

# NDTA 2012 Annual Conference

## GSP 4 NDT: Routes to Functional Outcomes

MAY 18-20, 2012 • SHERATON PARK HOTEL AT THE ANAHEIM RESORT



The NDTA Conference Committee invites you to participate in the Poster Display being held in the Exhibit Hall during the 2012 Conference in California. Posters will be on display beginning Friday, May 18 at 9:30 am through Saturday, May 19 until 9:15 am. The Staffed Poster Session will take place on Saturday from 7:45 am – 9:15 am. All poster presenters will be acknowledged and abstracts will be posted for conference participants.

**ABSTRACTS:** We encourage you to submit an ABSTRACT of your clinical research. Each submitting Author may enter a maximum of three Abstracts. Please follow the instructions listed below when offering your research for consideration.

**DEMONSTRATION POSTERS:** You may wish to create a DISPLAY featuring Clinical Applications of NDT/Bobath philosophy and treatment and/or areas of interest to clinicians working with individuals with neurological impairment. The purpose of a demonstration poster is to report a clinical observation, present colleagues with a new idea or describe your unique clinical service.

Guidelines for Poster Presentation Submission:

**SUBMISSION DEADLINE:**  
**APRIL 2, 2012**

### 1. COMPLETE THE SUBMITTING AUTHOR INFORMATION:

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

Address: \_\_\_\_\_

City, State, Zip Code, Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Title of Research \_\_\_\_\_

### 2. COMPLETE THE ABSTRACT IDENTIFICATION INFORMATION:

**TITLE OF ABSTRACT.** Use all CAPITAL Letters

**AUTHOR(S).** Underline submitting author

**SITE/AGENCY.** Indicate where the research study was done

### 3. SUBMIT APPLICATION INFORMATION:

For ABSTRACT submission, please provide ALL of the requested information. For DISPLAY submission, please include:

1) Objective, 2) Description, 3) Conclusions/Ramifications.

**PURPOSE:** Study hypothesis/questions

**SUBJECTS:** Number and characteristics

**METHODS:** Techniques/materials used

**DATA ANALYSIS:** Statistical tests used

**RESULTS:** What did data analysis reveal?

**CONCLUSIONS:** Do results support the research hypothesis?

**RELEVANCE:** Significance of the study relative to healthcare

**ACKNOWLEDGEMENTS:** Site/Agency funding/supporting the study

### 4. SUBMIT BY APRIL 2, 2012

NDTA 2012 Research Exhibit

c/o Cherie Peters, PT, MPT, MHA, C/NDT

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### SAMPLE ABSTRACT

THE RELATIONSHIP OF HAMSTRING SPASTICITY & CONTRACTURE TO GAIT IMPAIRMENT IN CHILDREN WITH SPASTIC DIPLEGIA. Glock E., Yoloho E., Physical Therapy Program, Young University, Pungo VA.

**PURPOSES:** The purposes of this research were to determine the: 1) reliability of hamstring spasticity measurements; 2) reliability of popliteal angle measurements; 3) relationship of hamstring spasticity to step length, stride length & gait velocity; 4) relationship of hamstring contracture to step length, stride length & gait velocity. **SUBJECTS:** Eleven children (8M/3F) with spastic diplegia (ages 3-15 yrs) were studied. All walked independently with or without appliances. **METHODS:** Two raters twice graded hamstring spasticity in both legs of subjects using the modified Ashworth scale while subjects simulated the Terminal Swing (TSw) Phase position in standing. Raters twice goniometrically measured subjects popliteal angles in the supine position. Each subject walked 20i with inked shoe pads to determine stride & step length distances. Gait velocity was determined using a stopwatch. **DATA ANALYSIS:** Intraclass correlation coefficients (ICC) and percent of agreement (0-100%) were used to determine the reliability of intrarater & interrater measurements of spasticity and popliteal angles. Spearman rank correlation coefficient was used to assess the relationship between spasticity & gait, and between hamstring contracture & gait. **RESULTS:** Intratester reliability for hamstring spasticity measurement was fair (.487) to good (.941); intertester reliability was poor (.242) to fair (.613); the percent of agreement ranged from 0% - 10%. The reliability of popliteal angle measurements was good (.884) to high (.962). Negative correlation between hamstring spasticity & gait measurements was poor (.305) to fair (.431) on the right side, and moderate (.564) to good (.877) on the left side. The Pearson product moment correlation coefficients between hamstrings range (popliteal angle) & gait were moderate (.685) to good (.840). Correlation of hamstring range with Terminal Swing Phase gait was significant at the .05 level. **CONCLUSIONS:** The reliability of spasticity measurements was variable, and the relationship of spasticity to gait was equivocal with respect to the right and left sides. Measurements of hamstring range were reliable, and there was a significant relationship between hamstring range of motion and swing-phase gait. **RELEVANCE:** Reliable examination procedures are required to assess patient impairments and their impact on functional movement. Assessment of the efficacy of treatment on patient functional outcomes requires the health care provider to analyze the relationship between measured impairments and measured functional performance. **ACKNOWLEDGEMENT:** This research was supported by Grant No 652 awarded by Young University, Pungo, VA.

The NDTA Research Reviewer will acknowledge acceptance of your submission and send Poster Display Instructions. **All poster presenters will be required to register for and attend the conference.**