

International Meeting on Upper Limb in Tetraplegia
Shriners Hospitals for Children, Philadelphia, PA
September 17-20, 2007

Tuesday, September 18, 2007

6:30 AM **Bus Pickup at Sofitel**

7:00 AM - 7:30 AM **Registration, Breakfast, Poster & Exhibit Viewing**

7:30 AM - 7:40 AM **Welcome: Overview of Scientific Program and Terminology**
Scott Kozin MD

SESSION 1

7:40 AM - 8:20 AM **Free Papers: *Pinch, Grasp and Release***

Moderator: Randal Betz MD

Moderator: Harry Hoyen MD

7:40 AM - 7:48 AM **Abstract # 101** *Revisiting Single-Stage Pinch and Grasp Restoration*
Presenting Author: Allan Peljovich MD, MPH

7:48 AM - 7:56 AM **Abstract # 102** *Outcomes of Surgical Procedures Used to Restore Key Pinch & Grasp in Tetraplegic Patients*

Presenting Author: Maura Whittaker BSc, PT

7:56 AM - 8:04 AM **Abstract # 103** *Reconstruction of Active Palmar Thumb Abduction in Tetraplegia*

Presenting Author: Jan Fridén MD, PhD

8:04 AM - 8:12 AM **Abstract # 104** *Independent ECRL & ECRB Function After ECRL Transfer to Finger Flexors: A Functional Study*

Presenting Author: Julian Liew MD

8:12 AM - 8:20 AM **Discussion**

8:20 AM - 8:30 AM **Summary of Outcomes Pre-Course: Recommendations for Direction and Initiatives for Outcomes Research on UE in SCI**

Presenter: Kevin Chung MD

Moderator: Michael Keith MD

8:30 AM - 8:40 AM **Discussion**

8:40 AM - 8:45 AM **Contemporary Trends in Upper Limb Management: New Zealand Perspective**

Presenter: Alastair Rothwell PhD

Moderator: Arvid Ejeskär MD, PhD

8:45 AM - 8:48 AM **Discussion**

SESSION 2

8:48 AM - 9:48 AM **Free Papers: *Functional Electrical Stimulation***

Moderator: Rich Lauer PhD

Moderator: M.J. Mulcahey PhD, OTR/L

8:48 AM - 8:56 AM **Abstract # 201** *Neuro-Muscular Electrical Stimulation- Assisted Grasp Training and Restoration of Function in the Tetraplegic Hand: A Case Study Series*

Presenting Author: Rebecca Martin OTR/L

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- 8:56 AM - 9:04 AM **Abstract # 202** *An Implanted Radio Frequency Microstimulator for Muscle Excitation Sized for Pediatric Applications: An Evaluation Using a Canine Model*
Presenting Author: Brian Smith MS
- 9:04 AM - 9:12 AM **Abstract # 203** *Restoration of Hand Function in Spinal Cord Injury Using Implanted Neuroprostheses*
Presenting Author: Kevin Kilgore PhD
- 9:12 AM - 9:18 AM **Discussion**
- 9:18 AM - 9:26 AM **Abstract # 204** *An Implanted, EMG-Controlled Hand, Arm, Shoulder, and Trunk Neuroprosthesis for C5-C6 Spinal Cord Injury*
Presenting Author: Robert Kirsch
- 9:26 AM - 9:34 AM **Abstract # 205** *Measuring Changes in ADL Performance After Neuroprosthesis Implantation*
Presenting Author: Anne Bryden OTR/L
- 9:34 AM - 9:42 AM **Abstract # 206** *An Implanted, 24-Channel Neuroprosthesis Using Nerve Cuff Electrodes for C1-C4 Spinal Cord Injury*
Presenting Author: Robert Kirsch
- 9:42 AM - 9:48 AM **Discussion**
- 9:48 AM - 10:00 AM **Meeting Logistics**
- 10:00 AM - 10:15 AM **Break, Poster and Exhibit Viewing**
- SESSION 3**
- 10:15 AM - 12:00 PM **Free Papers: Outcome Instruments and Outcomes Research**
Moderator: Anne Sinnott BPhty, MPhty
Moderator: Kevin Chung MD
- 10:15 AM - 10:23 AM **Abstract # 301** *Application of the Canadian Occupational Performance Measure as a Means to Evaluate Reconstructive Procedures in Persons with Tetraplegia*
Presenting Author: Kim Costello RN, BSN
- 10:23 AM - 10:31 AM **Abstract # 302** *Development of an Objective Test of Upper Limb Function in Tetraplegia*
Presenting Author: Ralph Marino MD
- 10:31 AM - 10:39 AM **Abstract # 303** *The Graded and Redefined Assessment of Sensibility Strength and Prehension (Grassp Protocol) – Development and Validation of a Hand Function Measure for the Tetraplegic Population*
Presenting Author: Sukhvinder Kalsi-Ryan MSc, BScPT
- 10:39 AM - 10:45 AM **Discussion**
- 10:45 AM - 10:53 AM **Abstract # 304** *Assessment of Motor Capacities in Tetraplegic Patients After Upper Limb Functional Surgery*
Presenting Author: Charles Fattal MD, PhD
- 10:53 AM - 11:01 AM **Abstract # 305** *Perceived Satisfaction and Performance with Self-Assessment Goals After Surgical Grip Reconstruction in Tetraplegia*
Presenting Author: Johanna Wangdell OT

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- 11:01 AM - 11:07 AM **Discussion**
- 11:07 AM - 11:15 AM **Abstract # 307** *Nontraumatic Spinal Cord Injury – An Indication for Reconstructive Upper Extremity Surgery?*
Presenting Author: Andreas Gohritz MD
- 11:15 AM - 11:23 AM **Abstract # 308** *Upper Limb Surgery in Tetraplegic Patients Over 60 Years – You Are Never too Old to Improve*
Presenting Author: Jan Fridén MD, PhD
- 11:23 AM - 11:31 AM **Abstract # 309** *Upper Limb Surgery for Tetraplegia: Use of a 10-Point Strategy by Two French Teams From 1989 to 2006*
Presenting Author: Marc Revol
- 11:31 AM - 11:37 AM **Discussion**
- 11:37 AM - 11:45 AM **Abstract # 310** *Critical Analysis of the Results of the Rehabilitative Surgery of the High Tetraplegic Patients*
Presenting Author: Manlio Ottonello
- 11:45 AM - 11:53 AM **Abstract # 312** *Evidence for Muscle Re-Education Following Tendon Transfer in Spinal Cord Injury*
Presenting Author: M. Elise Johanson DPT, MS
- 11:53 AM - 12:00 PM **Discussion**

SESSION 4

- 12:00 PM - 12:30 PM **Free Papers: Utilization of Reconstructive Surgeries**
Moderator: Hunter Peckham PhD
Moderator: Charles Hamlin MD
- 12:00 PM - 12:08 PM **Abstract # 401** *Enhancing Upper Extremity Function with Reconstructive Surgery in Persons with Tetraplegia: A Review of the Literature*
Presenting Author: Sandra Connolly BHScOT
- 12:08 PM - 12:16 PM **Abstract # 402** *Why Some Patients Choose Not to Have Tendon Transfer Surgery*
Presenting Author: Cathy Cooper
- 12:16 PM - 12:24 PM **Abstract # 403** *A Qualitative Study of the Reasons for Underutilization of Tendon Transfers in Surgically Indicated Individuals with Tetraplegia*
Presenting Author: Rebecca Ozelie OTR/L
- 12:24 PM - 12:30 PM **Discussion**
- 12:30 PM - 12:35 PM **Contemporary Trends in Upper Limb Management: European Perspective**
Presenter: Caroline Leclercq MD
Moderator: Scott Kozin MD
- 12:35 PM - 12:38 PM **Discussion**
- 12:38 PM **Adjourn**
- 12:45 PM Bus Service to: Sofitel Hotel, Reading Market (Center City), South Philadelphia (Home of Philly Cheese Steaks)

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6:30 AM **Bus Pickup at Sofitel**

7:00 AM - 7:30 AM **Breakfast, Poster & Exhibit Viewing**

SESSION 5

7:30 AM - 8:00 AM **Founders' Lecture: *To Whom Should We Listen?***
Presenter: Michael Keith MD
Moderator: Alastair Rothwell PhD

8:00 AM - 8:15 AM **Discussion**

8:15 AM - 8:20 AM **Contemporary Trends in Upper Limb Management: *Canadian Perspective***
Presenter: Sukhvinder Kalsi-Ryan MSc, BScPT
Moderator: Marc Revol

8:20 AM - 8:23 AM **Discussion**

8:23 AM - 9:09 AM **Free Papers: *Elbow Extension***
Moderator: Caroline Laclercq MD
Moderator: Antonio Landi MD

8:23 AM - 8:31 AM **Abstract # 501 *Posterior Deltoid to Triceps: A Clinical and Roentgenological Study***
Presenting Author: Arvid Ejeskär MD, PhD

8:31 AM - 8:39 AM **Abstract # 502 *Experience with 31 Posterior Deltoid-to-Triceps Transfers Using a Designer Dacron Prosthesis***
Presenting Author: Natasha van Zyl MBChB, FRACS

8:39 AM - 8:45 AM **Discussion**

8:45 AM - 8:53 AM **Abstract # 504 *Elbow Extension Reconstruction in Upper Limb Functional Surgery for Tetraplegic Patients***
Presenting Author: Charles Fattal MD, PhD

8:53 AM - 9:01 AM **Abstract # 505 *Dynamic Electromyographic Evaluation of Adolescents with Traumatic Cervical Injury after Biceps to Triceps Transfer: The Role of Phasic Contraction***
Presenting Author: David Hutchinson MS, PT

9:01 AM - 9:09 AM **Abstract # 506 *Shortened Rehabilitation Period After Reconstruction of Elbow Extension in Tetraplegia***
Presenting Author: Istvan Turcsanyi MD

9:09 AM - 9:15 AM **Discussion**

9:15 AM - 9:45 AM **Keynote Address: *Spinal Cord and Nerve Regeneration: An International Perspective***
Keynote Speaker: Dalton Dietrich PhD
Moderator: Jan Fridén MD, PhD

9:45 AM - 10:00 AM **Discussion**

10:00 AM - 10:30 AM **Break, Poster and Exhibit Viewing**

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- 10:30 AM - 10:35 AM **Contemporary Trends in Upper Limb Management: Asian Perspective**
Presenter: Josephine Wy Ip MD
Moderator: Michael Keith MD
- 10:35 AM - 10:38 AM **Discussion**
- 10:38 AM - 11:08 AM **Keynote Address: *Epidemiology of Pediatric SCI: Past, Present & Future***
Presenter: Michael DeVivo MD, PhD
Moderator: Amir Samdani MD
- 11:08 AM - 11:23 AM **Discussion**
- 11:23 AM - 12:05 PM **Pediatric SCI Symposium**
Moderator: Michelle James MD
Moderator: Amir Samdani MD
- 11:23 AM - 11:28 AM **Abstract # PSCI 101** *Ambulation in Children and Youth with Spinal Cord Injuries*
Presenting Author: Lawrence Vogel MD
- 11:28 AM - 11:33 AM **Abstract # PSCI 102** *Outcomes of Urinary Diversion in Children with Spinal Cord Injuries*
Presenting Author: Lisa Merenda MSN, RN, CRRN
- 11:33 AM - 11:38 AM **Abstract # PSCI 103** *Adult Outcomes of Individuals with Pediatric-Onset Spinal Cord Injuries: Tetraplegia Compared with Paraplegia*
Presenting Author: Caroline Anderson PhD
- 11:38 AM - 11:43 AM **Abstract # PSCI 104** *Orthopaedic Considerations in the Child and Adolescent with Tetraplegia Secondary to Spinal Cord Injury*
Presenting Author: Randal Betz MD
- 11:43 AM - 11:48 AM **Abstract # PSCI 105** *Risk Factors and Causes of Death Following Pediatric Spinal Cord Injury*
Presenting Author: Michael DeVivo MD, PhD
- 11:48 AM - 11:53 AM **Abstract # PSCI 106** *Restoration and Refinement of Grasp Control in Children with Tetraplegia*
Presenting Author: Susan Duff EdD, PT, OT, CHT
- 11:53 AM - 12:05 PM **Discussion**
- 12:05 PM - 1:00 PM **Poster Viewing (9th Floor) and Lunch (6th Floor)**
- 1:00 PM - 1:30 PM **Keynote Address: *Preserving Arm Function in SCI – Introduction to the Clinical Practice Guidelines***
Presenter: Michael Boninger MD
Moderator: Michael Bednar MD
- 1:30 PM - 1:45 PM **Discussion**
- 1:45 PM - 2:55 PM **Walking Break**

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2:55 PM - 4:00 PM

Instructional Course Lectures

ICL 1: Practicing the UE Clinical Practice Guidelines: Using Wheelchair Propulsion Assessment in Propulsion Training, Wheelchair Comparison and Justification

Presenters: Ron Boninger, Tina Roesler
Motion Analysis Lab, 5th Floor

ICL 2: Early Recognition and Prevention of Complications in Upper Extremities of Patients with Mid-Level Incomplete Cervical Spinal Cord Injury: An Instructional Course

Presenters: Kenneth Parsons MD, Erin Henry OTR
Conference Center, 9th Floor

4:00 PM - 4:10 PM

Break - FINAL Poster Viewing

4:15 PM - 5:00 PM

Keynote Address: Between the Extremities: Spinal Cord Injury and What it Means to Be Human

Keynote Speaker: Daniel Gottlieb PhD

Moderator: Caroline Anderson PhD

Moderator: Heather Russell PhD

5:00 PM - 5:15 PM

Discussion

5:15 PM

Adjourn - Bus Service to Sofitel Hotel

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6:30 AM **Bus Pickup at Sofitel**

7:00 AM - 7:30 AM **Breakfast & Exhibit Viewing**

SESSION 6

7:30 AM - 7:35 AM **Tribute to Mr. Alan Clarke**
Presenter: Alastair Rothwell PhD

7:35 AM - 7:40 AM **Contemporary Trends in Upper Limb Management: Australia Perspective**
Presenter: Stephen Flood
Moderator: Arvid Ejeskär MD, PhD

7:40 AM - 7:43 AM **Discussion**

7:43 AM - 8:23 AM **Free Papers: Basic Science and Biomechanics**
Moderator: Hunter Peckham PhD
Moderator: Wendy Murray PhD

7:43 AM - 7:51 AM **Abstract # 601 Muscle and Tendon Length Adaptations to Acute Tendon Transfer**
Presenting Author: Jan Fridén MD, PhD

7:51 AM - 7:59 AM **Abstract # 602 Brachioradialis Muscle Volume and Length Following Tendon Transfer**
Presenting Author: Katherine Holzbaur PhD

7:59 AM - 8:07 AM **Abstract # 603 A Novel Method for Control of Muscle Spasticity**
Presenting Author: Kevin Kilgore PhD

8:07 AM - 8:15 AM **Abstract # 604 Using Constraint Modelling to Predict the Upper Body Strength Capabilities of People with Tetraplegia**
Presenting Author: Shayne Gooch PhD

8:15 AM - 8:23 AM **Discussion**

SESSION 7

8:23 AM - 9:03 AM **Free Papers: Complications in Upper Limb Management & Misc. Topics**
Presenter: Allan Peljovich MD, MPH
Moderator: Albert Weiss MD

8:23 AM - 8:31 AM **Abstract # 701 Occurrence and Impact of Spinal Cord Injury Related Complications Involving Upper Extremities in Tetraplegia During First Year After Injury**
Presenting Author: Govert Snoek MD, PhD

8:31 AM - 8:39 AM **Abstract # 702 Detection, Prevention and Treatment of Shoulder Pains in Tetraplegic Patients Using the SGC Method**
Presenting Author: Thierry Marc Physiotherapist

8:39 AM - 8:47 AM **Abstract # 703 Biceps to Triceps Transfer for Elbow Extension in Persons with Tetraplegia: An Assessment of Complications**
Presenting Author: Scott Kozin MD

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- 8:47 AM - 8:55 AM **Abstract # 704** *The Role of Tenolysis in the Transferred Tendon in Tetraplegia*
Presenting Author: Antonio Landi MD
- 8:55 AM - 9:03 AM **Discussion**
- 9:03 AM - 9:11 AM **Abstract # 705** *Brachial Plexus Lesion in Spinal Cord Injuries: A Multicentric Study*
Presenting Author: Antonio Landi MD
- 9:11 AM - 9:19 AM **Abstract # 706** *Scapular Stabilization in the Patient with Spinal Cord Injury*
Presenting Author: Joshua Pahys MD
- 9:19 AM - 9:27 AM **Abstract # 707** *Distal Ulnar Intrinsic Release in Patients with Tetraplegia*
Presenting Author: Carina Reinholdt MD
- 9:27 AM - 9:35 AM **Abstract # 708** *Isolated Pronation Osteotomy of the Radius for Forearm Supinating Contracture in High-Level Tetraplegic Patients: Overview of 11 Cases*
Presenting Author: Bertrand Coulet MD, PhD
- 9:35 AM - 9:43 AM **Discussion**
- 9:43 AM - 9:48 AM **Contemporary Trends in Upper Limb Management: USA Perspective**
Presenter: Charles Hamlin MD
Moderator: Caroline Leclercq MD
- 9:48 AM - 9:51 AM **Discussion**
- 9:51 AM - 10:15 AM **Walking & Snack Break**
- 10:15 AM - 11:15 AM **Instructional Course Lectures**
- ICL 3: *Shoulder Modeling and Reachable Workspace***
Presenter: Carole Tucker PhD
Motion Analysis Lab, 5th Floor
- ICL 4: *Incomplete Tetraplegia: Surgical Evaluation and Treatment Techniques***
Presenters: V. Rod Hentz MD, Caroline Leclercq MD, Wendy Murray PhD
Conference Center, 9th Floor
- 11:15 AM - 11:25 AM **Walking Break**
- 11:25 AM - 11:55 AM **Keynote Address: *Recent Advances in Upper Limb Mobility with Implanted Neuroprosthesis***
Keynote Speaker: Hunter Peckham PhD
Moderator: Randal Betz MD
- 11:55 AM - 12:10 PM **Discussion**
- 12:10 PM - 1:00 PM **Lunch (6th Floor)**

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SESSION 8

- 1:00 PM - 1:30 PM **Free Papers: *Wheelchair Propulsion***
Moderator: Michael Boninger MD
Moderator: Alastair Rothwell PhD
- 1:00 PM - 1:08 PM **Abstract # 801** *Improved Wheelchair Manoeuvrability After
Reconstructive Hand Surgery in Tetraplegia*
Presenting Author: Ann-Sofie Lamberg RPT, MSc
- 1:08 PM - 1:16 PM **Abstract # 802** *A Procedure for Measuring Manual Wheelchair
Propulsion Ability for People with Spinal Cord Injuries*
Presenting Author: Shayne Gooch PhD
- 1:16 PM - 1:24 PM **Abstract # 803** *Quantifying Manual Wheelchair Propulsion Ability vs.
Injury Level for People with Spinal Cord Injuries*
Presenting Author: Shayne Gooch PhD
- 1:24 PM - 1:30 PM **Discussion**
- 1:30 PM - 2:00 PM **Keynote Address: *ICF Core Set Development Project for SCI –
Practicalities and Pragmatics of the WHO's Western Pacific Region
Representation***
Keynote Speaker: Anne Sinnott BPhy, MPhty
Moderator: Michael DeVivo MD, PhD
- 2:00 PM - 2:15 PM **Discussion**
- 2:15 PM - 2:20 PM **Closing Remarks**
Moderator: Scott Kozin MD
- 2:20 PM - 2:30 PM **Business Meeting 2007**
- 2:30 PM **Adjourn**
Bus Service to Sofitel
Bus Service to Philadelphia International Airport

