

THE SENSITIVITY OF INFANTS WITH SINA BIFIDA TO SENSORY INFORMATION:

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Abstract (Limited to 300 Words):

BACKGROUND AND PURPOSE: Infants with spina bifida (SB) have impaired nervous systems. They move their legs less often and achieve motor milestones significantly later than typically developing (TD) babies. Typically developing infants move their legs more or less often depending on the sensory information they have available to them. To date, no one has examined the sensitivity of infants with SB to sensory information. Thus, the purpose of this pilot study was to determine if infants with lumbar or sacral SB would move their legs more or less often when confronted with changes in sensory information.

SUBJECTS: Four infants with lumbar or sacral SB, between five and 11 months at entry into the study, served as subjects.

METHODS: Infants' leg movements were videotaped one time per month for four months when they were seated in an infant seat designed to facilitate leg movements while they had 0%, 25%, 50%, 75%, and 100% of their estimated calf mass attached to one leg. Leg order and weightings were randomized. Frame by frame behavior coding was completed to establish the frequency of leg movements for each condition and month.

ANALYSES: MANOVA procedures confirmed or denied significant differences for the average number of total leg movements and proportion of weighted and unweighted leg movements generated in each condition at each age.

RESULTS: This small group of infants generated more leg movements in each weighted condition, produced the most leg movements at the two lowest weightings, and at the three youngest ages.

CONCLUSIONS: These results suggest that infants with SB, in spite of their neurological impairments, are sensitive to the sensory information they have available to them.

IMPLICATIONS: Therapists may be able to use this approach to help infants with SB move their legs more often and reduce the delays they experience in achieving selected motor milestones.