

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

Presented by

Donald A. Neumann, PT, PhD, FAPTA, Diane Fritts Ryan, OTR/L, C/NDT and Gay L. Girolami, PT, PhD, C/NDT

CONFERENCE DESCRIPTION:



This two-day course will integrate the anatomy and kinesiology of the shoulder complex with clinical applications to movement and function. Although the course is offered in two, one-day parts, each is designed to complement the other. Day 1, taught by Don Neumann, PT, PhD, FAPTA, will address the anatomic and kinesiological foundation of normal function of the shoulder complex (from thorax through the arm). Discussions include muscle and joint interactions associated with reach as well as weight bearing through the upper limb. Much of the material is based on material from Don Neumann's textbook, published in 8 languages: *Kinesiology of the Musculoskeletal System* (2017). The material covered in Day 1 will be delivered in traditional lecture format, and will be applicable to all age groups and areas of clinical practice. Day 1 will provide much of the foundations for Day 2.

Day 2, taught by Diane Fritts Ryan, OTR/L and Gay L. Girolami, PT, PhD, C/NDT, will concentrate on the clinical application of Dr.

Neumann's content to address shoulder girdle impairments in children and adolescents with neurological conditions. Because shoulder girdle mobility, alignment and stability directly impact posture as well as upper and lower extremity function, understanding the relationship between the shoulder girdle, trunk and pelvis are critical to improve function in this population.

Participants will practice strategies to address shoulder girdle impairments that impact functions, such as sitting posture for reach and grasp, upper extremity weight bearing for transitions, and higher-level gross motor skills, such as climbing. Lecture, movement labs and videos will be used to guide the students' appreciation of the impact of abnormal shoulder girdle mobility, alignment and how to facilitate the child for improved function.

Course Schedule: 14.0 Contact Hours (Both Days)

Day 1: 6.75 Contact Hours

7:30—8:00: Registration and Check-in
8:00—8:10: Introduction
8:10—10:00: Clinical Kinesiology of the Shoulder Complex, Arthrology and Anatomy
10:00—10:15: Break
10:15—12:00: Finish Arthrology, Introduce Scapulothoracic Musculature
12:00—1:00: Lunch
1:00—2:30: Muscles & Function of Shoulder Complex: Maximizing Reach of the Upper Limb
2:30—2:45: Break
2:45—4:15: Overall Kinesiology Involving the Shoulder and Entire Upper Limb.
4:15—4:30: Questions/Discussion

Day 2: 7.25 Contact Hours

7:30—8:00: Registration and Check-in
8:00—9:00: Shoulder Muscle Function & Postural Control
9:00—10:15: Key aspects of shoulder girdle development
10:15—10:30: Break
10:30—12:00: Integration of shoulder girdle and spinal alignment for function
12:00—1:00: Lunch
1:00—2:00: How the spine and shoulder alignment affect the arm and hand & the Hip/LE
2:00—3:30: Treatment strategies to address trunk and shoulder problems: PT/OT perspective
3:30—3:45: Break
3:45—4:45: Treatment strategies to address trunk and shoulder problems: -Examples of high, low and fluctuating tone
4:45—5:00: Questions/Discussion

Dates & Location:

**Friday, March 1st through
Saturday, March 2nd, 2019**

at

**Easterseals DuPage & Fox Valley
830 S. Addison Ave.
Villa Park, IL 60181**

COURSE OBJECTIVES:

Day 1:

At the end of Day 1 participants will be able to:

- Describe the detailed structural and functional relationships of the joints associated with the shoulder complex and nearby regions.
- Cite the muscular drive and normal muscular synergies that operate in the healthy shoulder.
- Describe how the shoulder operates to achieve maximal reach of the upper limb as well as a source of weight bearing stability throughout the upper limb.
- Explain the pathokinesiologic mechanics behind several movement and stability conditions of within the upper limb.
- Incorporate kinesiological principles to guide evaluation and treatment choices for neuromusculoskeletal pathological conditions of the shoulder and nearby regions of the upper limb.

Day 2:

At the end of Day 2 participants will be able to:

- Describe the primary atypical shoulder girdle patterns demonstrated by children with neurological conditions.
- Describe how impaired shoulder girdle mobility, alignment and stability affect posture in the trunk and functional competency of the extremities.
- Identify clinical considerations when assessing the shoulder girdle of a child with neuromuscular involvement
- Practice treatment strategies to improve shoulder girdle alignment and control and enhance upper and lower extremity function.
- Describe how the sensory system, the environment and intention to movement critically influence the success of shoulder girdle treatment strategies.

TARGET AUDIENCE:

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

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

CONTACT INFO:

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About the Instructors:



Donald A. Neumann, PhD, PT, FAPTA: Dr. Neumann 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. Dr. Neumann has lectured extensively nationally and internationally on areas related to clinical kinesiology. He has received multiple national awards that have

recognized his teaching, writing, service and research efforts, including being named a Catherine Worthingham Fellow (FAPTA) 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, 2017. Dr. Neumann also authored a chapter on the Hip, published in the 41st edition of *British Gray's Anatomy*. Donald served as an Associate Editor of *JOSPT* from 2002-2015.

Gay L. Girolami, PT, PhD, C/NDT holds the rank of Clinical Professor and serves as the Director of Professional Education in the Doctor of Physical Therapy Program (DPT), in the Department of Physical Therapy, at the University of Illinois at Chicago (UIC). She is a certified NDT coordinator instructor. Gay serves on the Program and Research committees of Academy for Pediatric Physical Therapy and is a member of the American Physical Therapy Association Movement System Task Force.



Dr. Girolami's research interests include the study of posture, balance and motor control in infants and children with typical and atypical motor development, and the assessment and treatment of infants and children with neuromotor disorders. Gay is co-developer of the Test of Infant Motor Performance (TIMP), a measurement tool to assess functional motor behavior and postural and selective control of movement in infants between 34 weeks gestational age and 4 months adjusted age. She holds a bachelor of science in Physical Therapy from Marquette University, a master of science in Pediatric Physical Therapy with a minor in curriculum design from the University of North Carolina at Chapel Hill and a doctoral degree in Movement Sciences from the Department of Kinesiology and Nutrition at the University of Illinois at Chicago.



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 Easterseals 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.

Continuing Education Credits

All participants will receive a course completion certificate upon successful completion of the conference. No certificates will be awarded until course completion is verified on the final date of the conference.

Early Intervention credits have been applied for.

Continuing education credits for **O.T. & P.T.** will be offered through the Illinois Department of Professional Regulation.

Occupational

This Intermediate Level course is offered with AOTA Classification Codes: Categories 1 Domain of OT & 2 Occupational Therapy Processes.

Therapy:



APPROVED PROVIDER of
CONTINUING EDUCATION
by The American Occupational
Therapy Association, Inc.

The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

REGISTRATION FORM

Please complete this form and mail with payment to:
Easterseals 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 – \$230

Day 2 Only – \$230

Both Days – \$445

Both Days (on or before 1/10/18) – \$425

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: February 13th, 2019.

Cancellations must be in writing and will incur a \$50 processing fee. No refunds granted after February 13th, 2019. If Easterseals or Speaker should need to cancel, course fees will be refunded or transferred to another course at the discretion of the participant.

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— please mention that you are attending a course at Easterseals 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@eastersealsdvr.org