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DuPage & Fox Valley
brighter futures begin here

Dates & Location:

Friday, February 3rd through
Saturday, February 4th, 2017

at
Easter Seals DuPage & Fox Valley
830 S. Addison Ave.
Villa Park, IL 60181

**Easter Seals DuPage & Fox Valley
Presents...**

**The Wrist and Hand: Integrating Kinesiology and Treatment
for the Child with Neuromuscular Involvement**

Presented by

Donald A. Neumann, PT, PhD, FAPTA, Diane Ryan, OTR/L, C/NDT and Linda Merry, OTR/L, C/NDT

CONFERENCE DESCRIPTION

This two-day course will integrate the kinesiology of the wrist and hand with clinical applications to hand movement and function. Although the course is offered in two one-day parts, each is designed to complement the other. Day 1 will address the anatomic and kinesiological foundation of normal function of the hand, which includes discussion of the joints and musculature immediately proximal to the hand. Based primarily on material from Don Neumann's textbook: *Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation*, this presentation will focus on the essential muscle and joint interaction of the distal upper extremity. The material covered in Day 1 will be applicable to all age groups and areas of clinical practice, and will provide much of the foundations for Day 2.

Day 2 will address the application of this foundational information as it relates to clinical practice in the treatment of children with neuromuscular impairment (high and low muscle tone). Development of the forearm and hand begins at birth and evolves as the child matures. Developmental factors, sensory input and intention influence the child's ability to use the hand for learning and activities of daily living. Presenters will provide video analysis of common forearm and hand patterns that result when normal neurological development is altered. Kinesiological analysis and intervention strategies will be provided. Adjuncts to support hand function will be reviewed, including constraint induced movement and bimanual therapy. Therapist and caregiver strategies for all aspects of movement, play and daily living will be emphasized.

COURSE OBJECTIVES

Day 1:

Through lecture, enhanced by video of fluoroscopy of joint function and dissection material, as well as over 100 original kinesiological illustrations, Day 1 participants shall be able to:

- Describe the structural and functional relationships of muscles and joints within wrist and hand.
- Cite the muscular actions and arthrokinematic patterns across all joints described above.
- Describe the kinesiological synergies that exist between the muscle and joints of the distal upper extremity.
- Cite the primary stabilizers of the wrist and how they interact for optimal distal hand function.
- Describe the pathomechanics associated with several musculoskeletal problems involving in the distal upper extremity, such as median and ulnar neuropathies, intrinsic dominant hand, forearm pronation contractures, wrist instability, ulnar drift, swan neck deformities, and others.

Day 2:

Through lecture, video analysis of movement patterns, and discussion of assessment and intervention, Day 2 participants shall be able to:

- Describe developmental factors, sensory and intention influences affecting hand function as it relates to the child with neuromuscular involvement.
- Describe clinical considerations when assessing grasp and release of a child with neuromuscular involvement
- Identify the impact of compensatory pathomechanics on distal movement.
- Understand how the position and stability of the wrist impacts hand function.
- Describe treatment strategies to enhance forearm and hand alignment, movement and function.
- Describe adjuncts to support wrist and hand function.

Course Schedule:

Day 1:

Day 1: 7 Contact Hours

8:00—8:15: Introduction and Welcome
 8:15—9:00: Kinesiology Review of the Forearm Joints.
 9:00—10:15: Arthrology of the Wrist (Stability versus /Instability)
 10:15—10:30: Break
 10:30—12:00: Kinesiology and Clinical Applications of the Wrist; Arthrology of the Hand Joints
 Lunch
 1:00—2:30: Kinesiology and Clinical Applications of the Hand
 2:30—2:45: Break
 2:45—4:15: Muscle and Joint Interactions of the Hand
 Pathomechanics of Common Hand Deformities
 4:15—4:30: Conclusions, Questions, Evaluation

Day 2:

Day 2: 7.5 Contact Hours

8:00—8:30: Introduction
 8:30—9:30: Developmental Progression, Proximal, Sensory and Intentional Influences
 9:30—10:30: Assessment
 10:30—10:45: Break
 10:45—12:00: Impairments often seen in the client with neuromuscular impairment
 Lunch
 1:00—2:00: Treatment principles
 2:00—3:15: Video presentation of treatment sequences: Integrating distal with proximal
 3:15—3:30: Break
 3:30—4:30: Overview of adjuncts (splinting, taping, adaptations, CIMT/ bimanual therapy)
 4:30—5:00: Summary, questions and answers

**Total for Both Days:
14.5 Contact Hours**

TARGET AUDIENCE

Day 1 of this course will be of interest to OT, COTA, PT and PTA professionals providing wrist and hand treatment to all age groups and areas of clinical practice.

Day 2 will be of interest to **pediatric** OT, COTA, PT and PTA professionals.

About the Instructors:

Donald A. Neumann, Ph.D., P.T., FAPTA, received a B.S. in physical therapy from the University of Florida. After several years of practice and teaching in the area of rehabilitation of persons with spinal cord injury, he received a Ph.D. in Exercise Science from the University of Iowa. In 1986, he joined Marquette University where he is currently Professor in the Department of Physical Therapy. Don has received multiple awards from the American Physical Therapy Association that have recognized his teaching, writing, and research efforts, including being named a Catherine Worthingham Fellow of the APTA in 2008. Dr. Neumann received a



Teacher of the Year Award at Marquette University, and was named Wisconsin's *College Professor of the Year* by the Carnegie Foundation. In 2015, he was awarded the Educational Service Award by the World Confederation of Physical Therapy (WCPT). Dr. Neumann has received Fulbright Scholarships to teach in Lithuania, Hungary, and Japan. He is the author of *Human Kinesiology: Foundations for Rehabilitation*, published by Elsevier, 2009. Dr. Neumann served as an Associate Editor of JOSP from 2002-2015.

Linda Merry, OTR/L, C/NDT, received her Occupational Therapy degree at Indiana University School of Medicine and has over 35 years of experience working with individuals living with disabilities. As a senior therapist at Easter Seal DuPage & Fox Valley, she understands the long term impact of impairments and designing intervention which supports participation across environments. She has extensive experience treating children and adults with a variety of developmental challenges, specializing in children with cerebral palsy, hypotonia, brachial plexus and autism. Ms. Merry's continuing education certifications and training include the 8 week Neuro-Developmental Treatment, 3 week Advanced Baby Course, Sensory Integration Certification, and coursework in cognitive-behavioral approaches, autism, kinesiotaping, splinting and casting. Ms. Merry is a State of Illinois Early Intervention evaluator and therapist. She has provided professional presentations and student lectures on a variety of topics. She has been a consultant to several school systems including a residential program for children with vision and hearing impairments.



Diane Fritts Ryan, OTR/L, C/NDT, graduated from the University of Illinois and has over 30 years of pediatric experience with babies, children, and young adults with neurological impairments. Ms. Ryan currently works at Easter Seals DuPage & Fox Valley. She is a State of Illinois Early Intervention evaluator and therapist and has assisted in the development/ongoing evaluation of at-risk babies in the DuPage County Neonatal Follow-up Clinic. Ms. Ryan has been an OT NDT instructor for the 8-week pediatric course since 1990. She has assisted in several advanced baby and UE/hand treatment courses in the U.S. and internationally. She has also published articles relating to UE/hand function, as well as co-authored chapters on assessment and treatment of infants with neurological impairments.



REGISTRATION FORM

Please complete this form and mail with payment to:
Easter Seals DuPage & Fox Valley
Continuing Education Department
830 South Addison Avenue
Villa Park, IL 60181
FAX: 630.620.1148

Registration Fees:

(Please check appropriate box below.)

- Day 1 Only – \$225
 Day 2 Only – \$225
 Both Days – \$440
 Both Days (on or before 1/4/17) – \$420

Name: _____
(This is how your name will be printed on the course completion certificate.)

Title/Position: _____

Organization: _____

Org. address: _____

City: _____

State: _____ Zip: _____

Business phone: _____

Home address: _____

City: _____

State: _____ Zip: _____

Home phone: _____

E-mail: _____

For credit card payment, please complete:

Type (please circle): Visa, MasterCard, AmEx, Discover

Credit Card #: _____

Expiration Date: _____ CVV: _____

Registration fee includes the conference, continental breakfast, and afternoon refreshments.

Space is limited— early registration is encouraged. Registration deadline: January 20, 2017.

Cancellations must be in writing and will incur a \$50 processing fee. No refunds granted after January 20, 2017.

Hand & Wrist 02.2017

Continuing Education Credits

OCCUPATIONAL THERAPY & PHYSICAL THERAPY

Continuing education credits for **OT & PT** will be offered through the Illinois Department of Professional Regulation.

Early Intervention credits will be applied for.

All participants will receive a course completion certificate upon successful completion of the conference.



OTHER INFORMATION

MEALS— Continental breakfast & afternoon refreshments will be provided. Lunch will be on your own or for a small fee you may purchase a deli style lunch.

HOTEL RESERVATIONS— A special rate at the Hyatt Place is available— mention that you are with Easter Seals DuPage. The hotel is at 2340 South Fountain Square Drive in Lombard and the phone number is 630.932.6501. If you are interested in shuttle service to and from the conference site, please indicate this at the time you make your reservation.

QUESTIONS/Special Accommodations Needed? Call us at: 630-282-2026 or by email at ce@eastersealsdfvr.org