

## MEETING HIGHLIGHTS

Wednesday, September 29, 2004

### **Specialty Day** 1:30 PM TO 5:30 PM

This very special program has been planned in answer to requests by the specialties within AACPDm for advanced, specialty-specific sessions. This year sessions will focus on: functional changes in adults with CP; the role of alternative therapies; and controversies in orthopaedic management.

### **President's Welcoming Reception** 6:00 PM to 8:00 PM

Join exhibitors, friends, new members and guests at a welcoming reception Wednesday night at 6:00 PM in the exhibit hall. Light hors d'oeuvres will be served. Afterward, take advantage of one of the restaurants near the hotel or on Rodeo Drive. Don't forget to register any guest so they will have a badge and a drink ticket.

Thursday, September 30, 2004

### **Business Meeting and Lunch** 11:30 AM to 1:00 PM

Members-only lunch and business meeting will be held immediately following the morning free paper sessions. The meeting will be in the General Session room. Members are asked to quickly go through and pick up their box lunch and take a seat toward the front of the large room. Only members who sign up and have a ticket will get lunch, so please don't forget to sign up.

### **Hollywood Nightlife Tour** 6:00 PM to 11:00 PM

Bus tour will start with a drive down Sunset Strip featuring well-known nightclubs as Whisky, Johnny Depp's The Viper Room and Justin Timberlake's new restaurant Chi. Arriving at Hollywood and Highland where we will depart and a talented and knowledgeable guide will lead you down the Hollywood Walk of Fame. The jaunt will take you to the Grauman's Chinese Theatre home to movie premieres and the handprints and footprints left by the legends of Hollywood; Disney's El Capitan Theatre lights up the street with nightly screenings and live entertainment, and the Kodak Theatre home to the Academy Awards. Here you can browse the shops and find a nice place to have dinner on your own. Meet your guide back at Hollywood and Highland at 10:30pm for the return trip to the hotel. **Cost: \$45**

### **Hollywood - Partytown!** 6:00 PM to 11:00 PM

You will drive by the Hollywood Walk of Fame, Grauman's Chinese Theatre, the El Capitan Theater and the Kodak Theatre. Then hit the scene on the Sunset Strip. Your tour guide will point out all the clubs and restaurants: Whisky where Jim Morrison and the Doors played, the Roxy, Johnny Depp's The Viper Room and the newly famous Key Club. You'll also see The Standard, The Sky Bar and Justin Timberlake's new restaurant, Chi. Find a quiet place for dinner or hop between the busiest and most fascinating clubs in town. Meet your guide for the return trip to the hotel. **Cost: \$45**

### **Universal CityWalk** 6:00 PM to 11:00 PM

Adjacent to one of the busiest studios in town, Universal CityWalk is full of action and excitement every night! An outdoor promenade full of crazy lights and glitz, there is something for everyone. Theme restaurants, including the Hard Rock Café and Latin Café Tu Tu Tango, make CityWalk a festive atmosphere to the eclectic mix of souvenir and specialty stores. Street performers and live musicians also line the Walk to inspire visitors to participate in the full sensory experience that makes this place so exciting. **Cost: \$45**

There is a minimum number needed for each tour. If that number is not met, the tour may be canceled. Your money will be refunded.

Friday, October 1, 2004

### **Hooray for Hollywood! Party** 6:30 to 10:30 PM

Join your friends in the beautiful gardens of the Century Plaza for this unique opportunity to meet legends of Hollywood. There will be dinner, dancing and surprise visitors. Bring your camera! **Cost: \$85**  
**There will be no refunds after September 1, 2004.**

Saturday, October 2, 2004

### **International Affairs Lunch** **Are there More Roads to Rome?** 11:30 AM to 1:00 PM

The International Affairs Luncheon will host the recipients of the International Scholarships and other international attendees. This year Dr. Sajrau Uzicanin from Bosnia and Dr. Sashikala Gopalswamy from India will speak for 15 to 20 minutes each. They will bring information on how children and youth with developmental problems in these two countries receive diagnostic and management services, and how the best services can be provided with what is available. Please come to the lunch and support the Academy in its philosophy to support international care around the globe. **Cost: \$35**

### Benefits you will receive by participating:

1. **Choose from 32 Instructional Courses, 54 Free Papers, and 10 "Breakfast with the Experts":** select topics and speakers to fit your educational needs.
2. **Take Away Resource Materials:** handouts are available from each instructional course you attend; abstracts of free papers are compiled and given to each registrant; tapes and CDs are available for purchase.
3. **International Participation:** learn what research and technical advances are taking place outside North America.
4. **Learn from Experts:** speakers who have written the textbooks and journal articles and are doing the research.
5. **Reduced-Rate Accommodations:** a block of reduced-rate accommodations has been reserved at the Century Plaza Hotel and Spa.
6. **Special Networking Opportunities:** join your colleagues at the Opening Reception Wednesday night, meet at the complimentary breakfasts each day.
7. **Access to others in your field:** possibly the one time so many different disciplines will be available; an opportunity to hear what your peers and teachers are doing.
8. **Internet Discussion Group:** continue the conference learning experience by participating in post-conference discussions. Visit the web page booth in the exhibit area and learn how to register. [www.aacpdm.org](http://www.aacpdm.org)
9. **Hear the latest research in the field of Cerebral Palsy and Developmental Disabilities.**
10. **Continuing Medical Education Credits and CEUs.**

## GENERAL INFORMATION

### Registration Fees

To advance register for the 2004 Annual Conference, complete the registration form and return it along with the total registration fees by August 13, 2004. **Early registration deadline is August 13, 2004. Pre-registration closes September 3, 2004. After September 3, please register onsite.**

Those paying with either Visa or MasterCard may fax their registration to **847-823-0536** or mail the registration form with your payment to American Academy for Cerebral Palsy and Developmental Medicine, Dept. 77-6632, Chicago, IL 60678-6632. We can accept U.S. dollars only. **SEND CHECKS TO THE ABOVE ADDRESS ONLY. Registration is also available on-line at [www.aacpdm.org](http://www.aacpdm.org).**

### Cancellation Policy

Registration fees are refundable if the refund request is received in writing by August 13, 2004; 75% refund August 13 to September 23, 2004; no refund after September 24, 2004.

### Who Should Attend

Orthopaedic surgeons, physical and occupational therapists, speech and hearing therapists, neurologists, developmental pediatricians, psychologists, PM&R physicians, nurses, special education teachers, researchers, educators, administrators, orthotists, rehab engineers, kinesieologists, and others concerned with the care of children with cerebral palsy and other developmental disabilities. All levels of skills will be addressed.

### Americans with Disabilities Act

The American Academy for Cerebral Palsy and Developmental Medicine wishes to ensure that no individual with a disability is excluded, denied services, or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act please notify AACPDM at least 14 working days prior to the program to allow time to acquire the support needed.

### Purpose Statement and Objectives

The educational program of the American Academy for Cerebral Palsy and Developmental Medicine is designed to provide targeted opportunities for dissemination of information in the basic sciences, prevention, diagnosis, treatment, and technical advances as applied to persons with cerebral palsy and developmental disorders. The program provides a forum for discussion of scientific developments and clinical advances in the care of people with these problems. The program is intended for all physicians and other health care providers who are

concerned with and/or care for patients with these problems. By presenting forums which foster interdisciplinary communication and interchange among all allied health care professionals concerned with individuals with cerebral palsy and neurodevelopmental disorders, this program's purpose is to ensure that the qualified personnel have the skills and knowledge derived from practices that have been determined through research and experience to be successful in serving children with disabilities. The purpose is also to encourage team-building within organizations and institutions, encourage multi-center studies, develop information for parents, and find a consensus on the optimal care of various conditions.

### Objectives

- To identify recent scientific advances in the area of developmental health care.
- To describe current research pertaining to the study of cerebral palsy and other developmental disabilities.
- To discuss in an interdisciplinary forum options in effective care for individuals with cerebral palsy or other neurodevelopmental disabilities.
- To evaluate new studies on the care of individuals with cerebral palsy or other neurodevelopmental disabilities.
- To foster interdisciplinary communication and interchange that will provide more effective care for individuals with cerebral palsy or neuro-developmental disabilities
- To broaden the learning experience by presenting a multidisciplinary forum for professionals who care for individuals with cerebral palsy or other developmental disabilities.

### Continuing Medical Education Information

The American Academy for Cerebral Palsy and Developmental Medicine is accredited by the Accreditation Council for Continuing Education to provide continuing medical education for physicians.

The American Academy for Cerebral Palsy and Developmental Medicine designates this educational activity for a maximum of 26 Category 1 credits toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the activity.

For credit that may be acceptable to state medical associations, specialty societies or state boards of medical licensure, please contact those organizations. Those who attend a "breakfast" are eligible for 1.0 credits, and Specialty Day attendance is eligible for 4.0 credits.

A passport book that can be stamped to indicate events attended will be provided as documentation along with a certificate of attendance with the number of hours credited.

This program has applied for contract hours through Texas Scottish Rite Hospital for Children, an approved provider through the Texas Nurse Association. Physical Therapy credits and ABC credits will be applied for.

**FDA**

Some medical devices or pharmaceuticals not cleared by the FDA or cleared by the FDA for a specific use only may be used “off-label” (i.e., a use not described on the product’s label) if, in the judgement of the treating physician, such use is medically indicated to treat a patient’s condition. “Off label” uses of a device or pharmaceutical may be described in Academy educational programs or publications so long as the lack of FDA clearance for such uses is also disclosed. Results from scientific studies known to the author or presenter relating to the described intended use should be discussed if so doing will not adversely affect the study or violate some other regulatory requirement. Some drugs or medical devices described or demonstrated in Academy educational materials or programs have not been cleared by the FDA or have been cleared by the FDA for specific uses only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in practice.

**On-Site Registration Hours**

**The Annual Meeting Registration desk will be open:**

- Wednesday . . . 10:00 am - 5:00 pm
- Thursday . . . . . 7:00 am - 5:30 pm
- Friday . . . . . 7:00 am - 5:30 pm
- Saturday . . . . . 7:00 am - 5:30 pm

**Century Plaza Hotel and Spa**

Set amid seven acres of opulently landscaped grounds, The Century Plaza Hotel & Spa is located adjacent to Beverly Hills and Rodeo Drive on Los Angeles’ fashionable West Side. This is an urban resort that was once the back lot of Twentieth Century Fox Studios, you’ll enjoy close proximity to movie studios, world-class shopping, museums, and palm-fringed beaches just a short drive down Santa Monica Boulevard. Cabs are readily available to take you. For the more adventurous there is also the Metro (bus), a \$3.00 daily pass is available. Century City shopping mall is just out the back door offering a food court, movie theaters, and many shops.

Spacious rooms and suites feature Westin’s signature Heavenly Bed®, custom artwork, lavish marble baths, and balconies with views of the mountains, Beverly Hills, or the gardens and swimming pools. Each room is equipped with Internet access and individual climate control. Guest

amenities include 24-hour room service, concierge service, a full-service fitness center, same-day laundry and valet service, a multi-lingual staff, and cell phone and pager rental. Please inquire about their children’s program.

**Parking**

There is a garage behind the hotel that the doorman can direct you to. Currently the rate is \$12 per day self park and \$14 per day valet. Please check the rate when you arrive in case it has changed.

**Getting There**

The hotel is a 45-minute cab ride from LAX. There are also shuttle buses just outside the baggage claim area. Get your baggage and go to the center island where the dispatchers are located. Give them the name of the hotel. The wait can be as long as 30 minutes, but it is a lot cheaper than a cab. There is no need to call ahead. The drivers can take credit cards as well as cash. You pay on arrival at your destination, or you can pre-arrange by calling Super Shuttle at 310-782-6600.

**Take advantage of negotiated airline discounts on UNITED and DELTA! Call ITS at 1-800-621-1083 or 847-940-1176. Tell them you are going to the American Academy for Cerebral Palsy meeting in Los Angeles.**

- **5% discount off lowest published airfare or 10% off the published unrestricted coach airfare.**
- **An additional 5% discount on all published airfares if you purchase your ticket 30 days or more in advance of your travel date.**
- **Area and Zone fares apply with a 7-day advance purchase; no Saturday night requirement. Minimum stay varies by airline.**



## Breakfast with the Experts

Thursday, September 30, 7:00 – 8:00 am

### #1 Advanced Brain Imaging in Children with Cerebral Palsy

**Faculty:** Roslyn Boyd, Senior Research Physiotherapist, NHMRC Post Doctoral Fellow, Murdoch Children's Research Institute and the Brain Research Institute, Melbourne;  
Martin Staudt, Pediatric Neurologist and Research Fellow, Dept. Pediatric Neurology and Developmental Medicine, University Children's Hospital, Tübingen, Germany

**Summary:** The breakfast session presents the combined experience of two international groups with practical experience of Advanced Brain Imaging in children with cerebral palsy. The session will cover handy tips on achieving good quality images and compliance in young children with cerebral palsy for functional MRI, including a practical and methodological aspects of block and event related paradigms for upper limb and lower limb studies as well as qualitative and quantitative analysis of fMRI. There will be a particular emphasis on multimodal assessment of sensorimotor reorganization in congenital hemiparesis including an overview on structural MRI in hemiparesis (correlations between lesion type and timing) and a discussion on the various contributions of fMRI, DTI, TMS and MEG for the "understanding/interpretation" of sensorimotor reorganization. The presenters will provide examples from their research in motor studies with fMRI and DTI, DWI in children with congenital hemiplegia and the use of advanced MRI measures of brain growth and development in neonates.

### #2 Managing Intrathecal Baclofen Pumps

**Faculty:** Linda E Krach, MD, Pediatric Rehabilitation;  
Michael Partington, MD, Pediatric Neurosurgery;  
Tom Novacheck, MD, Pediatric Orthopaedics

**Summary:** This session will provide information about the management of intrathecal baclofen pumps. Topics will include: Selection and screening, pump implant considerations to decrease the likelihood of complications, timing of orthopaedic surgery including spine fusion and hip surgery, dosing, trouble shooting and complication management as well as complex dosing techniques.

#### Objectives:

- 1) The participants will be able to discuss relative indications and contraindications for intrathecal baclofen pump implantation.
- 2) The participants will be able to recognize signs and symptoms of intrathecal baclofen withdrawal and list initial steps to take.

3) The participants will be able to discuss issues related to orthopaedic surgery and intrathecal baclofen pump use.

4) The participants will be able to list options for pump programming for different kinds of dosing patterns for intrathecal baclofen.

**Level:** Intermediate

**Target Audience:** Physicians, nurses, and therapists with some experience in the use of or follow-up of individuals receiving intrathecal baclofen.

### #3 Spina Bifida Case Studies

**Faculty:** David B Shurtleff, MD; Carys Bannister, OBE;  
Gregory Liptak, MD

**Summary:** This will be an open forum for expanding further on the issues of Spina Bifida. Cases will be presented and discussed. You are encouraged to bring your difficult cases to share with the presenters.

**Level:** All levels.

**Target Audience:** All health professionals

Friday, October 1, 7:00 – 8:00 am

### #5 Surgical Case Presentations

**Faculty:** Henry Chambers, MD; Scott Hoffinger, MD

**Summary:** As part of the overall care of a child with cerebral palsy, orthopedic surgery plays a key role. The indications for surgery are often subjective as are the choice of procedures. Illustrative and controversial cases will be presented and audience participation will be encouraged to discuss these issues. In past years, experienced pediatric orthopedic surgeons in the audience have shared their expertise and experience in caring for these complex problems. Participants are encouraged to bring their own problem cases for discussion.

### #6 Intrauterine Closure in Spina Bifida

**Faculty:** Noel B Tulipan, MD

### #7 Patient Advocacy Through Effective Letter Writing

**Faculty:** Lisa Samson-Fang, MD

**Summary:** Clinicians advocate for patients and families through letter writing. These letters include letters of medical necessity, letters to support Social Security application, and letters to schools, public utilities and other programs. In some cases a letter is required for approval of funding, in other situations the physician's letter, while not required, can significantly facilitate the process. Success in obtaining services is enhanced by strong letters. This

## Breakfast with the Experts (continued)

course will provide the needed knowledge and skills for clinicians to effectively advocate for their patients through letters. The session will be comprised of brief presentations followed by skill application in writing letters. These exercises will be patient case examples.

### Objectives:

- 1) Clinicians will be empowered to advocate for their patients acquisition of services through understanding the systems.
- 2) Clinicians will write more effective letters by understanding the elements needed in the letter.
- 3) Clinicians will understand the systems to which they refer children and families.

**Level:** Beginner to Intermediate

**Target Audience:** Physicians and all who coordinate care

### #8 Botulinum Toxin and Sonography — The Beginning of a Beautiful Friendship

**Faculty:** Florian Heinen, MD, PhD; Steffen Berweck, MD; Sebastian Schroder, MD; Volker Mall, MD

**Summary:** Same as Rick Blaine (H. Bogart) in the movie Casablanca, we argue in favor of this famous quote when it comes to Botulinum toxin and sonography. This seminar introduces the participant to the use of this method in the treatment with Botulinum toxins. We will explain the superiority that comes with the increased accuracy according to our own experiences in more than 600 children. We will give examples and data to show the benefits of the method to the patients. We will consider the technical aspects of sonography and will demonstrate applications. We will show injections of the salivary glands, the upper and lower extremity muscles, especially the tricky ones, psoas and tibialis posterior.

Saturday, October 2, 7:00 – 8:00 am

### #9 Reimbursement Concerns for Providers to Special Health Care Needs Children

**Faculty:** Ganesh G Gupta, MD

**Summary:** This course provides a framework for professionals to evaluate and identify problem aspects of reimbursement issues at the local level. Furthermore, methodology to improve revenue will be discussed. This course will discuss the problem of reimbursement for providers with little or no previous experience regarding the business of health care delivery. Specific issues relating to why reimbursement for treating special health care needs children is lower versus other health conditions will be considered. Concepts to be explored include the idea of

product, measuring productivity, and fair market value. Although concepts are global, healthcare reimbursement is local. Definitions to understand contracts and practice plans will be reviewed. A practical guide for evaluating local reimbursement for local productivity will be demonstrated. This course will help individuals in practice and/or providers with management responsibilities.

### Objectives:

- 1) The attendee should be able to define their product.
- 2) The attendee should be able to compare and contrast four different methods of measuring provider productivity.
- 3) The attendee should be able to describe fair market value
- 4) The attendee should be able to evaluate their own local reimbursement and benchmark that data against national data.

**Level:** Basic

**Target Audience:** Health professionals and paraprofessionals who are directly or indirectly held responsible for reimbursement for services given to patients. This course would be valuable for both private practice and employed providers who are pediatricians, physiatrists, physical therapists, occupational therapists, speech therapists, practice plan administrators, orthopaedic surgeons, and neurosurgeons.

### #10 The Management of the Neurogenic Bladder— Some Standard and New Concepts

**Faculty:** William E Kaplan, MD, Professor of Urology Northwestern University Feinberg School of Medicine, Chief of Pediatric Urology Children's Memorial Hospital Chicago

**Summary:** The key to the management of the neurogenic bladder is the understanding of bladder compliance (The relationship of volume to pressure). This talk will focus on the conservative and surgical management of bladder compliance in an attempt to provide continence as well as safe bladder/urinary tract pressures. The presentation will include standard comments regarding intermittent catheterization and pharmacotherapy. Urodynamics will be included as a basis for treatment. Results of bladder stimulation as well as rhizotomy will be included. Surgical management will be discussed.

**Level:** Intermediate to Advanced

**Target Audience:** Physicians (pediatricians, family practice, orthopaedics, neurologists), physiotherapists, nurses.

## Breakfast with the Experts *(continued)*

### #11 Is NDT Dead?

**Faculty:** Diane Damiano, PhD, PT; Gay L Girolami, PT

**Summary:** This breakfast is the second in the “IS IT DEAD? Series” and is intended to be a lively and positive discussion of the current role of Neuro-Developmental Therapy (NDT) in pediatric rehabilitation. Should NDT be maintained as a major component of therapeutic

practice and be continually revised and updated to conform with current evidence, or should it be relegated to an historical role and replaced entirely by other evidence based approaches? Please come to listen and discuss these two perspectives with other therapists who have strong and divergent opinions on this topic.

## Specialty Day

WEDNESDAY, SEPTEMBER 29, 2004

1:30 – 5:30 PM

### SD #1 – Functional Change in Adults with Cerebral Palsy

**Faculty:** Janet Lord, MD; Dr. Brian Kemp; Nancy L Young, BScPT, MSc, PhD; Tony Germino; Kevin Murphy, MD; LTC Marc P DiFazio, MD

**Summary:** Little information exists describing how adults with cerebral palsy function. While pediatric programs strive to bring children to their maximum functional potential, it is not known how well these functional achievements are maintained over the years. Are the functional goals that we set for children really the skills they need through adulthood? What new problems arise during the adult lifespan? Without information about adult functioning, it is difficult to establish the long-term benefit of pediatric programming. This session addresses adult experience with cerebral palsy, both during transition to adulthood and throughout the aging process.

**Objectives:** Symposium participants will:

- 1) Understand typical progressive changes in functional capability that develop as individuals with cerebral palsy move into adulthood and through the aging process.
- 2) Become familiar with typical disability-related medical problems that adults with cerebral palsy experience through adulthood.
- 3) Understand options available to treat medical conditions and to ameliorate functional losses that develop through adulthood and aging among adults with cerebral palsy.

**Level:** Beginner and Intermediate

**Target Audience:** Physicians (general practitioners, pediatricians, physiatrists, neurologists, and orthopedists), social workers, physical and occupational therapists.

### SD #2 – Complementary and Alternative Therapies (CAM) in Cerebral Palsy

**Keynote Speaker:** Michael Goldstein, PhD, Professor of Public Health and Sociology at the University of California, Los Angeles and author of *Alternative Health Care: Medicine, Miracle, or Mirage?*

**Faculty:** William Oppenheim, MD; Eileen Fowler, PT, PhD; Diane Damiano, PT, PhD; Sheryl Low, PT; Edward Dabrowski, MD; Scott Hoffinger, MD

**Summary:** Patients and parents involved with chronic diseases are often attracted to therapies, which are not medically proven. Therapies are typically pursued without medical supervision, supported by individual belief systems and nurtured by anecdotal experiences, internet chat rooms, and the charisma of CAM practitioners. This symposia is designed to give an overview of the many factors that play a role in the choice to seek alternative health care. The course will familiarize the conventional practitioner with alternative and complementary therapies offered for cerebral palsy including therapeutic electrical stimulation, Feldenkrais, Craniosacral Therapy, Hippotherapy, Adeli suit, Doman Delacato, and Hyperbaric Oxygen Therapy. Evidence for and against each of the therapies will be presented. There will be a panel discussion with audience participation to discuss CAM and how best to have an informed discussion with patients and parents about CAM. Finally, effective physical and occupational therapy “alternatives” to CAM will be discussed.

**Objectives:** The participant will:

- 1) Understand why patients seek CAM.
- 2) Understand the role of alternative medicine in managed care and the dynamic relationship between conventional and alternative treatments.

## Specialty Day (continued)

- 3) Understand the role of spirituality.
- 4) Understand the evidence for and against each of the therapies presented.
- 5) Learn about new evidence-based concepts in physical and occupational therapy.

**Course Level:** Basic

**Target Audience:** therapists, physicians, nurses, psychologists, and anyone interested in alternative and complementary therapies

### **SD #3 – Musculoskeletal Management in Cerebral Palsy: An Evidenced-based Approach**

**Faculty:** Kerr Graham, MD, FRCS (Ed), FRACS; Adrienne Harvey, BApp, Sc (PT), M.Physio; Richard Baker, PhD; Paulo Selber, MD, FRACS

**Summary:** The format of the seminar will include a series of short formal presentations, interspersed with clinical case presentations with ample time for interactive discussions. Points to be covered are:

- 1) Anecdote versus evidence
- 2) Neuromusculoskeletal pathology
- 3) Three dimensional gait analysis: Classifying, planning, assessing
- 4) Spasticity management overview
- 5) Do you use S.E.M.L.S. or do you S.M.I.L.E.: Principles of orthopaedic surgery in cerebral palsy
- 6) Don't forget the rehabilitation!
- 7) Practical orthotic management after surgery
- 8) Yes, it's new but is it true? New orthopaedic procedures and traditional procedures re-visited

### **Objectives:**

- 1) Teach the clinician how to evaluate the patient with CP; clinically important findings and relation to treatment and prognosis.
- 2) Discuss management of CP in the context of current practice identifying supporting science when available.
- 3) Focus on both operative and non-operative treatment schemes and relate to clinical features of the patient as well as to classification schemes developed via gait analysis and existing as the GMFCS.

**Level:** An intermediate to advanced course

**Target Audience:** practitioners caring for persons with CP

### **AACPDM TECHNOLOGY TUTORIALS**

Dylan Schieman of SitePen, Inc, William Oppenheim, MD, and Loretta Knutson, PhD, PT, will be conducting hands-on, informal, half hour tutorials at the AACPDMD Website Booth in the Exhibit Hall on Wednesday afternoon and also during the breakfast and break period on Thursday.

Topics will include:

- Using the internet more securely
- Setting up e-mail encryption
- Becoming more efficient with the internet
- Advanced PowerPoint presentation techniques
- Embedding audio and video in PowerPoint presentations
- Advanced Online medical research techniques

Time schedules and sign up sheets will be sent to registrants. There will be no additional cost for these tutorials, through sign-up is very limited.

### **Continuing Medical Education Information**

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## Thursday, September 30, 2004

## FREE PAPER SESSIONS

6:30 – 8:00 AM	<b>Continental Breakfast</b>	9:45 – 10:15 AM	<b>Break</b>
7:00 – 8:00 AM	<b>Breakfast with the Experts #1 - #3</b>	10:15 – 11:30 AM	<b>Free Papers A, B, C</b>
8:15 – 9:45 AM	<b>Opening Session</b> Welcome: Robert W Armstrong, MD	11:30 – 1:00 PM	<b>Business Meeting Lunch</b>
8:15 – 8:30 AM	<b>Exchange of Gavel/Presidential Address</b> Luciano S Dias, MD	1:00 – 2:30 PM	<b>Free Papers D, E, F</b>
8:30 – 9:15 AM	<b>Presidential Guest Lecture</b> <i>History &amp; Current Management &amp; Prevention of Neural Tube Defects</i> David B Shurtleff, MD Professor, Department of Pediatrics University of Washington	2:30 – 3:00 PM	<b>Break</b>
9:15 – 9:45 AM	<b>Cathleen Lyle Murray Lecture</b> Rafer Johnson, Olympic Medalist Founder of the California Special Olympics	3:15 – 5:15 PM	<b>Point/Counter Point</b> 1. How Important is Early Diagnosis & Intervention Program for Motor Dysfunction in CP 2. Is There a Role of Intra-uterine Closure of Spina Bifida 3. Should Spastic Hip Dislocation be Treated?

### Thursday September 30, 2004

#### Session A – Cerebral Palsy Outcome Tools

Location: Olympic Room  
Moderator: Deborah Gaebler-Spira, MD

#### Session B – Baclofen

Location: Santa Monica Room  
Moderator: Darcy L Fehlings, MD

#### Session C – Botulinum Toxin

Location: Los Angeles/Beverly Hills Room  
Moderator: Mauricio R Delgado, MD

10:15 – 10:23 AM

#### A1 Association between Quality of Life and Functional Status in Preschool Aged Children with Physical Disabilities

Lisa Grilli; Debbie Feldman, PhD,PT; Annette Majnemer, PhD,OT; Melanie Couture; Laurent Azoulay; Bonnie Swaine, PhD, PT

#### B1 Functional Assessment of Children with Dystonia Before and After Intrathecal Baclofen Therapy

Francesco Motta, MD; Vincenzo Buonaguro, MD; Cecilia Stignani, PT; Fabiana Conduro, PT

#### C1 A Randomised Trial of Botulinum Toxin A (BTX-A) Combined with Hip Bracing in Children with Marked Spastic Cerebral Palsy: Impact on Functional Outcomes

Roslyn Boyd, MSc,PT; H Kerr Graham, MD; Gary Nattrass, MD; Dinah Reddihough, MD; Rory Wolfe, PhD; Pam Thomason, MSc; Fiona Dobson, BS; Jenny Parrott; Kevin Lowe; Ann Lancaster; Alfhild Larsen; Jenene Oates; Jane Valentine; Sara Love

10:23 – 10:31 AM

#### A2 The Reliability of Family Report for the Gross Motor Function Classification System

Christopher Morris, MSc; Peter L Rosenbaum, MD

#### B2 The Effect of Intrathecal Baclofen Therapy on Upper Limb Function in Cerebral Palsy

Francesco Motta, MD; Cecilia Stignani, PT; Vincenzo Buonaguro, MD; Marianna Abramini, PT

#### C2 Serial Casting With and Without Botox for Fixed Contractures in Abulatory Children with Cerebral Palsy

Robert M Kay, MD; Susan A Rethlefsen, PT; Anna M Fern-Buneo, MS, PT; Tishya A L Wren, PhD; David L Skaggs, MD

10:31 – 10:39 AM	<p><b>A3</b>  <b>Discriminatory Ability of Outcome Assessment Tools in Ambulatory Patients with Cerebral Palsy</b>  Anita Bagley, PhD; George E Gorton, BS; Donna J Oeffinger, MS</p>	<p><b>B3</b>  <b>Acute Effects of Intrathecal Baclofen on Spinal Deformity in Patients with Cerebral Palsy</b>  M Normann Cabrera, MD; Sybil Snow, PTA; Beth P Smith, PhD; L Andrew Koman, MD; Jeffrey S Shilt, MD</p>	<p><b>C3</b>  <b>A Placebo-Controlled, Double-Blind, Randomized Clinical Trial Evaluating the Effect of Botulinum A Toxin on Upper Extremity Spasticity Associated with Cerebral Palsy</b>  L Andrew Koman, MD; Beth P Smith, PhD; Peter Evans, MD, PhD; Rafael Williams, MD; Rachel Richardson, OT; Julia Rushing, MSTAT</p>
10:39 – 10:52 AM	<b>DISCUSSION</b>	<b>DISCUSSION</b>	<b>DISCUSSION</b>
10:52 – 11:00 AM	<p><b>A4</b>  <b>Stability of the Gross Motor Function Classification System</b>  Robert J Palisano, PT, ScD; David Cameron, PhD; Peter L Rosenbaum, MD; Stephen D Walter, PhD; Dianne J Russell, MSc</p>	<p><b>B4</b>  <b>Gram Negative Meningitis and Infections in Individuals Treated with Intrathecal Baclofen for Spasticity: A Case Series</b>  Colleen A Wunderlich, MD, MSc; Linda E Krach, MD</p>	<p><b>C4</b>  <b>Neuromuscular Junction Remodeling And Recovery Following Botulinum Toxin A Injection in Juvenile Rats</b>  Jian Shen, MD,PhD; Jianjun Ma, MD, PhD; Gamal Elsaidi, DO; Beth P Smith, PhD; Thomas L Smith, PhD; L Andrew Koman, MD</p>
11:00 – 11:08 AM	<p><b>A5</b>  <b>Do Children with Hemiplegia Function Differently from Those with Diplegia Within the same GMFCS Level, and if so, Which Measure is the Best Discriminator?</b>  Diane L Damiano, PhD, PT; Mark F Abel, MD; Donna Oeffinger, MS; Chet Tylkowski, MD; Mary Kay Rayens, PhD</p>	<p><b>B5</b>  <b>Effect of Selective Dorsal Rhizotomy on Gait in Children with Cerebral Palsy: The Risk of Including S2 Roots in the SDR Procedure.</b>  Guy Molenaers, MD; Kaat Desloovere, PhD; Petra Pauwels, MD; Jos De Cat, PT; Marijke Eyssen, MD; Ludo De Borre, MD; Bart Nuttin, MD; Ine Timmermans, PT; Jozef Nijs; Mary Beth Dunn</p>	<p><b>C5</b>  <b>A Quantitative Functional MRI Study in Children with Congenital Hemiplegia: A Randomized Trial of Botulinum Toxin A and Upper Limb Training</b>  Roslyn Boyd, MSc,PT; Timothy Bach, PhD; Meg E Morris, PhD; Christine Imms, OT; Christine Imms, MSc; Lindy Johnson, BS; H Kerr Graham, MD; Arri Syngeniotis; David F Abbott, PhD; Graeme D Jackson, MD</p>
11:08 – 11:16 AM	<p><b>A6</b>  <b>Caregiver Priorities &amp; Child Health Index of Life with Disabilities (CPCHILD): The Initial Development and Validation of a Disease-Specific Measure of Health Status and Well-Being of Children with Severe Disabilities due to Cerebral Palsy</b>  Unni G Narayanan, MD; Darcy L Fehlings, MD, MSc, FRCP(C); Kent Campbell, PhD; Shannon Weir, BSc; Sonia Kiran, BAsC</p>	<p><b>B6</b>  <b>Functional Outcomes in Vertically Limited and Conventional Selective Posterior Rhizotomies in Spastic Cerebral Palsy</b>  Aniruddh K Purohit, M.Ch; M V N D Prasad</p>	<p><b>C6</b>  <b>Effect of Orthopedic Surgery on Muscle Spasticity in Children with Cerebral Palsy</b>  Rita M Davis, MPT; Rosemary A Pierce, PT; Robin D Dorociak, BS; Michael D Aiona, MD; Michael D Sussman, MD</p>
11:16 - 11:30 AM	<b>DISCUSSION</b>	<b>DISCUSSION</b>	<b>DISCUSSION</b>

Thursday  
September 30, 2004

**Session D –  
Cerebral Palsy - Orthopaedics**

Location: Los Angeles/Beverly Hills Room  
Moderator: Unni G Narayanan, MD

**Session E – Spina Bifida**

Location: Santa Monica Room  
Moderator: Michael D Aiona, MD

**Session F – Therapy**

Location: Olympic Room  
Moderator: Susan Murr, PT

1:00 – 2:30 PM

**Free Papers D, E, F**

1:00 – 1:08 PM

**D1  
Does Adductors Surgery Prevent Hip  
Dislocation in Children with Spastic  
Quadriplegia?**

Francesco Motta, MD;  
Vincenzo Buonaguro, MD

**E1  
Do Grip and Pinch Strength Predict  
Neurologic Dysfunction in Children with  
Spina Bifida and Hydrocephalus?**

Gregory S Liptak, MD, MPH; Ruth Fried,  
MA, OTR/L; Sandra Fucile, MS, OTR;  
Elizabeth Baltus-Hebert, MS, OTR; Susan  
Eyer, MS,OTR; Tamara L Doremus

**F1  
Effects of Constraint-induced Movement  
Therapy in Young Children with  
Hemiplegic Cerebral Palsy: An Adapted  
Model**

Ann-Christin Eliasson, PhD, OT; Karin  
Shaw, PT; Lena Krumlinde Sundholm, PhD,  
OT

1:08 – 1:16 PM

**D2  
Muscle-tendon Surgery in Cerebral Palsy:  
What's the Dose?**

Terence Y P Chin, MBBS; H Kerr Graham,  
MD; Paulo Selber, MD, FRACS; Joseph E A  
Palamara, PhD; Rory Wolfe, PhD; Altay O  
Altunas, MBBS; Norman Eizenberg, MBBS

**E2  
Crouched Gait In Children with Spina  
Bifida: A Comparison Between the  
Degree of Knee Flexion Contracture in the  
Clinical Examination and During Gait**

Todd Moen, BS; Laura Lemke, MD; Nicholas  
J Gryfakis, MS; Luciano Dias, MD

**F2  
Functional Testing of Children with  
Unilateral Congenital Below Elbow  
Deficiency (UCBED) With and Without  
Prostheses**

Michelle A James, MD; Anita Bagley, PhD

1:16 - 1:30 PM

**DISCUSSION**

**DISCUSSION**

**DISCUSSION**

1:30 – 1:38 PM

**D3  
The Effect of Multi-level Orthopaedic  
Surgery on Lower Limb Muscle Strength  
in Spastic Diplegic Cerebral Palsy:  
Preliminary Results**

Maria Seniorou, MD; Nicky Thompson,  
MSc, MSCP; Marian Harrington, DPhil, CEng;  
Tim Theologis, FRCS, MSc, PhD

**E3  
Paternal Contributors to Development  
and Behavior in Children and  
Adolescents with Myelomeningocele**

Michelle M Macias, MD; Conway F Saylor,  
PhD

**F3  
Early Detection of Cerebral Palsy from  
Spontaneous Movements Using the NASA  
Postural Video Analysis Tool**

Eilish M Byrne, MSPT; Jessica Rose, PhD,  
PT; Erin Butler, MS; Rosanne Kermoian, PhD;  
Janet O Constantinou, PhD

1:38 – 1:46 PM	<p><b>D4</b>  <b>Distal Femoral Extension Osteotomy and Patellar Tendon Advancement for Treatment of Persistent Crouch Gait in Individuals with Cerebral Palsy.</b>  Jean L Stout, MS, PT; James R Gage, MD; Tom F Novacheck, MD; Michael H Schwartz, PhD</p>	<p><b>E4</b>  <b>Learning and Memory Differences in Children with Myelomeningocele and Shunted Hydrocephalus</b>  Behroze Vachha, MBBS, PhD-CCC/SLP; Richard C Adams, MD</p>	<p><b>F4</b>  <b>Neuromuscular Electrical Stimulation and Volitional Isometric Strength Training of the Quadriceps Femoris and Triceps Surae in Children with Spastic Diplegic Cerebral Palsy: A Preliminary Study</b>  Scott K Stackhouse, PhD; Stuart A Binder-Macleod, PhD; James J McCarthy, MD; Samuel C K Lee, PhD, PT</p>
1:46 - 2:00 PM	<b>DISCUSSION</b>	<b>DISCUSSION</b>	<b>DISCUSSION</b>
2:00 – 2:08 PM	<p><b>D5</b>  <b>Recurrence After Femoral Derotational Osteotomy in Cerebral Palsy</b>  Ha-Yong Kim, MD; Michael Aiona, MD; Michael D Sussman, MD</p>	<p><b>E5</b>  <b>The Impact of Tibial Torsion and AFO's on Transverse Plane Knee Motion in Children with Lumbosacral Myelomeningocele</b>  Sylvia Ounpuu, MSc; Katharine Bell, MS; Jeffrey Thomson, MD</p>	<p><b>F5</b>  <b>Effects of the MOVE (Mobility Opportunities via Education) Curriculum on Range of Motion, Motor Skills, and Functional Mobility of Children with Severe Multiple Disabilities: A Pilot Program</b>  Sheryl M Low, PT,MPH</p>
2:08 – 2:16 PM	<p><b>D6</b>  <b>The Effect of Repeat Hamstring Lengthenings in Individuals with Cerebral Palsy</b>  Melany Westwell, PT; Peter A De Luca, MD; Sylvia Ounpuu, MSc;</p>	<p><b>E6</b>  <b>Outcomes of Spinal Fusion in Children with Idiopathic and Neuromuscular Scoliosis</b>  Nancy A Murphy, MD; Trish Jorgensen, BS; Charles Hoff, PhD; Paul Young, MD</p>	<p><b>F6</b>  <b>Comparison of the Efficacy of Adeli Suit and Neurodevelopmental Treatments in Children with Cerebral Palsy (A Pilot Study)</b>  Simona Bar-Haim, CMSc, PT; Mark Belokopytov, MSc; Netta Harries, BPT; Lionel Copeliovitch, MD; Alexander Frank, MD, PhD; Jacob Kaplanski, PhD; Eli Lahat, MD</p>
2:16 – 2:30 PM	<b>DISCUSSION</b>	<b>DISCUSSION</b>	<b>DISCUSSION</b>

This is a preliminary program and is subject to change

**Friday, October 1, 2004**

**FREE PAPER SESSIONS**

6:30 – 8:00 AM	Continental Breakfast	11:15 AM – 12:00 PM	<b>Symposium on ICF Classification</b> Maureen O'Donnell, MD; Johanna M Darrah, PhD
7:00 – 8:00 AM	Breakfast with the Experts #5 - #8	12:00 – 1:00 PM	<b>Lunch</b>
8:15 – 9:30 AM	Free Paper Session G, H, I	12:00 – 1:30 PM	<b>Past President's Lunch</b>
9:30 – 10:15 AM	Break	1:00 – 3:00 PM	<b>Instructional Courses #1 - #8</b>
10:15 – 11:15 AM	<b>MacKeith Basic Science Lecture</b> <i>Structural &amp; Functional Changes in Muscle Due to Spasticity</i> Richard L Lieber, PhD Professor of Orthopaedics & Bioengineering University of California, VA Medical Centers	3:00 – 3:30 PM	<b>Break</b>
		3:30 – 5:30 PM	<b>Instructional Courses #9 - #16</b>

**Friday, October 1, 2004**

**Session G – Cerebral Palsy - General**

Location: Los Angeles/Beverly Hills Room  
Moderator: Mauricio R Delgado, MD

**Session H – Development/Transition**

Location: Santa Monica Room  
Moderator: Susan R Leibold, RN

**Session I – Health and Well Being**

Location: Olympic Room  
Moderator: Peter D Patrick, PhD

8:15 – 8:23 AM

**G1**  
**Participation of Students with Cerebral Palsy within Inclusive School Settings and its Correlation with Motor and Cognitive/Behavioral Activity Performance**  
Rony Schenker, MSc, OT; Shula Parush, PhD

**H1**  
**Longitudinal Evaluation of Motor and Communication Scores of Typically Developing Infants — Comparison of Scores at 21 Months and 4 Years**  
Johanna M Darrah, PhD, PT; Joyce Magill-Evans, PhD; Megan Hodge, PhD; Joanne Volden, PhD

**I1**  
**Health Care Utilization and Expenditures for Children with Autism Spectrum Disorder: Data from U.S. National Samples**  
Gregory S Liptak, MD; Tami Stuart; Peggy Auinger, MS

8:23 – 8:31 AM

**G2**  
**Working Memory in Children with Cerebral Palsy: Neuropsychological and Neuroimaging Approaches**  
Flavia Heloisa Dos Santos, PhD, Sc; Roberto Gomes Nogueira, MD, PhD; Orlando Francisco Amodeo Bueno, PhD, Sc

**H2**  
**Growth Curves for Children with Moderate-Severe Cerebral Palsy**  
Richard D Stevenson, MD; Mark R Conaway, PhD; Gordon Worley, MD; Maureen O'Donnell, MD; Greg Liptak, MD; Richard C Henderson, MD, PhD; Peter Rosenbaum, MD; Virginia A Stallings, MD; WC Chumlea

**I2**  
**Impact of Distressed Neighborhoods on Child Disability Rates Among 247,822 Children in the Y2000 US Census**  
Michael E Msall, MD; Roger C Avery, PhD; Dennis P Hogan, PhD

8:31 – 8:52 AM

**G3**  
**A Comparison of the Utility of the Test of Infant Motor Performance with a Traditional Neurobehavioral Assessment**  
Laurie M Snider, PhD, OT; Annette Majnemer, PhD, OT; Chaya Hyman, MSc, OT; Barbara Mazer, PhD, OT

**H3**  
**Accuracy of Developmental Prescreening in Biologically At-Risk Infants**  
Glen P Aylward, PhD; Brandon S Aylward, BS

**I3**  
**Health and Well Being of Children with Congenital Heart Defects and Their Families**  
Annette Majnemer, PhD; Catherine Limperopoulos, PhD; Michael Shevell, MD, CM; Charles Rohlicek, MD, CM; Bernard Rosenblatt, MD, CM; Christo Tchervenkov, MD, CM

8:39 – 8:52 AM	DISCUSSION	DISCUSSION	DISCUSSION
8:53 – 9:01 AM	<b>G4</b> <b>Reliability of Upper and Lower Limb Three-Dimensional Kinematics in Children with Hemiplegia</b> Anna H Mackey, MSc, PT; Glenis A Lobb, BA, PT; Sharon E Walt, PhD; N Susan Stott, MD	<b>H4</b> <b>The Health Status of Youth and Young Adults with Cerebral Palsy</b> Nancy L Young, PT,PhD; Wendy Mills, MSW; Anna McCormick, MD; Katherine Boydell, PhD; Shubhra Mukherjee, MD; Darcy Fehlings, MD; Mary Law, PhD; Nancy Olmsted; Peter Rumney, MD; John Wedge, MD	<b>I4</b> <b>Parent's Concerns About Their Child's Developmental Problems</b> Raymond C Tervo MD
9:01 – 9:09 AM	<b>G5</b> <b>Mechanical Work Performed on the Body Center of Mass During Walking in Normal and Spastic Diplegic Children</b> Arnel L Aguinaldo, MA,ATC; Marilyn Wyatt, MA, PT; David Sutherland, MD; Henry G Chambers, MD	<b>H5</b> <b>Transition to Adulthood: Perception of Adults with Physical Disabilities and their Parents</b> Lawrence C Vogel, MD; Caroline J Anderson, PhD; Kathleen M Willis, BA	<b>I5</b> <b>Perceived Need for Health-Related Advocacy Among Families of Children with Disabilities</b> Susan Speraw, PhD, RN
9:08 – 9:16 AM	<b>G6</b> <b>Gastrostomy Tube Feeding and the Risk of Respiratory Morbidity</b> John S Morrice, MB, ChB; Angharad Vernon-Roberts; Hugh Grant; M Eltumi; Peter B Sullivan	<b>H6</b> <b>Transition to Adulthood: Perspective of Adults with Pediatric-onset Spinal Cord Injuries or Myelomeningocele</b> Caroline J Anderson, PhD; Lawrence C Vogel, MD; Kathleen M Willis, BA	<b>I6</b> <b>The Health of Primary Caregivers of Children with Cerebral Palsy: How Does It Compare to Other Canadian Caregivers?</b> Jamie C Brehaut, PhD; Dafna E Kohen, PhD; Parminder Raina, PhD; Stephen D Walter, PhD; <b>Dianne J Russell, MSc</b> ; Marilyn Swinton, BSc; Maureen O'Donnell, MD, FRCP(C); Peter Rosenbaum, MD
9:16 – 9:30 AM	DISCUSSION	DISCUSSION	DISCUSSION

## Saturday, October 2, 2004

6:30 – 8:00 AM	Continental Breakfast
7:00 – 8:00 AM	Breakfast with the Experts #9 - #11
8:15 – 9:00 AM	Young Investigator, Scientific Poster, Gayle Arnold, Sage Award, or Distinguished Service
9:00 – 9:15 AM	Consideration of a New Classification System for CP Murray Goldstein, DO, UCP
9:15 – 9:30 AM	Break

9:30 – 11:15 AM

**Gayle Arnold Lectureship**  
*Modeling and Simulation of Gait Abnormalities*  
 Scott Delp, PhD  
 Chair, Dept. of Bioengineering  
 Stanford University

11:30 AM – 1:00 PM

**International Affairs Luncheon**

1:30 – 3:30 PM

**Family Forum**

1:00 – 3:00 PM

**Instructional Courses #17 - #24**

3:00 – 3:30 PM

**Break**

3:30 – 5:30 PM

**Instructional Courses #25 - #32**

This is a preliminary program and is subject to change

## 2004 ANNUAL MEETING INSTRUCTIONAL COURSES

Friday, October 1, 2004,  
1:00-3:00 PM

- 1 Pediatric Spinal Cord Injuries: Specialty Topics  
*Lawrence C Vogel, MD; Caroline J Anderson, PhD; Randal R Betz, MD; M J Mulcahey, MD, OTR/L*
- 2 Etiological Evaluation of Children with Cerebral Palsy—When to Search for Zebras  
*John F Mantovani, MD; Alexander H Hoon, MD*
- 3 Issues in Pediatric Intrathecal Baclofen Therapy  
*Susan S Ferson, MSN, CPNP; Signe A Carlos, MSN, CPNP; Leland Albright, MD*
- 4 “In Our Own Back Yard”: Exploiting Research That is Waiting to be Done in Your Setting  
*Peter L Rosenbaum, MD; Robert J Palisano, ScD, PT; Doreen J Bartlett, PhD, PT*
- 5 Myelomeningocele: Orthopaedic Management of Lower Extremity Deformities  
*Luciano S Dias, MD; Nicholas J Gryfakis, MS; Michael El-Shammaa, MS*
- 6 HOW and WHY to Strengthen Muscles in Cerebral Palsy  
*Diane L Damiano, PhD, PT*
- 7 Advances in Botulinum Toxin Type A Use to Treat Spasticity in Children and Future Possibilities  
*Mark E Gormley, MD; Henry G Chambers, MD; L Andrew Koman, MD; Rita Ayyangar, MD*
- 8 International Classification of Functioning, Disability and Health (ICF) — What Is It and How Can I Use It Clinically?  
*Johanna M Darrah, PhD, PT; Richard C Adams, MD; Maureen O'Donnell, MD*

Friday, October 1, 2004,  
3:30-5:30 PM

- 9 After The Operation — So What Happens Now? Rehabilitation and Orthotic Management After Orthopaedic Surgery for Children with Cerebral Palsy  
*H. Kerr Graham, MD; Adrienne Ruth Harvey, PT; Gavin Burchall, CO*
- 10 Children and Adolescents with Disabilities: How and When Do We Address Issues of Puberty and Sexuality?  
*Nancy A Murphy, MD; Teresa Such-Neibar, DO; Dedee Caplin, PhD*
- 11 Orthopaedic Assessment and Management of Children with Cerebral Palsy — A Basic Course  
*Michael D Aiona, MD*
- 12 Using Joint Kinetics as a Tool for Treatment Decision-making  
*Sylvia Ounpuu, MSc; Melany Westwell, MS, PT*
- 13 Applying Interdisciplinary Strategies for Successful Management of the Neurogenic Bowel  
*Susan R Leibold, MS, RN, CNS-P; Behroze Vaccha, MBBS, PhD-CCC/SLP; Richard Adams, MD*
- 14 Neuroimaging I: Principles and Clinical Applications  
*Alexander H Hoon Jr, MD, MPH*
- 15 Outcomes Based Medicine: Evaluating Published Research  
*Lisa Samson-Fang, MD; N Susan Stott, MD, PhD; Lynne Logan, MA, PT; Michael Msall, MD*
- 16 Measurement Tools: Gillette Children's Experience  
*Tom F Novacheck, MD; Linda E Krach, MD; Raymond C Tervo, MD; Susan Murr, PT*

Saturday, October 2, 2004,  
1:00-3:00 PM

- 17 The Evaluation and Treatment of Spine Deformity in Neuromuscular Patients  
*Kenneth J Guidera, MD; Robert Bernstein, MD; Ivan Krajbach, MD; Sandra Smith, MS, PT*
- 18 After Injections with Botulinum Toxin A — What Happens Now? Specific After-care to Improve the Effect of BTX-A Injections in the Lower Limbs for Children with Cerebral Palsy  
*Guy Molenaers, MD; H. Kerr Graham, MD; Kaat Desloovere, PhD*
- 19 Dystonia, Spasticity and Rigidity — Why Are They Important in Childhood CP and How Do We Measure Them?  
*Terence D Sanger, MD; Margaret Barry-Michaels, PhD, PT, PCS; Darcy Fehlings, MD*
- 20 Physical Therapy and Orthotic Management of Children with Myelomeningocele  
*Stephanie Butler Figlioli, MPT; Brigid C Driscoll, CO, PT; Claudia Kelp-Lenane, PT*
- 21 Neuromuscular and Functional Electrical Stimulation for Therapeutic and Functional Applications  
*Samuel C K Lee, PhD, PT; Therese E Johnston, MS, PT*
- 22 The Multidiscipline Outpatient (Clinic) Management of Complex Feeding Disorders in Children  
*Mark Fishbein, MD; Sibyl Cox, RD; Cheri Fraker, SLP; Cheryl Swenny, MA; Chris Mogren, RN; Jerie Beth Karkos, MD*
- 23 The Year's Top Ten Articles on Developmental Disabilities  
*Gregory Liptak, MD; Gordon Worley, MD*
- 24 Operative Management of the Upper Extremity in Cerebral Palsy  
*L Andrew Koman, MD; Michelle Gerwin Carlson, MD*

Saturday, October 2, 2004,  
3:30-5:30 PM

- 25 Training in the Reliable Administration and Scoring of ‘The Melbourne Assessment of Unilateral Upper Limb Function’  
*Melinda Randall, BAppSci, OT; Christine Imms, BAppSci, OT, MSc*
- 26 Caring for Caregivers of Children with Disabilities Across the Years  
*Nancy Murphy, MD; Teresa Such-Neibar, MD; Dedee Caplin, PhD*
- 27 Saliva Overflow, Sialorrhea, or Drooling: Interventions Galore But No Cure Yet  
*Janet H Allaire; Carol J Brown, PhD*
- 28 Evaluation and Treatment of Crouch Gait in Cerebral Palsy  
*James R Gage, MD; Thomas F Novacheck, MD; Jean Stout, MPT; Michael Schwartz, PhD*
- 29 Serial Casting Program for Long Term Success in Treatment of Equinus Deformity  
*Brigid Driscoll, CO,PT; Mary Weck, PT*
- 30 The Role of the Therapist in Managing Patients with Hypertonia  
*Margaret Barry-Michaels, PhD, PT, PCS; Kristie Bjornson, PhD, PT; Michele Harris, PT*
- 31 Phenol Blocks to Treat Spasticity in Children  
*Mark E Gormley, MD; Rita Ayyangar, MD*
- 32 Combining Clinical Care and Outcome Research in the Management of Pediatric Cerebral Palsy Patients  
*L Andrew Koman, MD; Beth P Smith, PhD; Amy W Goodman, RN; Normann Cabrera, MD*

To view Scientific Posters, click here

To view Demonstration Posters, click here.

FRIDAY, OCTOBER 1, 2004, 1:00 – 3:00 PM

## 1 Pediatric Spinal Cord Injuries: Specialty Topics

*Lawrence C. Vogel, MD; Caroline J. Anderson, PhD; Randal R. Betz, MD; M. J. Mulcahey, MS, OTR/L*

**Course Level:** Intermediate/Advanced

**Purpose:** The purpose of this course is to highlight new and innovative aspects of acute management and rehabilitation of pediatric SCI from an interdisciplinary focus.

**Target Audience:** This course is applicable to physicians and allied health professionals who care for children who have sustained a SCI.

**Course Summary:** The course will begin with an overview of pediatric SCI, including epidemiology as a function of age at injury. The next discussion will review the incidence, prevention, management (standard and innovative) and functional implications of scoliosis and hip dysplasia in children and adolescents with SCI. The next presentation will review the prevention and management of several medical complications that children and adolescents experience, including deep venous thrombosis, autonomic dysreflexia, hypercalcemia, latex allergy, and spasticity. The next presentation will summarize psychosocial, transition, and sexuality issues for children and adolescents with SCI and their families. There will then be a review of rehabilitation of the child with a tetraplegic spinal cord injury, including upper extremity function, the use of functional electrical stimulation systems, mobility, and activity based rehabilitation. The final presentation will be a case presentation highlighting issues discussed in this instructional course.

## 2 Etiological evaluation of children with cerebral palsy—when to search for zebras

*John F. Mantovani MD; Alexander H. Hoon, Jr, MD, MPH*

**Course Level:** Intermediate

**Purpose:** To describe and discuss etiological testing for children with early onset, hypertonic motor impairments including spasticity and dystonia with particular emphasis on appropriate diagnostic testing for rare conditions.

**Target Audience:** Physicians and other health professionals concerned with understanding and evaluating the possible etiologies of apparently non-progressive neuromotor impairments in children in the first years of life.

**Course Summary:** The etiologic diagnosis of cerebral palsy has important implications for recurrence risk, prognosis and treatment. This course will use a case presentation format to discuss both common and rare

causes of hypertonic motor impairments beginning in early life (cerebral palsy).

The course will begin with a brief overview of acquired brain injuries and developmental brain malformations, which are associated with cerebral palsy in the large majority of children. Next, we will discuss the important genetic and neurometabolic conditions, which produce similar clinical phenotypes and focus on the historical and neuroimaging findings, which often distinguish these rare disorders. Further discussion will emphasize how this information can be used in practice to identify children who require broader diagnostic testing. Lastly, we will provide specific recommendations for appropriate diagnostic testing and emphasize the importance of diagnosis in order to improve genetic counseling, prognosis, and treatment opportunities.

## 3 Issues in Pediatric Intrathecal Baclofen Therapy

*Susan S. Ferson, MSN, CPNP; Signe A. Carlos, MSN, CPNP; Leland Albright, MD*

**Course Level:** Intermediate

**Purpose:** To identify and examine the issues in intrathecal baclofen (ITB) therapy which impact its efficacy in reducing hypertonia in children.

**Target Audience:** Health professionals who evaluate or treat children who are undergoing or might benefit from ITB therapy. This course will be relevant to nurses, nurse practitioners, physician assistants, physiatrists, neurologists, implanting surgeons, and other health professionals involved in ITB.

**Course Summary:** This course will identify and examine issues in ITB therapy, which impact its efficacy in reducing hypertonia in children. The opening speaker will briefly outline the decision-making process in the selection of patients with differing diagnoses (spasticity, dystonia, anoxic/traumatic brain injury), the ITB trial, and dosing subsequent to implant. Next, there will be a discussion of surgical techniques, which enhance the effect of ITB and minimize complications. Conditions peculiar to children with cerebral palsy will be highlighted. Management of complications, including pseudomeningocele formation, infection, and abrupt vs insidious loss of ITB effect will then be reviewed. Finally, we hope to engage the audience in an exchange of ideas concerning ITB therapy in children with hypertonicity.

#### 4 “In Our Own Back Yard:” Exploiting Research That is Waiting to be Done in Your Setting

*Peter L. Rosenbaum, MD; Robert J. Palisano, ScD, PT; Doreen J. Bartlett, PhD, PT*

**Course Level:** Basic

**Purpose:** To encourage people who are interested in clinical or health services research to recognize and consider how to develop research activities using the special opportunities that exist under our noses!

**Target Audience:** Any health professional who has thought about ‘doing research’ but either is not sure where to start or how to take advantage of what is readily available in their own environment might find this course interesting.

**Course Summary:** Using the presenters’ experiences as researchers and mentors, this course will illustrate ways we can often build a research activity—and even a research program—around things we do every day, and discuss that the main challenges involve recognizing opportunities and seizing them.

The course will open with presentation of several brief anecdotes about our own and others’ research opportunities, as a way to engage participants in how we are thinking about the ‘back yard’. For the second half of the first hour people will break into small groups, either to discuss ideas they have been incubating but are unsure how to pursue, or to reflect on insights that may have arisen during the initial presentations by the course leaders. We will use the second hour (a) for as many people as want to present their ideas for 2-3 minutes each, and (b) to draw the session to a close with some principles that people can take away with them.

#### 5 Myelomeningocele: Orthopaedic Management of Lower Extremity Deformities

*Luciano Dias, MD; Nicholas Gryfakis, MS; Michael El-Shammaa, MS*

**Course Level:** Intermediate/Advanced

**Purpose:** To provide an objective evaluation of the orthopaedic pathology, using the clinical examination and motion analysis in the decision making process. The clinical application of spina bífida gait analysis will be presented.

**Target Audience:** Health professionals who are involved in the care of children with myelomeningocele. This course is relevant to orthopaedic surgeons, physiatrists, physical therapists, and gait laboratory professionals.

**Course Summary:** The course will start with a brief discussion of the functional motor levels, their bracing needs and their typical gait patterns with an emphasis on

the relationship between muscle strength and the kinematic data. This will follow by a brief discussion on energy cost and its relation to motor level. The course will then focus on the orthopaedic deformities of the hip and knee as well as rotational deformities and how they can affect gait, and we will present the orthopaedic management of these deformities. The usual pre and post operative motion analysis will be used during the entire course. We will finish discussing the principles of treatment of foot deformities.

#### 6 HOW and WHY to Strengthen Muscles in Cerebral Palsy

*Diane L. Damiano, PhD, PT*

**Level:** Basic/Intermediate

**Target Audience:** Physical and occupational therapists who, currently or would like to incorporate strengthening as one aspect of their (re)habilitation programs, and physicians, nurses and other health professionals who are interested in recommending strengthening programs and activities to their patients and families.

**Course Summary:** Strengthening is now well-accepted as an important component of therapy programs aimed at improving motor function in children with cerebral palsy and other neuromotor disorders. This course will review the most recent evidence showing the effectiveness of different types of strengthening programs from the level of Body Structures & Functioning to Activity and Participation as designated by the International Classification of Functioning. The basic physiological principles of strength training will be summarized and special considerations for those with cerebral palsy will be discussed. Various methods of strengthening will be presented, including the use of free weights, rehabilitation machines, standard gym equipment, adaptive mobility devices, and portable electrical stimulation. Case studies illustrating these different methods will be presented. Participant discussion and questions will be encouraged throughout.

#### 7 Advances in Botulinum Toxin Type A Use to Treat Spasticity in Children and Future Possibilities

*Mark Gormley, MD; Hank Chambers, MD; L. Andrew Koman, MD; Rita Ayyangar, MD*

**Course Level:** Advanced

**Purpose:** To discuss the evolution of botulinum toxin type A use to treat spasticity in children and current advances in research and thought which may optimize treatment in the future.

**Target Audience:** Physicians and other healthcare providers currently involved in the use of botulinum toxin to treat spasticity.

**Course Summary:** Over the past ten years, botulinum toxin type A (BTX A) has become a common treatment for spasticity in children. Initial guidelines recommended using relatively low doses and injecting few muscles. Historically, target areas of the muscle, dilution, and total dose have been anecdotally chosen.

More recently, research of muscle innervation and architecture and studies using higher doses has changed our thinking in muscle selection, localization, injection sites, drug dilution and dosing.

Recent and out of print studies on the location of neuromuscular junctions and muscle fiber orientation will be presented. The impact of dilution and dosing will be addressed. This course will present current thoughts in localization techniques using ultrasound, electrostimulation, and electromyography. Videos will be part of this presentation. Collectively this information can significantly change our approach to BTX A injection. Summary recommendations will be made contrasting these changes with our current approach.

## 8 International Classification of Functioning, Disability and Health (ICF) — What Is It and How Can I Use It Clinically?

*Richard C. Adams MD; Johanna Darrah PhD;  
Maureen O'Donnell, MD*

**Course Level:** Basic

**Purpose:** The purpose of the course is to familiarize participants with the purposes and terminology of the ICF and to give them an opportunity to apply the ICF to clinical practice.

**Target Audience:** Health care professionals who are unfamiliar with the changes from ICDH-2 to ICF, and who want to understand both the terms of ICF and its application to clinical work will benefit from this course.

**Course Summary:** This introductory level course will include an historical overview of the changes from the previous ICDH-2 to the current ICF, and the reasoning behind the revisions. We will then give a brief overview of the structure and terminology of the new ICF. Participants will have an opportunity to practice using the terms by playing an ICF version of Jeopardy. Then participants will work in small groups to apply the ICF terminology to clinical scenarios. There will be many opportunities for questions and discussion. This course is designed for participants with very little knowledge of ICF and its uses. The instructors for this course are all members of the Treatment Outcomes Committee.

FRIDAY, OCTOBER 1, 2004, 3:30 – 5:30 PM

## 9 After The Operation — So What Happens Now? Rehabilitation and Orthotic Management After Orthopaedic Surgery for Children with Cerebral Palsy

*H. Kerr Graham, MD; Adrienne Harvey, PT; Gavin Burchall, Orthotist*

**Course Level:** Basic/Intermediate

**Purpose:** To present a systematic and practical overview of orthotic management and rehabilitation for children with cerebral palsy, after simple/single and complex/multiple orthopaedic surgeries. The course will include a brief surgical overview, detailed orthotic management based on biomechanical principles, principles of rehabilitation and the early identification and management of surgical complications.

**Target Audience:** Physical therapists, Orthopaedic Surgeons, Orthotists and Physicians involved in the management of children with cerebral palsy following orthopaedic interventions.

**Course Summary:** This course will cover all aspects of postoperative management for children with spastic hemiplegia and diplegia who undergo common orthopaedic surgeries. The format is based on specific clinical cases, illustrated with clinical, video and motion analysis data. Ranging from simple calf lengthening through to multilevel surgery, principles of postoperative orthotic management and rehabilitation are established. The course will cover pre-operative planning, immediate postoperative/ inpatient management, outpatient management and rehabilitation throughout the first postoperative year. The physiotherapy aims and treatment focus on maintenance of muscle length, regaining muscle strength, regaining function and independence particularly in ambulation. The orthotic management will include appropriate prescription, troubleshooting and changes in prescription as the child progresses. The critical role for the floor reaction AFO in the immediate postoperative period is emphasized balanced by practical advice on progression to less rigid support in solid or hinged AFO's during the first postoperative year.

10

## Children and Adolescents with Disabilities: How and When Do We Address Issues of Puberty and Sexuality?

Nancy A. Murphy, MD; Teresa Such-Neibar, MD;  
Dedee Caplin, PhD

**Course Level:** Basic/Intermediate

**Purpose:** To increase participants' knowledge and skills related to the developmental stages of puberty and sexuality in children with developmental disabilities, to explore strategies of sexuality education for children with disabilities and their caregivers, and to discuss the rights of persons with disabilities as related to issues of sexuality.

**Target Audience:** This course is relevant to health professionals and paraprofessionals who care for children and adolescents with developmental disabilities, including pediatricians, pediatric sub specialists, nutritionists, educators, psychologists, social workers, physical therapists, occupational therapists, and speech therapists.

**Course Summary:** This course will update participants' knowledge and clinical skills related to pubertal and sexual development as specifically related to children with developmental disabilities.

We will start the course with a discussion of the Tanner stages of pubertal development and associated stages of typical sexual development. We will then describe how children with developmental disabilities and their caregivers may experience the developmental stages of sexual and puberty. Strategies to provide developmentally appropriate education regarding issues of puberty and sexuality with children and their caregivers will be presented. Participants will understand that children with disabilities are more than twice as likely to be sexually abused when compared to typically developing children, and explore strategies to minimize this risk and recognize abuse when it occurs. We will conclude with a discussion of the rights of persons with disabilities as related to issues of sexuality.

11

## Orthopaedic Assessment and Management of Children with Cerebral Palsy — A Basic Course

Michael D. Aiona, MD

**Course Level:** Basic

**Purpose:** This course will introduce health professionals with minimal knowledge to the orthopaedic assessment of patients with cerebral palsy and present them with many of the basic treatment options, including orthotic management..

**Target Audience:** Health professionals and paraprofessionals who have little or no knowledge of the specifics of orthopaedic treatment of patients with cerebral palsy. This course will be relevant to pediatricians, physical therapists, occupational therapists, speech therapists, educators, psychologists, administrators, neurosurgeons and others.

**Course Summary:** The course will start with a discussion of basic deficits of patients with cerebral palsy. A brief discussion on orthotic devices, specifically AFOs as they relate to ankle function will be presented. Following this, there will be a discussion on the common gait abnormalities and the various surgical procedures with some details on technique, which are utilized in their treatment. Gait analysis data, video and xrays will be utilized to illustrate the methods of evaluation and outcomes achieved during the case presentation portion of the course.

## Using Joint Kinetics as a Tool for Treatment Decision-making

Sylvia Öunpuu, MSc; Melany Westwell, PT, MS

**Course Level:** Intermediate

**Purpose:** The purpose of this tutorial is to 1) provide the needed background knowledge to apply joint kinetics to treatment decision-making and evaluation and 2) illustrate the use of joint kinetics in a variety of pathologies.

**Target Audience:** Physical therapists, physicians, kinesiologists and other gait laboratory staff interested in application of joint kinetics to clinical gait analysis and understanding of gait pathology.

**Course Summary:** The course will review tools needed to interpret joint kinetic data and provide examples of how kinetic data provides the clinician with clinically relevant information for treatment decisions for a variety of pathologies.

The course will begin with an overview of the methods. Normal joint kinetic patterns will then be covered followed by an interactive exercise in identification of abnormal joint kinetics. Possible conclusions that can be made about the pathology based on the joint kinetic plot will be discussed. Finally, the impact of trunk positioning on lower extremity joint kinetics using patient examples will then be discussed.

In the second half, pathological gait will be discussed initially by identifying common abnormal joint kinetics patterns. This will be followed by case examples. In each case, the impact of the joint kinetic information on the understanding of the pathomechanics of the specific problem and the treatment decision will be reviewed.

## 13 Applying Interdisciplinary Strategies for Successful Management of the Neurogenic Bowel

*Susan Leibold MS, RN, CNS-P; Behroze Vachha MBBS, PhD-CCC/SLP; Richard Adams MD*

**Course Level:** Basic/Intermediate

**Purpose:** To 1) briefly review the physiologic basis of the neurogenic bowel and the spectrum of variations; 2) outline and demonstrate application of a step-wise approach to clinical assessment, and 3) construct individualized, flexible, interventional programs based on the assessment process and on concepts of individualized learning differences manifest in many of these children.

**Target Audience:** Physicians, nurses, therapists, and nutritionists involved with these children and their families.

**Course Summary:** Children and youth with neurogenic bowel incontinence experience potentially serious health conditions, the potential for associated limitations of personal/social activities, and severe restrictions on participation in educational, community, and employment opportunities.

After a brief overview of anatomy and physiology related to the neurogenic bowel, the participants will have outlined a step-wise clinical pathway for holistic assessment of the child with neurogenic bowel within the social context of the family.

Given the neuro-cognitive differences and the related language disorders among children with spina bifida, strategies for successful teaching of self-directed skills will be shared. Representative cases will be presented so that participants can apply the process and concepts outlined. Patient education materials will be made available.

## 14 Neuroimaging I: Principles and Clinical Applications

*Alexander H. Hoon Jr., MD, MPH*

**Course Level:** Basic/Intermediate

**Purpose:** To provide an approach to the interpretation of neuroimaging techniques of benefit in childhood neurologic disorders. To discuss brain imaging in the management of children with cerebral palsy, including clinical syndromes associated with developmental brain malformations, periventricular leukomalacia, hypoxic ischemic encephalopathy and genetic-metabolic diseases.

**Target Audience:** Health care professionals interested in using imaging studies in clinical care.

**Course Summary:** Cerebral palsy describes a group of motor impairment syndromes secondary to genetic and acquired disorders of early brain development. Progress in

treating these disorders makes it essential to establish a diagnosis in a timely fashion. Studies have shown that 70-90% of children with cerebral palsy have abnormalities on brain MR imaging, which can guide etiological investigation and focus treatment.

This course will be divided into two parts. The first part will focus on neuroimaging principles and applications, as well as selective vulnerability of the developing brain. The second part will be devoted to the presentation of clinical vignettes. These will include the preterm infant with spastic diplegia, the term infant with hypoxic-ischemic encephalopathy and several examples of genetic metabolic diseases, which present with the clinical phenotype of cerebral palsy.

## 15 Outcomes Based Medicine: Evaluating Published Research

*Lisa Samson-Fang MD; N. Susan Stott, MD, PhD; Lynne Logan, MA, PT; Michael Msall, MD*

**Course Level:** Basic/Intermediate

**Purpose:** Participants will attain skills necessary to evaluate the levels of evidence and conduct of published clinical trials. Participants will better understand the methodology that is used in writing Outcomes Reviews.

**Target Audience:** All disciplines.

**Course Summary:** Health professionals nowadays are expected to incorporate the results of recent research into their clinical practice. However, many people feel overwhelmed by the task of assessing levels of evidence, and determining validity and applicability of the many studies in their field. Part I of this course will focus on understanding Levels of Evidence, Internal/External Validity, and Study Conduct. These concepts will be explained. Definitions of specific levels of evidence will be presented focusing on the degree of impact each level of evidence might be considered to have with regard to future research or clinical practice. A process for evaluating the quality of conduct of a study will be presented. (Definitions and methodologies presented are those published by the AACPD's Treatment Outcomes Committee). Part II will consist of breakout sessions, where participants will divide into small discipline focused groups to evaluate a published clinical trial with the support of a course facilitator. Part II will present a recently published Outcomes Review to demonstrate how the coded articles are combined together to develop an assessment of existing evidence for a particular intervention in a specific population.

## 16 Measurement Tools: Gillette Children's Experience

*Tom F. Novacheck, MD; Linda E. Krach, MD; Raymond C. Tervo, MD; Susan Murr, PT*

**Course Level:** Basic

**Purpose:** Present the utility of various available tools to measure the status and changes in the lives of children with cerebral palsy and challenges to their implementation in a clinical setting.

**Target Audience:** Health professionals who face the challenge of implementing measurement tools in their clinical practice with children who have cerebral palsy. This will be relevant to pediatricians, pediatric orthopaedists, pediatric rehabilitation medicine physicians, pediatric neurologists, physical and occupational therapists, speech and language pathologists, nurse practitioners, nurses, psychologists, and others who use measurement tools.

**Course Summary:** This course will summarize Gillette Children's experience with various tools to assess function and development of children with cerebral palsy. Included will be established tools (Child Development Inventory, WeeFIM, GMFM, and PODCI) and tools developed at Gillette Children's (Functional Assessment Questionnaire and Normalcy Index.)

Because children with cerebral palsy may have impairments and functional limitations in many domains, a number of tools are necessary for comprehensive evaluation. This course will discuss the challenges of using measurement tools in a busy clinical setting, including selection of tools based upon accuracy, different ages and levels of function, sensitivity to area of interest, collection, storage and evaluation of data, and application of information learned to clinical practice. Case examples will be used to illustrate the pros and cons of the various tools.

SATURDAY, OCTOBER 2, 2004, 1:00 – 3:00 PM

## 17 The Evaluation and Treatment of Spine Deformity in Neuromuscular Patients

*Kenneth J. Guidera, MD; Robert Bernstein, MD; Ivan Krajbach, MD; Sandy Smith, MS, PT*

**Course Level:** Intermediate/Advanced

**Purpose:** To introduce professionals to the principles of evaluation and treatment of spine deformities in the neuromuscular patient.

**Target Audience:** Health professionals from various disciplines who are involved in the treatment of neuromuscular patients who develop scoliosis and other spine deformities. This course will be appropriate and informational to physicians, surgeons and non-surgeons, physical therapists, occupational therapists, nurses, and orthotists.

**Course Summary:** The course will outline the evaluation and presentation of neuromuscular spinal deformity followed by a discussion of treatment modalities including conservative care, bracing, physical therapy, and seating modalities. Aspects of surgical care including anterior and posterior surgical procedures will be presented, as will the differences between some of the neuromuscular conditions such as myelomeningocele, cerebral palsy, and muscular dystrophy. Educational case presentations will be provided. At the end of the course the participant will have an understanding of the overall evaluation and potential methods of treatment for spinal deformity in this patient population and hopefully will be able to apply this information to their patients. This course was presented last year and was well received. Based on evaluations we will modify the content to include more conservative and orthotic treatment.

## 18 After Injections with Botulinum Toxin A — What Happens Now? Specific After-care to Improve the Effect of BTX-A Injections in the Lower Limbs for Children with Cerebral Palsy

*Guy Molenaers, MD, PhD; H. Kerr Graham, MD, PhD; Kaat Desloovere, PhD*

**Course Level:** Intermediate

**Purpose:** The purpose of this course is to provide the audience with an overview of the optimal after-care for Botulinum Toxin A (BTX-A) injections for children with cerebral palsy (CP), and to highlight crucial success factors to improve the functional effect of the injections.

**Target Audience:** The course will be relevant to orthopaedic surgeons, (neuro) pediatricians, physicians, kinesiologists, physical therapists and other health care providers involved in the multidisciplinary treatment of children with CP.

**Course Summary:** An in depth discussion of crucial factors that determine the outcome success will be preceded by an introduction to the use of BTX-A and by guidelines for different target groups, with specific goal-settings. The contribution of each crucial factor in the after-care will be thoroughly explored and illustrated with objective data from clinical practice and specific clinical cases. The course will cover all aspects of appropriate post injection care, including serial casting, orthotic management, physiotherapy and outcome measurements. Special attention will be given to proper patient selection with individually defined goal-settings. Emphasis will be placed on physiotherapy aims and specific day- and night orthoses, to improve and prolong the effect of the injections in the lower limbs and on the longitudinal follow-up of BTX-A treatment. Interactive educational case presentations will be provided.

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## Dystonia, Spasticity And Rigidity — Why Are They Important in Childhood CP and How Do We Measure Them?

Terence D. Sanger, MD; Margaret Barry-Michaels, PhD, PT, PCS;  
Darcy Fehlings, MD

**Course Level:** Basic/Intermediate

**Purpose:** This course will provide definitions, assessment guidelines and the clinical rationale for the differentiation of dystonia, spasticity and rigidity in cerebral palsy. Recent information on the neurophysiological basis for spasticity and dystonia in patients with hypertonic CP will be presented. Current assessment tools and measurement strategies will be reviewed and treatment options including therapy, medication and surgery for dystonia, and spasticity or combinations will be discussed. Whether rigidity, as defined in the context of Parkinson's disease, is identifiable and treatable will also be explored. A case study format with videotapes of individual patients will be utilized to illustrate how these distinctions are essential for effective treatment planning and for optimizing functional outcomes and easing disability in these patients. Formal presentations will discuss the relationship between the technologies for measurement and the pathophysiology of the impairments.

**Target Audience:** Pediatricians, child neurologists, physical medicine physicians, orthopedic surgeons, neurosurgeons, therapists

**Course Summary:** The ability to distinguish spasticity, dystonia and rigidity in a child with hypertonic cerebral palsy (CP) is critical in determining management and treatment goals. Hypertonia may limit voluntary function and increase the likelihood of contractures in a growing child. The increasing recognition of dystonia (and perhaps rigidity) as an additional hypertonic process has complicated and impacted treatments for hypertonia that are aimed primarily at alleviating spasticity. The ability to prescribe effective treatments and predict outcomes when other disorders of movement or tone are present in combination with spasticity is difficult at best, and is dependent on the ability of the clinician to differentiate these components. While validated clinical scales are available to measure spasticity and dystonia individually, such as the Ashworth Scale and the Barry-Albright Dystonia Scale, these have recognized limitations and no scales exist for differentiating these movement disorders. In order to improve functional limitations and disability and increase participation for children with CP, the first step is to confidently assess the child and accurately describe the tone abnormalities. In developing and implementing a treatment plan, communication among team members caring for the child is essential.

This instructional course will provide the current clinical definitions of hypertonia, spasticity, rigidity and dystonia,

and their distinguishing characteristics and underlying causes in children. Current rating scales will be presented as well as instrumented and clinical measures that aid in the identification and quantification of each type of hypertonia. Treatment options and implications will be discussed ranging from oral medications to injections and surgical procedures. The role of different team members and modes of communication among team members will also be discussed. The second half will consist of case presentations that illustrate the challenges in assessing these patients and effects of treatments based on the accuracy or inaccuracy of these distinctions.

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## Physical Therapy and Orthotic Management of Children with Myelomeningocele

Stephanie Butler Figlioli MPT; Brigid C. Driscoll, CO, PT;  
Claudia Kelp-Lenane, PT

**Course Level:** Basic

**Purpose:** To introduce health professionals and others with minimal knowledge to physical therapy assessment, treatment, and orthotic intervention of children with myelomeningocele.

**Target Audience:** This course will be relevant to physical therapists, occupational therapists, nurses, physicians, orthotists, educators and others involved in the care of this population.

**Course Summary:** This course is designed to be an introduction to the evaluation and treatment of children with myelomeningocele. The course will begin with a discussion of the importance of early intervention, especially in the first year of life. Orthopedic considerations will be discussed, including muscle testing and its relationship to tethered cord. An overview of splinting and bracing options will be presented. Research will be presented regarding gait abnormalities and typical gait findings in children with myelomeningocele.

21

## Neuromuscular and Functional Electrical Stimulation for Therapeutic and Functional Applications

Samuel C. K. Lee, PhD, PT; Therese E. Johnston, MS, PT

**Course Level:** Basic/Intermediate

**Purpose:** Provide information regarding the clinical use of neuromuscular electrical stimulation (NMES) for clinicians with an interest in applying NMES in clinical practice but have minimal experience in the field.

**Target Audience:** Therapists and physicians interested in learning the principles and techniques for clinical NMES applications.

**Course Summary:** This instructional course will focus on three areas: the basic principles of clinically-applied NMES,

the application of NMES to clients with neuromuscular disorders and the advances being made in NMES research.

The course will begin with a discussion of the principles of electrical stimulation as it applies to a clinical situation, including relevant physiology. Procedures to assess appropriateness for NMES interventions will be discussed as well as techniques for treatment with NMES. The remainder of the course will focus on specific interventions for children with neuromuscular disorders, including NMES for strength training and functional electrical stimulation. This section will include a discussion of current literature and current studies on these topics as well as considerations that need to be made when planning and conducting the intervention.

## 22 The Multidiscipline Outpatient (Clinic) Management of Complex Feeding Disorders in Children

*M. Fishbein, MD; S. Cox, RD; C. Fraker, SLP; C. Swenny, MA; C. Mogren, RN; J. B. Karkos, MD*

**Course Level:** Intermediate

**Purpose:** Complex feeding disorders in children, particularly in those with both medical and aversive components, are managed typically in specialized university-based and multi-disciplinary settings. Unfortunately, due to geographic concerns and the requirement for long-term care, many children have limited access to these programs. The purpose of this course is to provide participants with an innovative approach to the comprehensive care of children with feeding disorders that is offered currently at a regional care facility and may be replicated.

**Target Audience:** The target audience includes developmental pediatricians, psychiatrists, occupational therapists, speech language pathologists, psychologists, nurses, social workers, and child life specialists.

**Course Summary:** Course will guide clinicians through the triage, evaluation and treatment pathways for children referred for feeding disorders. At the initial encounter, a pediatric gastroenterologist, dietitian, and speech language pathologist are responsible for triaging with regard to subsequent diagnostic studies, referrals and treatment. Immediate attention is provided to children with likely aspiration, failure to thrive, or severe dysphagia. Depending upon the complexity of the feeding problem and tailoring to the needs of the child and family, additional services are provided by rehabilitation specialist, occupational therapist, and behavioral psychologist. Feedback to parents and community providers by telemedicine, e-mail, and voicemail has been effective in supplanting direct contact for families that require prolonged therapy and reside in remote locations. Course will highlight treatment techniques used,

delineating an innovative stepwise approach to the children with extreme food selectivity, "food chaining." Case studies will be provided to demonstrate the efficacy of our outpatient feeding program.

## 23 The Year's Top Ten Articles on Developmental Disabilities

*Gregory S. Liptak, MD, MPH; Gordon Worley, MD*

**Course Level:** All

**Purpose:** To present summaries of the ten most important articles on developmental disabilities published in the past year (2003-2004)

**Target Audience:** Physicians, nurses and others who treat children with developmental disabilities and want to keep abreast of the latest scientific findings that have the greatest impact on evidence-based care

**Course Summary:** The top ten clinically relevant articles published in English between Autumn 2003 and Summer 2004 will be presented to the audience. Articles will be chosen from the presenters= personal experience as well as from searches in Medline and CINAHL (Current Information in Nursing & Allied Health Literature). Categories from which the articles will be chosen include the following: attention deficit hyperactivity disorder, autism, cerebral palsy, Down syndrome, mental retardation, spina bifida, and spinal cord injury. They will be selected using the following criteria: (1) impact on clinical care, (2) scientific merit of the study [validity], and (3) generalizability to practices. The presenters will summarize the ten articles in reverse order (saving number one for last). Their impact on clinical practice, place in the context of current care, and their implications for future research will be discussed. The audience will be encouraged to respond to each article as it is presented. A copy of the references and abstracts will be given to the attendees.

## 24 Operative Management of the Upper Extremity in Cerebral Palsy

*L. Andrew Koman, MD; Michelle G. Carlson, MD; OT, to be announced*

**Course Level:** Intermediate and Advanced

**Purpose:** To introduce principles of diagnosis and operative management of the upper extremity in pediatric cerebral palsy patients. The course will include discussions of both non-operative and operative options and the rationale for their use.

**Target Audience:** Health professionals who treat cerebral palsy patients.

**Course Summary:** This course will provide an overview of the diagnosis and management of spasticity of the upper

extremity in pediatric cerebral palsy patients. Discussions will include the use of standardized history and physical examination techniques to identify treatment options. In addition, validated functional, health-related quality of life, and utility instruments used in outcome assessment of operative and non-operative interventions will be reviewed. Operative options for the management of specific deformities of the upper extremity (shoulder, elbow, forearm, wrist, and hand and digits) will be discussed using a case presentation format. Rehabilitation options and specific therapeutic protocols also will be discussed.

SATURDAY, OCTOBER 2, 2004, 3:30 – 5:30 PM

## 25 Training in the Reliable Administration and Scoring of 'The Melbourne Assessment of Unilateral Upper Limb Function'

Melinda Randall, BAppSci, OT;  
Christine Imms, BAppSci, OT, MSc

**Course Level:** Intermediate

**Purpose:** To provide an introduction to, and instruction in the administration and scoring of 'The Melbourne Assessment of Unilateral Upper Limb Function' (The Melbourne Assessment). The Melbourne Assessment was published in 1999 and is a quantitative assessment of quality of upper limb movement in children up to 15 years of age with cerebral palsy.

**Target Audience:** Clinicians and researchers interested, and with some experience in, the assessment of and /or intervention for, upper limb function in children with neurological impairment.

**Course Summary:** This workshop will introduce participants to the Melbourne Assessment by providing a brief summary on the background of, rationale for, and development of the assessment. Results of validity and reliability studies undertaken on the assessment will also be presented.

The major part of the course will be participatory. Participants will firstly observe a videotape of a child with cerebral palsy being administered the Melbourne Assessment. Additional instruction will clarify the standardised guidelines provided in the manual. Following the initial viewing of the videotape, participants will then score the child's videotaped performance using the specific assessment scoring criteria. Instruction in the scoring method and discussion of results will assist in clarifying the scoring process.

Finally participants will be asked to draw from their clinical and research experiences when receiving instruction as to the limitations as well as possible additional applications of the assessment and the potential for future development.

## 26 Caring for Caregivers of Children with Disabilities Across the Years

Nancy Murphy, MD; Teresa Such-Neibar, MD; Dedee Caplin, PhD

**Course Level:** Basic/Intermediate

**Purpose:** To increase participants' knowledge and skill in promoting the health and well being caring for the caregivers of children with developmental disabilities across the lifespan.

**Target Audience:** This course is relevant to health professionals and paraprofessionals who care for children and adolescents with developmental disabilities, including pediatricians, pediatric sub specialists, nutritionists, educators, psychologists, social workers, physical therapists, occupational therapists, and speech therapists.

**Course Summary:** This course will increase participants' awareness and skill to render family-centered care, to support caregivers of children with developmental disabilities, to recognize caregiver burnout, and to provide strategies and resources to caregivers so that they can continue to care for their children with special healthcare needs across the lifespan.

We will start with course with a discussion of issues that threaten the physical, mental and spiritual well being of caregivers of children with developmental disabilities. The value of rendering family-centered care in recognizing and reducing caregiver stress will be explored. We will then present strategies to support and promote wellness among caregivers of children with disabilities and chronic illnesses, including the options of in-home respite care, congregate care and professional parenting. Lastly, we will describe issues of guardianship and life planning that caregivers of children with developmental disabilities must address as their children transition into adulthood.

## 27 Saliva Overflow, Sialorrhea, or Drooling: Interventions Galore But No Cure Yet

Janet H. Allaire, MA; Carol J. Brown, PhD

**Course Level:** Intermediate

**Purpose:** To inform health care professionals of state of the art interventions for persons with saliva overflow problems. The course will re-acquaint course participants with the corpus of knowledge about drooling, present interventions in the area of therapeutic and technological interventions and stress outcome measurement and saliva control.

**Target Audience:** This course is relevant to physicians, nurses, physical and occupational therapists, speech/language pathologists, and educators. Interventions will focus on evidenced-based practice.

**Course Summary:** This course will present background

information on the problem of drooling or saliva overflow including the anatomy and physiology of salivary function and the saliva swallow. Demographics of the problem will be highlighted. The theoretical constructs supporting therapeutic treatment interventions will be discussed. The therapeutic treatment interventions involving oral motor activities will be summarized along with the evidence base. Both classic oral motor activities and those that facilitate saliva transport problems will be discussed. Technological approaches will be outlined. Recent experiences with saliva vacuuming will be explained as well as various methods of external and internal saliva collection. All approaches will be highlighted focusing on evidenced-based practices. Case presentations will illustrate the complex clinical implications for children with drooling problems.

## 28 Evaluation and Treatment of Crouch Gait in Cerebral Palsy

*James R. Gage, MD; Tom F. Novacheck, MD; Jean Stout, MPT; Michael Schwartz, PhD*

**Course Level:** Intermediate

**Purpose:** The specific etiology of crouch gait is poorly understood. Consequently, treatment outcomes have been poor. This course will discuss the mechanism of crouch gait in cerebral palsy and the principles that need to be employed to correct it.

**Target Audience:** Pediatric orthopaedists, physiatrists and physical therapists who encounter children with cerebral palsy and crouch gait in their clinical practice.

**Course Summary:** This course will summarize Gillette Children's experience with crouch gait in cerebral palsy.

Abnormal forces during growth produce deformities including: 1) abnormal muscle growth and 2) lever-arm dysfunction (LAD). Adolescents with crouch gait typically present with LAD (usually a combination of femoral anteversion, external tibial torsion and pes valgus) plus abnormal muscle lengths (soleus, vasti, and gluteus maximus muscles are generally too long whereas gastrocnemius and hip flexors are too short). The relative lengths of hamstrings and rectus femoris are variable and depend on pelvic position.

If we study example cases, the elements of crouch gait become apparent: 1) It usually occurs during the adolescent growth spurt. 2) Precipitating factors include LAD and/or soleus weakening. 3) All cases of crouch demonstrate loss of the plantarflexion / knee-extension couple.

Based on an understanding of the pathology, we will illustrate treatment with appropriate case examples.

## 29 Serial Casting Program for Long Term Success in Treatment of Equines Deformity

*Brigid Driscoll PT, CO, Mary Weck, PT*

**Course Level:** Intermediate

**Purpose:** To provide the participants with a wholistic program including a series of casts and center of mass training to achieve and maintain a heel toe or plantigrade gait as a treatment for long term counter of equines deformity.

**Target Audience:** This course will be relevant to physicians, orthotists and physical therapists.

**Course Summary:** This course is designed to present a new concept of serial casting which is wholistic in nature and has been demonstrated to produce long term (8 year follow-up) correction of equines deformity. It will begin with precasting and intercasting evaluation and application techniques and methods for education which address the importance of global alignment in the application of casts. The patient and the family regarding their role in the center of mass training and in the home exercise will be described. An overview of orthotic management, post casting, will emphasize on style of AFOs and the significance/ necessity of separate day and night AFOs. Research will be presented supporting the effectiveness of this approach.

## 30 The Role of the Therapist in Managing Patients with Hypertonia

*Meg Barry Michaels, PhD, PT, PCS; Kristie Bjornson, PhD, PT, PCS; Michele Harris, PT*

**Course Level:** Intermediate

**Purpose:** The purpose of the course is to explore the role of the therapist in the clinical decision making process for patients with hypertonia as part of an interdisciplinary team.

**Target Audience:** This course is designed for clinicians already familiar with pharmacological and surgical treatment options for the management of hypertonia. The course will be relevant to physical, occupational and speech therapists as well as nurses and physicians involved in an interdisciplinary approach to hypertonia.

**Course Summary:** This course will explore the role of the therapist in the management of patients with hypertonia for clinicians already familiar with the pharmacological and surgical treatment options.

The course will begin with a review of relevant terms related to hypertonia and the currently available pharmacological and surgical treatments. The role of the therapist will be discussed including examination of the patient, the decision making process, referral for medical intervention, communication with the other team members, rehab

strategies before and after any interventions. Specifics of the physical examination and evaluation of the findings will be demonstrated and discussed. Rehabilitation strategies, such as strengthening, motor learning approaches and seating, will be discussed. Case presentations and discussion will bring all the elements together to illustrate the role of the therapist in managing patients with hypertonia.

### 31 Phenol Blocks to Treat Spasticity in Children

Mark E. Gormley, MD; Rita Ayyangar, MD

**Course Level:** Intermediate

**Purpose:** To expose the audience in the use of phenol neurolysis to treat spasticity in children and demonstrate injection techniques.

**Target Audience:** Healthcare professionals who treat spasticity in children, especially physicians currently using botulinum toxin.

**Course Summary:** Phenol has been successfully and safely used to treat spasticity in children for almost 50 years. More recently fewer physicians have been trained in this beneficial technique.

This course intends to inform physicians about the therapeutic use of phenol, demonstrate injection techniques, and discuss key muscles to target. The course will demonstrate insertion uses, videotapes of commonly injected muscles. Equipment needed, resources available, adjunctive therapies, and combination uses with botulinum toxin will be discussed. Physicians who have not used phenol will be instructed in how to inject muscles simple to access and should then have the foundation to expand their potential injection sites.

### 32 Combining Clinical Care and Outcomes Research in the Management of Pediatric Cerebral Palsy Patients

L. Andrew Koman, MD; Beth P. Smith, PhD; Amy Goodman, RN, Normann Cabrera, MD

**Course Level:** Intermediate

**Purpose:** Coordination of care of children with cerebral palsy (CP) challenges caregivers and healthcare providers and consumes extensive resources. The paucity of available longitudinal data evaluating the medical and surgical interventions in CP patients impedes the identification of optimal treatment paradigms for this group of patients. Therefore, instruction in efficient systems to assist health care professionals in improving patient care and outcomes is critical in expanding the knowledge for treatment of CP patients.

**Target Audience:** Health care professionals involved in the management of cerebral palsy: pediatricians, physical

therapists, occupational therapists, orthopaedic surgeons, physiatrists, and neurologists.

**Course Summary:** Because of the chronic nature of cerebral palsy, patients are followed throughout childhood. This course will present our experience with a web-based information system with the ability to document and monitor patient care as well as to collect information about their functional abilities, resource utilization, and health-related quality of life. The information system collects data at each clinic visit and documents treatment methodologies using a secure, quality-controlled software program.

Participants in this course will learn how of the system can be optimized to meet the needs of a variety of health care providers and the CP patients that they treat. Easy access to historical and current health care information provided by the system assists health care professionals in facilitating management decisions and prompts the use of appropriate, evidence-based practices. In addition, by archiving these data into a searchable database, future clinical and research information can be retrieved and analyzed.



## SCIENTIFIC POSTERS

### Biomechanics and Clinical Measures

- 1 Accuracy of Clinical Perceptions of Biomechanical Characteristics of Ankle - Foot Orthoses used by Children with Cerebral Palsy  
**Alan Young, MSIII**; Susan Rethlefsen, PT; Tishya A L Wren, PhD
- 2 Dynamic Hamstring Length in Children with Cerebral Palsy and Crouch Gait Before and After Surgery  
**Khanh Patrick Do, BS**; Tishya A L Wren, PhD; Robert M Kay, MD
- 3 The Selected Biomechanical Properties of a Knee Joint in Patients with Cerebral Palsy with Spasticity and Dystonia  
**Maria K Lebedowska, PhD**; Deborah Gaebler-Spira, MD; Richard S Burns, MD; John R Fisk, MD
- 4 The Unilateral Below Elbow Test (UBET)  
**Anita Bagley, PhD**; Michelle A James, MD
- 5 Frequency of Specific Gait Abnormalities in Children with Cerebral Palsy: Influence of Age and Level of Involvement  
**Tishya A L Wren, PhD**; Susan A Rethlefsen, PT; Robert M Kay, MD
- 6 Quantitative Analysis of Foot Function for Children with Cerebral Palsy  
**Gene G Jameson, MA**; Jon R Davids, MD; Jason P Anderson, MS; Roy B Davis, PhD
- 7 Quantification of Quadriceps Spasticity with Three-Dimensional Motion Analysis  
**Hank White, MSPT**; Samuel Augsburger, MSME; Donna Oeffinger, MS; Anita Bowman, MS; Chester Tylkowski, MD
- 8 The Comparison of 3 Channel Recordings in Somatosensory Evoked Potential with Spastic Hemiplegic Cerebral Palsy  
**Sei Ju Kim, MD**; Joon Shik Yoon, MD; Jong Woo Choi, MD; En Mi Park, MD
- 9 Range of Motion Measurement in Cerebral Palsy: A Comparison of Assessment Method  
**Allan M Glanzman, PT**; Amy E Swenson, DPT; Heakyung Kim, MD

### Botulinum Toxin

- 10 Efficacy of BTX/A in the Treatment of Adductor Spasticity: A Randomised, Double Blinded, Placebo-Controlled Trial  
**Volker Mall, MD**; Florian Heinen, MD, PhD; Andrea Siebel; Rudolf Korinthenberg, MD
- 11 Cerebral Palsy: Comparative Evaluation of Botulinum Toxin Injection and Neurolytic Block for Management of Spasticity  
**Renga Rajan, MD**; G P Dureja, MD

### General

- 12 Access and Barriers to Gynecological Care for Youth and Adolescents with Disability  
Payal Shah; **Lisa Samson-Fang, MD**
- 13 Optimized Oral Feeding in Children with Cerebral Palsy and Malnutrition.  
Charise L Williams, RD; Barbara Elieson, RD; Laurie Moyer-Mileur, PhD; **Lisa Samson-Fang, MD**
- 14 Screening for Low Bone Density with Heel Ultrasound in the Developmentally Disabled  
Kelly Krohn, MD; Holly Smolensky, MD; **Carl A Culig, MD**; Karen Hunter, RN
- 15 Factor V Leiden Mutation: A Contributory Factor for Cerebral Palsy?  
**Susan M Reid**; Jane L Halliday, BSc; Michael R Ditchfield; Henry Ekert, MD; Dinah S Reddihough, MD
- 16 Long-term Neurodevelopmental Follow-up and Brain Volumes of Children following Severe Fetal Anemia with Hydrops  
**Hanes Swingle, MD**; Dennis C Harper, PhD; Daniel Bonthius, MD, PhD; Carl P Weiner, MD; John A Widness, MD; Glen P Aylward, PhD

### Outcome Tools and Assessment

- 17 Impact of Movement Ability on the Lives of Children with Cerebral Palsy and their Families.  
**Christopher Morris, MSc**; Allan Colver, MD; Peter L Rosenbaum, MD

18 **Cardio-Respiratory Responses to Walking in Children with CP: Trends in Aerobic Capacity**

**Nancy Lennon, MS, PT;** Scott Coleman, MS; Freeman Miller, MD

19 **Reliability of the application of the Gross Motor Function Classification System to Adults with Cerebral Palsy**

**Ellen M Godwin, PT, MS, PCS;** Diana Burt, BS, SPT; Ksio Murdakhayeva, BS, SPT

20 **Identification of Children with Autism Spectrum Disorders by the Ages and Stages Questionnaires**

**Robert E Nickel, MD**

21 **Unmatched Pattern of Response between Oxygen Consumption and the Energy Expenditure Index during Overground Walking in Children with Cerebral Palsy**

**Daniel J Keefer, PhD;** Wayland Tseh, PhD; Jennifer Caputo, PhD; Kelly Griffith, MS; Mary Beth Akins, MS; Don Morgan, PhD

22 **Long-term Outcomes of Surgical Intervention: A Comparison of Clinical Examination Measures and Related Motion Data During Gait in Children with Cerebral Palsy**

**Sylvia Ounpuu, MSc;** Ron Lamdan, MD; Katharine Bell, MS; Peter DeLuca, MD

23 **Relationships Between Functional Assessments and Quantitative Gait Measures in Ambulatory Children with Cerebral Palsy**

**Megan K Schaefer, DPT;** Carrie A Stackhouse, MS; Patricia A Shewokis, PhD; Brian T Smith, MS; James McCarthy, MD

24 **The Use of the Modified Physician Rating Scale (mPRS) to Assess Outcome Following Treatment for Dynamic Equinus in Children with Cerebral Palsy**

**Barry S Russman, MD;** Susan Sienko Thomas, MA; Jason Wingert, MSPT; Cathleen E Buckon, MS; Jeffrey D Ackman, MD

25 **The Relationship of 1H Magnetic Resonance Spectroscopy (MRS) and Bayley Scales of Infant Development (BSID-II) in Child with Spastic Diplegia**

**Han-Young Jung, MD,PhD;** In-Young Sung, MD, PhD; Myoung-Ok Kim, MD, PhD; Myung-Kwan Lim, MD, PhD

## Recreation and Therapy

26 **A Preliminary Report: Efficacy of Axial Loading with Therapy in Cerebral Palsy**

**Edward Dabrowski, MD;** Gretchen M Backer, PT; Ronald Thomas, PhD; Stephen Siconolfi, PhD

27 **Efficacy of a Neurorestorative Program for Children with Spastic Cerebral Palsy.**

**Gabriel Rodriguez, MD;** Carlos Maragoto, MD; Lilia Dulzaides; Idelys Sarduy; Nayoy Rodriguez; Andres Garcia, MD; Maria Angeles Ortega

28 **Effect of Adaptive Downhill Skiing on Gross Motor Function Measure (GMFM) in Children with Cerebral Palsy**

**John A Sterba, MD,PhD**

29 **Effect of Horseback Riding Therapy on Gross Motor Function Measure (GMFM) for Each Level-of-Disability in Children with Cerebral Palsy**

**John A Sterba, MD,PhD**

30 **Effect of Aquatic Therapy on Gross Motor Function Measure (GMFM) in Children with Cerebral Palsy**

**John A Sterba, MD,PhD;** Dominique Safar-Riessen, PT; Marge DeForest, OTR/L

## Surgical Techniques

31 **Scapulothoracic Fusion Treatment Of Scapular Winging In Facioscapulohumeral Muscular Dystrophy**  
**J David Thompson, MD**

32 **Influence of Prior Surgical Intervention on the Frequency of Specific Gait Abnormalities in Children with Cerebral Palsy**

**Tishya A L Wren, PhD;** Susan A Rethlefsen, PT; Robert M Kay, MD

33 **Transfer of the Posterior Tibial Tendon: A Biomechanical Comparison of Rerouting Methods**

**Jacques L D'Astous, MD;** Bruce A MacWilliams, PhD; Seung-Jae Kim, BSc; Kent Bachus, PhD

## DEMONSTRATION POSTERS

### Cultural

- 1 WITHDRAWN
- 2 Chinese Parents' Beliefs About Physicality and Gross Motor Development and the Implications for Physiotherapists  
**Catherine E Yoell, BScPT, MEd**; Daniel D Pratt, PhD; Judith Johnston, PhD
- 3 Eclectic Developmental Intervention for Children with Cerebral Palsy- An Indian Model  
**Gopalaswamy Shashikala, MD**
- 4 CIR Early Detection and Developmental Monitoring Activities in Nicaragua  
Laura Hamilton, OTR, MPH; **Barbra Lancelot, MEd**; Desiree Roman Stadthagen, MEd
- 5 Effects of Home Exercise Programme Based on Neurodevelopmental Treatment in Children with Cerebral Palsy: A Retrospective Study from Turkey  
**Akmer Mutlu, PT**; Mintaze Kerem, PT; Ayse Livanelioglu, PT
- 6 APAE (Association of the Parents and Friends of the Mentally and Physically Impaired): A Reality in the Rehabilitation Treatment in Rio Grande do Sul / Brazil  
**Elida dos Santos, PT**

### Developmental

- 7 CP Children in Lithuania  
**Audrone Prasauskiene, MD**
- 8 Pediatric Education: The Residents' Views on Medical Home  
Diane Behl, PhD; **Lisa Samson-Fang, MD**
- 9 WITHDRAWN
- 10 Accommodated Cognitive Assessment for Children with Significant Motoric Impairments  
Marie Van Tubbergen, PhD; **Seth Warschausky, PhD**; Rita Ayyangar, MD
- 11 Reports of Adults Who have Lived with Cerebral Palsy for a Lifetime: Interviews with Real People  
**Paula Click Fenter, DHSc, PT**; Jeff M Mentel, MPT; Rachel Kelly, MPT

### Measurements

- 12 Ankle Kinetics, Kinematics and Stiffness in Normal Children Simulating Pathological Gait Patterns  
**Smita Rao, MSc**; H John Yack, PhD, PT
- 13 Evaluation of Efficient Walking Strategies Using Swing Leg Resonance in Normal Subjects and Subjects with Cerebral Palsy  
**Paul E Allaire, PhD**; Mark F Abel, MD; Bradford C Bennett, PhD; Adam Wolovick, BS; David Carmines, PhD; Robert U Rockwell, MS; Timothy Franklin
- 14 A Manual Spasticity Evaluator  
**Qiyu Peng, PhD**; Shah Parag, MD; Ruud W Selles, PhD; Deborah J Gaebler-Spira, MD; Li-Qun Zhang, PhD
- 15 The Resistance of a Knee Joint to Externally Imposed Movement in Children with Cerebral Palsy  
**Maria K Lebiedowska, PhD**; Richard Burns, MD; Deborah Spira-Gaebler, MD; John R Fisk, MD

### Orthotic & Assistive Devices

- 16 Development and Measurement Properties of the Orthotics and Prosthetics Users? Survey (OPUS): A Comprehensive Set of Clinical Outcome Instruments  
**Joshua A Vova, MD**; Allen W Heinemann, PhD; Deborah Gaebler-Spira, MD
- 17 Wheelbasics  
**Michelle M Roy, BScPT**
- 18 Assistive Technology Lab  
**Molly Breslin, PT**; Herb Hostler, MPT; Christy Olson, PT; Mira Shah; SLP
- 19 An Overview of RGO and HKAFO Use in Patients With Myelodysplasia OF Different Ages  
**Sandra Smith, MSPT**; Janet Marshall, CPO; Paul Forster, CO; Kenneth J Guidera, MD

### Services

- 20 Evaluation of the Use, Utility and Impact of an Information KIT for Parents of Children and Youth with Special Needs  
**Debra Stewart, MSc**; Mary C Law, PhD; Peter L Rosenbaum, MD; Cheryl A Missiuna, PhD ; Gillian A King, PhD; Jan Burke-Gaffney; Therese Szkut

- 21 **Multidisciplinary Therapeutic Play Group as an Adjunct to Traditional Care in the Treatment of Children with Spina Bifida**  
**Anna M Fern-Buneo, MA, PT;** Stacey T Mizokawa, PhD; Suzanne Roberts, MD; Kristine Tanita, MA, OTR
- 22 **Intensive Therapeutic Intervention Program**  
**Melanie Loomer, PhD;** Karen Serrett, PhD; Zsuzsa Tamas; Colleen Lewis, PT; Wendy Woynillowicz, PT
- 23 **Short-Term Intensive Physical Therapy to Address Balance and Gait Efficiency in an Adolescent Who Has Cerebral Palsy**  
**Anne Flanagan, PT, PCS;** Noelle Jacoby, PTA; Patricia Ann Johnson, MOT, PT, PCS; Joseph Krzak, PT
- 24 **Wilson Center: An In-Patient Intensive Rehabilitation Service**  
**Joanne King;** Ann Smith, PT; Glenis A Lobb, BA, PT; N Susan Stott, MD

## Syndromes and Case Studies

- 25 **Diagnostic Profile of Hypotonic Infant**  
**Jung Hoe Koo, MD;** Ju Seuk Ryu, MD; Song Rae Park, MD; Soo-Ah Lee, MD; In-Young Sung, MD, PhD
- 26 **WITHDRAWN**
- 27 **Fetal Alcohol Spectrum Disorder - Diagnosis and Treatment in Alaska Native Communities**  
Philip J Mattheis, MD; **Kieran O'Malley, MD**
- 28 **In Utero Stroke Related to Methylenetetrahydrofolate Reductase Deficiency**  
**Karen L Carter, MEd, MD;** David B Flannery, MD; Ann Flannery, MD; Lynn McDaniel, MD; Lawrence Devoe, MD; Shannan Delany, MS

## Treatment Interventions

- 29 **Medical Nutrition Therapy for the Pediatric Patient with Neuromuscular Scoliosis Undergoing Spinal Fusion: Screening is the Key.**  
Eduardo del Rosario, RN; MSN, FNP-C;  
**Jacque De Vore-Ries, RD, MPH**

- 30 **Neuronal Plasticity: Modulation of Cortical Excitability**  
**Joachim Schessl, MD;** Michael Walther, MD; Dirk Kreml, MD; Rudolf Korinthenberg, PhD, MD; Volker Mall, MD
- 31 **Neuronal Plasticity: Maturation of Cortical Excitability**  
**Michael Walther, MD;** Joachim Schessl, MD; Rudolf Korinthenberg, PhD, MD; Volker Mall, MD
- 32 **Effects of Electrical Stimulation to the Plantarflexors to Decrease Toe-walking in Children with Cerebral Palsy**  
**Donna Groh, BS, MPT;** Susan A Rethlefsen, PT; Bitte Healy, MS, PT; Patrick Do, BS; Donald McNeal, PhD; Robert M Kay, MD
- 33 **Proximal Femoral Resection and Articulated Hip Distraction with an External Fixator for the Treatment of Painful Spastic Hip Dislocation in Spastic Quadriplegia**  
**Miguel H Puigdevall, MD;** Mario Lampropulos, MD; Ruben A Maenza, MD; Jorge Hokama, MD; Hector Malvarez, MD

## Upper Extremity

- 34 **Investigation of Children with Erb Palsy, Non-operated, Obstetric Brachial Plexus Paralysis (OBPP) Followed up by Neurodevelopmental Treatment Approach**  
Mintaze Kerem, PT, PhD; **Akmer Mutlu, PT, MSc;** Numan Demir, PT; Ayse Livanelioglu, PT; Gursel Leblebicioglu, PhD, MD
- 35 **Constraint-induced Movement for Child with Hemiplegia vs. Child with Brachial Plexus Injury**  
**Robbin Hickman, PT, MHS;** Monique Mandin-Jones, OTR/L; Susan Richards, PT; Sandra Gumfory, MA/OTR/L
- 36 **Kinematic Patterns During Reach and Grasp Movement in Children with Mild Cerebral Palsy Before and After Constraint Induced Therapy (CIT)**  
**Sheila Schneiberg, MSc, PT;** Celine Lamarre, MD; Alain Bibeau, MSc, OT; Sylvie Gendron, OT; Nathalie Bilodeau, MSc, OT; Mindy F Levin, PhD, PT

## POSTER PRESENTATIONS

The 58th Annual Meeting Scientific and Demonstration Posters will be available for viewing at all times during the meeting beginning at 2:00 PM on Wednesday, September 29 until noon on Friday, October 2.

## EXHIBITS

The Exhibit Hall will open for viewing at 1:00 PM on Wednesday. The Scientific Program Committee welcomes our exhibitors and encourages you to visit the exhibits during the Welcome Reception on Wednesday, September 29 from 6:00 PM to 8:00 PM. The exhibitors will also be available during all the continental breakfasts and the breaks. The displays are informative and of great assistance to you in delivering quality health care.

### Partial List of 2004 Exhibitors

AACPDM Membership Committee	Kaye Products
AACPDM Web Site	Lippincott Publishers
Brookes Publishing	Medtronic, Inc.
Cambridge University Press	Mobility Research
Camp Healthcare	OrthoProActive Consultants, Inc.
Convaid Inc.	Tekscan, Inc.
Easter Seals	TherAdapt Products, Inc.
Elsevier	Ultraflex Systems, Inc.
Gillette Children's Specialty Healthcare	Vicon Motion Systems
Hattie Larlham Research Institute	WE MOVE

*A special thanks to our exhibitors – We appreciate their support*



# 2004 AACPDM 58TH ANNUAL MEETING REGISTRATION

**Early Registration Deadline: August 13, 2004**

Please Print or Type

1. Name: \_\_\_\_\_  
Last First Middle

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Office ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

E-mail: \_\_\_\_\_

Emergency Contact \_\_\_\_\_ Tel: ( ) \_\_\_\_\_

Hotel name, if not Century \_\_\_\_\_

CME or CEU Credit needed

- MD     PT  
 CP/CO     OT  
 RN     Speech language/hearing  
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2. Do you require any special assistance with accessibility or diet?     Yes  
 Describe: \_\_\_\_\_  
***All program presenters must pay a registration fee. Fee includes the opening reception, continental breakfasts, coffee breaks, and printed material.***

3. I am an:

- AACPDM Member/EACD Member .....
- Non-Member .....
- Full-Time Student, Intern, Resident (Proof of special status *must* accompany registration) .....
- Past President (Complimentary instructional courses) .....
- One Day fee (more than one day must pay full fee)  
 I will only attend on \_\_\_/\_\_\_/\_\_\_ .....

**4. Wednesday Specialty Day**

- SD1. Functional Change in Adults** .....
- SD2. Complementary and Alternative Therapies** .....
- SD3. Musculoskeletal Management in CP** .....

5. Please register me for the following instructional courses:

Courses	1st choice	2nd choice	List by number	Early Registration	After Aug. 13
Friday 1:00 pm				\$50.00	\$55.00
Friday 3:30 pm				\$50.00	\$55.00
Saturday 1:00 pm				\$50.00	\$55.00
Saturday 3:30 pm				\$50.00	\$55.00

Breakfast Seminar	Circle number	Limited to 80 each		Early Registration	After Aug. 13
<i>Thurs. 7:00 am</i>	1   2   3			\$25.00	\$25.00
<i>Fri. 7:00 am</i>	5   6   7   8			\$25.00	\$25.00
<i>Sat. 7:00 am</i>	9   10   11			\$25.00	\$25.00

6. **Spouse/Accompanying Person**..... \$35.00 per person .....
- (includes Presidential Reception and administrative costs)

Name: \_\_\_\_\_

7. **Members Business Meeting Lunch - Thursday - NC** (*Must sign up for lunch*) .....
8. **International Affairs Luncheon - Saturday** ..... \$35.00 .....
9. **Hollywood Nightlife City Tour - Thursday** ..... \$45.00 .....
10. **Hollywood - Partytown! - Thursday** ..... \$45.00 .....
11. **Universal Citywalk - Thursday** ..... \$45.00 .....
12. **Hooray for Hollywood Party - Friday** ..... \$85.00 .....

How Many


\$ _____	\$ _____
\$ _____	\$ _____
\$ _____	\$ _____
\$ _____	\$ _____
\$ _____	\$ _____
\$ _____	\$ _____
<b>Total US</b>	<b>\$ _____</b>

13. *If paying by credit card:*     Mastercard     VISA (**American Express and Eurocards NOT accepted**)

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Print name as it appears on card: \_\_\_\_\_ Signature: \_\_\_\_\_

**A confirmation will be mailed upon processing your registration form.**

14. **Refund Policy:** A request for a full refund must be submitted in writing on or before Aug. 13, 2004; 75% refund Aug. 13-Sept. 23, 2004; No refunds after Sept. 24, 2004. **All payment must accompany completed Registration Forms. NO WIRE TRANSFERS**

15. **Pre-Registration closes September 3, 2004.** After the 3rd, register onsite.



THANK YOU FOR REQUESTING RESERVATIONS AT THE CENTURY PLAZA HOTEL AND SPA. OUR STAFF WOULD LIKE TO TAKE THE OPPORTUNITY TO EXTEND A WARM WELCOME TO YOU DURING YOUR UPCOMING MEETING.

**AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL DISABILITIES  
September 29 – October 2, 2004**

RESERVATIONS FOR THIS GROUP RECEIVED AFTER AUGUST 29, 2004 WILL BE ACCEPTED ON A SPACE AND RATE AVAILABILITY BASIS. (If group block fills prior to the cut off date, reservations will be accepted on a space and rate availability)

**PLEASE COMPLETE ALL OF THE FOLLOWING INFORMATION  
TO CONFIRM YOUR RESERVATION AND ENSURE A SPEEDY CHECK-IN.**

Arrival Date \_\_\_\_\_ Arrival Time \_\_\_\_\_ Departure Date \_\_\_\_\_ Departure Time \_\_\_\_\_

*Official check-in time is 4:00pm, but we try to accommodate early arrivals, so please tell us your arrival time. Departure time is 12:00 noon*

Name \_\_\_\_\_ Sharing With \_\_\_\_\_

Organization/.Company \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

Address \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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**Please indicate which room type you wish to reserve**

Room Type:	Rate	Bed Type	
		King	2 Dbl Beds
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Double Occupancy	\$160.00	<input type="checkbox"/>	<input type="checkbox"/>
Suites: 1 Bedroom Century	\$550.00	<input type="checkbox"/>	<input type="checkbox"/>
1 Bedroom Penthouse	\$950.00	<input type="checkbox"/>	<input type="checkbox"/>
2 Bedroom Penthouse	\$1,250.00	<input type="checkbox"/>	<input type="checkbox"/>

*(If your requested rate or bed type is not available, the nearest alternate will be assigned)*

*Rates do not include applicable tax and fees.*

Special Needs: \_\_\_\_\_

**IN ORDER TO CONFIRM YOUR RESERVATION, PLEASE GUARANTEE YOUR ARRIVAL WITH A MAJOR CREDIT CARD OR YOU MAY SEND ONE NIGHT'S DEPOSIT.**

Enclosed is a Check/Money Order for \$ \_\_\_\_\_ (Please make check payable to Century Plaza Hotel & Spa)  
DO NOT SEND CASH

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