



***'Management of Pathological Movements:
Evidence-Based Analysis and Best Options Interventions'***

June 6-7, 2009

Course Agenda

June 6, 2009:

- 8:00 – 8:30 Registration / light refreshments
- 8:30 – 10:00 Lecture: Review and group discussion of the **graphical approach** to biomechanical description of movements (kinematics) and forces/torques (kinetics)
- 10:00 – 10:15 **Break**
- 10:15 – 11:00 Lecture: Analysis and treatment options for **impingement syndrome**
- 11:00 – 12:00 Laboratory I: Applying the graphical approach to selected clinical cases and presentation of evidence-based treatment options
- 12:00 – 1:00 **Lunch on your own** [suggestions provided]
- 1:00 – 3:00 Lecture: The torso and analysis of normal and abnormal lifting, and sit-stand tasks
- 3:00 – 3:15 **Break**
- 3:15 – 4:30 Grand Round I: Case presentation and working on intervention options associated with sit-stand and lifting tasks

June 7, 2009:

- 8:00 – 8:30 Light refreshments
- 8:30 – 10:00 Lecture: Analysis and treatment options for **low back syndrome**
- 10:00 – 10:15 **Break**
- 10:15 – 11:00 Analysis and treatment options for **patello-femoral syndrome and degenerative knee joint disease**
- 11:00 – 12:00 Grand Round II: Gait analysis and intervention options for selected orthopedic and degenerative joint disease
- 12:00 – 1:00 **Lunch on your own** [suggestions provided]
- 1:00 – 3:30 Lecture and Grand Round III: Gait analysis and best intervention options of subjects with CNS damage (hemiplegia and diplegia)
- 3:30 – 3:45 Discussion of final project
- 3:45 – 4:00 Course evaluation

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Course Instructor(s):

Gad Alon, PT, PhD

Dr. Alon is an Associate Professor with expertise in the area of limb amputation management, electrotherapy and neuron-rehabilitation. He has a long record of funded research in electrotherapy, and has published extensively in numerous scientific journals. Dr. Alon has mentored four PhD students in the last fifteen years and supervised over twenty student research projects, five of which resulted in publications in peer reviewed journals. Dr. Alon provides training to the AR RTP trainees in electro-testing and electrotherapy, management of limb amputation, and pathological movement analyses and management. In addition, he provides continuing education training to physicians and therapists on the topic of electrotherapy and pathological movement analyses and management throughout the USA, Canada, Europe, Middle East, and Australia. Dr. Alon's current research focuses on establishing Neuromuscular Electrical Stimulation (NMES) training done in the acute and chronic post stroke rehabilitation period.

Keith McBride, MPT, DPT

Dr. McBride is the Director of Clinical Support and Education of Bioness, Inc. as well as an adjunct instructor at the University of Maryland where he received his Doctor of Physical Therapy Degree in May of 2006. Prior to his work at Bioness, Dr. McBride has worked in a variety of clinical settings with a focus on Neurorehabilitation and Sports Medicine. He served for 5 years as a Research Fellow at the University of Maryland, Baltimore, Department of Physical Therapy and Rehabilitation Science. His research efforts included interventional studies in stroke, spinal cord injury, and geriatric hip fracture. He also served as a research assistant for studies involving development of Functional Magnetic Resonance Imaging (fMRI) protocols, stroke measurement/reliability, and electrophysiology. Dr. McBride has co-authored several published manuscripts involving functional electrical stimulation in persons with stroke and spinal cord injury, in addition to teaching in the areas of electrotherapy, biomechanics, human anatomy and pathokinesiology. Dr. McBride has presented Internationally, including at AOPA, AOTA, APTA, and IFESS and taught continuing education courses on topics ranging from stroke rehabilitation to pathokinesiology of running injuries.

Overview of Seminar:

The aim of the seminar is to offer a patho-mechanically derived system for analysis of the causes of selected pathological movements associated with activities of daily living and other functions. Based on the identified causes, the participant will learn to choose and justify the most advanced physical intervention option(s) that will effectively eliminate, or minimize the pathological movements. This clinically oriented, problem based learning seminar will include lecture, case study practice labs and "Grand Round" discussion.

At the end of the seminar the participants should be able to:

- ❖ Effectively and efficiently describe pathological movements
- ❖ Identify and state the more critical patho-mechanical reasons for the pathological movements
- ❖ Offer the most effective physical intervention option(s)
- ❖ Discuss how and why the selected intervention(s) are likely to eliminate, or at least minimize the pathological movements
- ❖ State the advantages and limitations of the intervention option(s)