Babies with Delayed Gross Motor Skills Need Specific Early Intervention

October 9 2008

If babies are not achieving specific movement skills, such as rolling or sitting, by a certain age, it is a sign that something could be wrong. Currently, more emphasis is now put on diagnosing problems in children at very young ages. A University of Missouri researcher was part of a study that concluded it is not just early intervention alone that helps, but rather targeting exactly what needs to be improved.

“The results indicate that focusing on one aspect of a gross motor delay is more helpful than early intervention using only general stimulation,” said Jan McElroy, adjunct faculty in the MU School of Health Professions and the College of Medicine. “Repeating a skill without making any changes will not change the quality or energy efficiency of the skill because you have not changed how the baby approaches a particular task. We have to focus on the barrier that keeps them from executing a skill properly instead of just helping them simulate the task.”

For example, if a baby should be walking and is not, then the barrier keeping the infant from doing the task should be identified and addressed. The barrier preventing walking may be different for every baby. If a baby is not walking because of tight muscles, poor trunk control or incorrect muscle sequencing, the emphasis should be on lengthening tight muscles, improving trunk control or improving muscle sequencing within the task of walking rather than simply simulating walking.

According to McElroy, the study identified a very specific movement –

trunk alignment and control. Researchers identified babies from ages three months to 12 months who showed difficulties controlling their trunks in anti-gravity positions. The significant gross motor delay was measured on the Alberta Infant Motor Scale (AIMS). Babies who scored at or below the fifth percentile were studied.

“One would expect a 3-month-old baby to be able to raise his or her head and older babies to have the ability to move against gravity into an upright position,” McElroy said. “The babies in our study were not able to do that.”

Experienced therapists worked with the babies during 10 visits. Meanwhile, the control group attended a parent and infant play group that focused on general movement in play activities. The Gross Motor Function Measure – the only standard test for young children with gross motor delays – was given to both groups before and after the study. The group with 10 visits to the therapists significantly increased their scores and maintained the improvements. The control group did not show significant changes.

“This study is clinically relevant because it models the use of specific targeting of trunk control for interventions with very young children experiencing gross motor delays,” McElroy said. “There is a big emphasis on treating children younger than age three, but not a lot of evidence on exactly what is effective. Therefore, there is not a lot of support for occupational or physical therapists and their methods.”

This study appeared in a recent quarterly issue of Pediatric Physical Therapy - the official publication of the pediatric section of the American Physical Therapy Association.

Provided by University of Missouri