation phase of ischemic stroke survivors: A pilot study. Annual meeting I Israeli PM&R society, December 15-16, 2005.

Alon G. A home-based, self-administered stimulation program to improve selected hand functions of chronic stroke. 14th International Congress, World Confederation for Physical Therapy, Barcelona, Spain. June 7-12, 2003.

Alon G, Estrada L, Lewis M, Smith GV. Gender and Dose-response relations between neuromuscular electrical stimulation (NMES) and activation of brain loci subserving the locomotor system. 14th International Congress, World Confederation for Physical Therapy, Barcelona, Spain. June 7-12, 2003.

Alon G. Improving gait and hand function in chronic stroke after training with the Ness stimulation system: A controlled prospective study. WCPT 14TH International Congress, Barcelona, Spain, June 7-12, 2003.

Alon G, McBride SK. The effects of the HandmasterTM neuroprosthesis on hand function in persons with chronic hemiparesis. *Phys Ther* (www.ptjournal.org/abstractsPt2002) PL-RR-160-F, 2002.

Alon G, Regev R. Functional performance of children with cerebral palsy following training with the NESS children system: A matched-controlled, analyst-blind, prospective study. *Phys Ther* (www.ptjournal.org/abstractsPt2002) PL-RR-196-F, 2002.

Alon G, Ring H. Gait and hand function of stroke survivors following training with the NESS neuroprosthesis stimulation system: A controlled, analyst blind prospective study. Platform presentation, 3rd World Congress in Neurological Rehabilitation, Venice, Italy Aril 2-6, 2002.

Gullapalli R, **Alon G,** Smith GV, Estrada L, Lewis M, Arya R. Group analysis of dose-response relationships between electrical peripheral nerve stimulation and cortical response using fMRI. *Proceedings: Int Soc Mag Reson Med* 2002;10:

Laufer Y, Ries J, Leininger P, **Alon G.** Electrically induced quadriceps femoris muscle contraction force output and fatigue in females and males. *Phys Ther (Suppl)* 2000;80:48S.

Alon G, Smith GV. Local anesthetic and alteration of sensory perception induced by standard, and a new anesthetic TENS. *Phys Ther (Suppl)* 1998;78:S58.

Alon G, Johnson TJ. Tolerance and conditioning to electrical stimulation within and between sessions and gender. *Phys Ther (Suppl)* 1998;78:S58.

Alon G, Dar A, Katz-Behiri D. Survivors of CVA and head injury can improve selected impairments and functional measures following training with the NESS NMES system. *Phys Ther (Suppl)* 1997; 77:S84.

Alon G, Daisey SE, Smith GV. A proposed battery of objective tests for patients with low back dysfunction. *Phys Ther (Suppl)* 1997;77:S102.

Alon G. The efficacy of transcranial electrical stimulation in managing behavioral and cognitive dysfunctions. *Proceedings 22nd Annual Convention, Association for Behavior Analysis*, 1996. pp. 145.

Alon G, Stookey LA, Lamb JL, Goodwin KD, Thompson KS, Taylor DJ, Rhodes SP, Farantos SJ, Balsor TG. The effects of minimal intensity and prolonged electrical stimulation on abdominal strength and endurance. *Phys Ther (Suppl)* 1994;74:593.

Syron SC, **Alon G.** The effects of transcranial electrical stimulation on the functional performance of children with cerebral palsy. *Phys Ther (Suppl)* 1994;74:515.

Anderson PA, Smith GV, **Alon G**. A preliminary kinematic analysis of normal balance. Proceedings Tenth Congress of the International Society of Electrophysiology and Kinesiology, Shiavi R and Wolf S., editors. June 21-24, 1994. pp. 80-81.

DeSales-Schroen M, **Alon G**. The effect of dynamic perturbation training on selected functional measures of chronically disabled elderly. *Phys Ther (Suppl)* 1993;73:580.

Alon G, Kantor G, Ho HS. Gender differences in response to electrical stimulation conducted through different electrode sizes. *Phys Ther*, 1993;73:590.

Anderson PA, **Alon G**, Smith GV. Dynamic Equilibrium Performance Parameters in Young Adult and Elderly Human Subjects. *Phys Ther (Suppl)* 1992;72:591.

Anderson PA, Smith GV, **Alon G**. Equilibrium Performance Parameters in Normal Subjects and Subjects with Multiple Sclerosis. *Phys Ther (Suppl)* 1992;72:563.

Anderson PA, Smith GV, **Alon G**. Postural Reaction and Recovery Times in Normal Subjects and Subjects with Multiple Sclerosis. *Phys. Ther. (Suppl)* 1992;72:563.

Anderson PA, **Alon G**, Hege-Maisel TY, Smith GV. Stepping Performance of Healthy Subjects on the Motionspec Balance and Motor Control System. *Phys Ther (Suppl)* 1992;72:592.

Mott KG, **Alon G**, Bechtel RH. Reaction Time and Stepping Performance of Patients with Sprained Ankles. *Phys Ther (Suppl)* 1992;72:577.

Cosgrove KS, **Alon G**, Bell SF. The Electrical Effect of Two Commonly Used Clinical Stimulators on Traumatic Edema. *Phys Ther (Suppl)* 1991; 71:S116.

Rolle WC, **Alon G**, Nirsche RP. Comparison of Subliminal and Placebo Stimulation in the Management of Elbow Epicondylitis. *Phys Ther (Suppl)* 1991; 71:S115.

Kantor G, **Alon G**, Ho HS. Intra and Inter Electrode Charge Distribution and Their effects on Threshold Excitation of Human Peripheral Motor Nerve. Proceedings IEEE-EMBS XIII Ann. Int. Conf. 1991. pp. 1628-1630.

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Brief communications

Alon G. (Invited commentary) Electrical stimulation in cerebral palsy: are we asking clinically relevant questions? Developmental Medicine & Child neurology 2006;48:868-868.

Alon G. Functional Electrical Stimulation Brings Technology to the Patient. Biomechanics Magazine, www.biomech.com, August 2004.

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Alon G. CD-ROM v.4. Pathological Movements. Analyses and Intervention Options. 2005

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Alon G. Videotapes. Orthopedic Clinic. Chattanooga, TN: Chattanooga Corporation,

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Alon G. Videotapes. Pain Management. Chattanooga, TN: Chattanooga Corporation, 1986

Alon G. Videotapes. Clinical Application of Electrical Stimulation, Chattanooga, TN: Chattanooga Corporation, 1985.

Alon G. Videotapes. High Voltage Simulation. Chattanooga, TN: Chattanooga Corporation, Vol. 1-8, 1984.

Major Invited Presentations

Alon G. Key Note Presentation: Training dosage and timing of electrical stimulation may be the key for maximizing the effects of NMES in neuro-rehabilitation. 2nd World Congress, International Society Physical and Rehabilitation Medicine, Prague, Czech Republic, May 18-22, 2003.

Other Invited Presentations

- 2007 Title: Electrotherapy in the management of Brachial Plexus Injury. University of Michigan, Department of Neurosurgery, Ann Arbor, MI.
- 2006 Title: Functional Electrical Stimulation (FES) in the Management of Upper limb and Locomotor Deficits of Adult Stroke survivors. Annual Meeting, Neuro-developmental Treatment Association (NDTA).
Title: Management of Low Back Pain and Upper Extremity Musculo-Skeletal Impairments, Gundersen Lutheran Medical Foundation, La Crosse, WI.
Title: Functional Electrical Stimulation (FES) During the Acute Phase of Stroke Rehabilitation. Department of Physical Medicine & Rehabilitation University of Cincinnati, OH.
Title: Electro-Pediatrics. Texas Children's Hospital Physical Medicine & Rehabilitation, Houston, TX
Title: Electro-Pediatrics. Cincinnati Children's Medical Center, Cincinnati, OH
Title: Electro-Pediatrics. San Francisco School system, San Francisco, CA
Title: Evidence-based use of neuromuscular electrical stimulation in pediatric Rehabilitation, South American congress of rehabilitation Medicine, Buenos Aires, Argentina.
- 2005 Title: Key note presentation: Are we ready to advance our clinical practice? The latest advancement in selected therapeutic technologies, and their implementation to maximize upper limb function and locomotion. Annual meeting Israeli PM&R society, Tel-Aviv, Israel.
Title: Therapeutic Technologies and the management of upper limb function and locomotion deficits. Annual Conference & Exposition of the American Physical Therapy Association Boston, MA.
Title: Electro-Pediatrics. Shriner Hospital, St. Louis MO
- 2004 Title: Functional electrical stimulation in Neuro-rehabilitation. Meeting of the Dutch Society of Rehabilitation Medicine, Utrecht, Netherlands.
Title: Pediatric Electrical Stimulation. Hospital for Children, Louisville, KY
Title: Pediatric Electrical Stimulation. Easter Seal, Peoria, IL
- 2003 Title: Clinical Advancements in Electrical Stimulation. University of Michigan, Medical Center, Ann Arbor, MI.
Title: Pediatric Electrical Stimulation. Shriners' Hospital for Children, Louisville, KY
Title: Electrical Stimulation in Neuro-rehabilitation. Conference on Movement analysis and therapy of upper limb after central nervous damage. Sicily, Italy
- 2002 Title: New Approaches to the Management of Common Back Syndromes. APTA of Maryland, St. Agnes, Baltimore, MD
Title: Electrotherapy in Neuro-Rehabilitation: Evidence-Based Approaches. Annual Midwest Stroke Rehabilitation Conference, Minneapolis, MN.

- Title: Electrotherapy in Neuro-Rehabilitation: Evidence-Based Approaches. Florida APTA annual conference, Ft. Meyers, FL
- 2001 Title: Electro-Clinic. Shenandoah University Winchester, VA.
Title: Electro-Pediatrics. Virginia Physical Therapy Association annual conference, Williamsburg, VA
- 2000 Title: Electrotherapy in the new millennium. Combined Sections Meeting, APTA, New Orleans, LA
- 1999 Title: Electro-Sports Medicine. Fifth Annual Sports Medicine Symposium, Sports Medicine Institute, The Christ Hospital, Cincinnati, OH
Title: Electro-Pediatrics. Children's Hospital, Cincinnati, OH
Title: Electro-Pediatrics. Children's Hospital, Miami, FL
Title: Electro-Geriatrics. Burke Rehabilitation Hospital, White Plains, NY
Title: Electrotherapy for the CNS involved patient. Good Samaritan Hospital, Baltimore, MD
- 1998 Title: Electrical Stimulation in Wound Healing. Surgical Grand Rounds Greater Baltimore Medical Center, Baltimore, MD
Title: Electrotherapy in Orthopedics Annual conference Washington State Physical Therapy Association, Seattle, WA
Title: Electro-Pediatrics. Schneider Children's Hospital, New York, NY
- 1997 Title: Wound care and electrical stimulation. Doctors Memorial Hospital, Laplata, MD
Title: Future Directions in Wound Healing. Symposia, APTA Scientific Meeting, San Diego, CA. 1997
Title: Electrotherapy in Sports Medicine. Xavier University, Cincinnati, OH.
Title: Trends and Treatments & Evaluations of Chronic Wounds. Electrical Stimulation in Wound Healing. Greater Baltimore Medical Center, Baltimore, MD.
- 1996 Title: The efficacy of transcranial electrical stimulation in managing behavioral and cognitive dysfunctions. 22nd Annual Convention, Association for Behavior Analysis, San Francisco, CA
Title: Clinical Electrotherapy. New Jersey Physical Therapy Chapter meeting, Englewood NJ
Title: Wound care and electrical stimulation" Bon Secour Nursing Center, Baltimore, MD
Title: Management of Inflammation. National Athletic Trainer Association Annual Convention, Orlando, FL
- 1995 Title: Transcutaneous Electrical Nerve Stimulation: From Physical Rehabilitation to Other Clinical Application. 21st Annual Convention, Association For Behavior Analysis, Washington DC.
Title: Electrotherapy Devices - Electrodes and Tolerance to Electrical Stimulation. Symposium of the Electro physiological Section of the American Physical Therapy association, Milwaukee, Wisconsin.
Title: High voltage PC for Pain Management. Symposium of the Electro physiological Section of the American Physical Therapy association, Milwaukee, Wisconsin.
- 1993 Title: Modalities in the Management of Spinal Dismobility. The Valley Hospital Sports Institute, Ridgewood, NJ
Title: Electro-Orthopedics. Annual Regional Meeting of the American Association of Trainers, Dayton, OH
Title: Electrical Stimulation to the CNS Involved Patient. Symposium of the American Physical Therapy Association, Cincinnati, OH
- 1992 Title: Subliminal Stimulation. Joe King Orthopedic Institute, Houston TX
Title: Advances in Clinical Electrotherapy. Physical Therapy Michigan State Chapter meeting, Detroit, MI
Title: Advances in Clinical Electrotherapy. Physical Therapy South Dakota Chapter meeting, Vermillion, SD
Title: Electro-Orthopedics. The Valley Hospital Sports Institute, Ridgewood, NJ
- 1991 Title: Subliminal Stimulation. Department of Rehabilitation Medicine, NIH, Bethesda, MD
Title: Advances in Clinical Electrotherapy" Physical Therapy Iowa Chapter Meeting, Mason City, Iowa

- 1990 Title: Electrical Stimulation in Neurological Rehabilitation. Greater Washington Rehabilitation Center, Silver Spring, MD
Title: Electrotherapy in Sports Medicine. Joe King Orthopedic Institute, Houston, TX
Title: High Voltage in Clinical Electrotherapy. International Symposium of Electrotherapy/Electrophysiology for Physical Therapy Educators and Clinicians, Burlington, VT
- 1989 Title: Advances in Clinical Electrotherapy. Organization of Chartered Physiotherapists in Private Practice, London, England
- 1988 Title: Advances in Clinical Electrotherapy. Oregon Physical Therapy State Meeting, Portland, OR
Title: Advances in Clinical Electrotherapy, Connecticut Physical Therapy State Meeting, Hartford, CT
Title: Advances in Clinical Electrotherapy. Central Toronto District, Canadian P.T. Association, Toronto, Ontario, Canada
- 1987 Title: Utilizing Electrical Stimulation in Treating Orthopedic Signs and Symptoms in the Home /Health Care Setting. APTA, Combine Sections meeting, Atlanta, GA
Title: Electrical Stimulation for Wound and Ulcers", Montebello Rehabilitation Hospital, Baltimore, MD
- 1986 Title: Clinical Electrotherapy - A Teaching Model. University of West Virginia, Morgantown, WV
Title: Biomechanics and Amputee Gait Analysis. Montebello Rehabilitation Hospital, Baltimore, MD
- 1985 Title: Clinical Electrotherapy - A Teaching Model. University of West Virginia, Morgantown, WV
- 1977 Title: Lower Extremity. Maryland Chapter APTA
Title: Gait Analysis. Washington, DC Chapter, APTA
- 1976 Title: Gait Analysis. Maryland Chapter APTA
- 1975 Title: Biofeedback. Maryland Chapter APTA
- 1974 Title: Biofeedback. Virginia Chapter APTA