The Containerization of Infants

By Brandi Breitbach

A recent research study replicated a study done in the 1940's, in which psychological researchers asked kids age 3, 5, and 7 to do a number of exercises…Today's 5 year olds were acting at a level of 3 year olds, 60 years ago, and today's 7 year olds were barely approaching the level of the 5 year old (1, 4, 5)." In the 1940's, children were reported to walk at 8-12 months of age, now children are reported to begin walking at 12-15 months of age (2). Realistically speaking that is only a generation ago; that's a huge decline in functional performance in a relatively short time span.

I found this phenomenon to be most interesting and also terrifying. Many considerations were outlined as possible causes, including genetics, birth process, nutrition, change in parenting, information gap, lack of play, overly structured childcare, etc. However, one plausible contributing factor called "containerization of infants" seemed an obvious and early implication for this trend. I decided to research this topic further and was astounded by what I found.

Containerization of infants is defined as "confining them to strollers, playpens, high chairs, and car/infant seats for hours at a time." Developmental delays in motor milestones such as rolling over, crawling, and walking can occur with this type of confinement (3). It is, of course, recommended that parents interact with infants in daily physical activities that promote exploration. Explorative play is an important part of child development as play becomes the cornerstone of learning about the body, the environment, and how the self relates to the world. The environment provides the motivation for movement through visual interest – and movement provides the brain constant feedback regarding body in space, muscle use, touch, and hand-eye coordination.

Many parents are not even aware of how much their infants have become containerized. We live in a day in age where both parents work, people have extremely busy schedules, and technology and more products have allowed us to continue the rigors of daily living with a baby in tote. For example a mother can place her baby in an infant seat, get ready to go out, take that infant seat and attach it as a car seat, drive to a destination, take the seat out of the car and place it in a grocery cart for easy shopping, place the seat back in the car, drive home. It's a convenience that is hard to beat and mothers can be seen anywhere holding their babies via plastic handle. However, from the perspective of the baby – there is low motor stimulation, virtually no positional changes, low or unchanging touch stimulation, and visual stimulation that is limited to a continuum of ceiling, potentially for several hours a day.

To fully grasp this containerization theory and compare the babies of today to the babies of higher functioning yesteryear, it is most imperative to take a look at each of the senses separately:

The vestibular system is the unifying system, giving us a sense of where we stand; movement stimulates the "vestibule" in the inner ear (1). Vestibular stimulus involves the movement of head through space including linear, angular, orbital, and rotary directions (6). In other words, as movement takes place the brain is processing information about where the body is in space. With regard to containerization theory, babies that spend too much time in

containers would not experience movement to the degree that is required for learning and developing gravitational security. Gravitational security is feeling safe during movement with a confident idea of where your body is in space.

The proprioceptive system refers to sensory messages about the position, force, direction, and movement of body parts. Our muscles/joints send messages to the brain as they contract, stretch, bend, and straighten. This gives us a "position sense" (1). Containerized babies tend to remain in one position only or with movement allowed to take place on only one plane. There is little opportunity for meaningful changes in position that allow for muscular input/output. Babies naturally tend to engage in yoga-like moves as they learn to roll, crawl, walk, etc; containers simply do not allow for this type of innate mind-body exercise.

The tactile system includes temperature and texture. This system is designed to alert us to threats and gives the body boundaries – it is the basis for body image (6). The tactile system of a containerized baby is likely under-stimulated with a typical social input being experienced to a much lesser degree.

The visual system involves the left and right brain working together to produce visual-spatial processing skills (1). While acuity is often thought of first with regard to vision, being able to process lighting, likenesses/differences, spatial relationships, and the tracking of moving objects is also imperative. Containerization for long periods of time may not offer appropriate visual stimuli, depending on the position of baby in the carrier and the position of the carrier itself.

Orientation and organization of these senses are required for development of skills later in life. Children need to interpret vestibular information in order to develop postural control, balance, cross midline, discriminate between left/right, and understand concepts such as up/down, in front/behind.

Proprioceptive information requires correct interpretation in order to maintain upright posture, motor plan body movements, grasp with appropriate pressure, and use the right amount of muscle force during daily activities. Development of the tactile system allows for the detection of size, form, contour, texture, and movement across the skin; functional implications being to tolerate clothing, unexpected social touch, bathing, haircuts, dental care, etc. (7) And the visual system is imperative to not only acuity, but fixation, depth perception, peripheral awareness, and saccades; these are functional requirements for motor coordination, safety, and successful navigation through a community setting.

As we look back at how infants were cared for one to two generations ago, we can imagine that infants had much more exposure to movement and seeing the world from changing angles and depths. It is more likely that a mother of generations ago would put her baby in one arm or on her hip and go about her day; the baby at that point experiences several positional changes from the mother's body moving, as well as from the mother likely changing holds on the baby. In this manner, the baby is then experiencing changing vestibular and proprioceptive inputs that are natural to a mother's movement and gravitational force. Baby-carrying provides the elements of pressure, motion, pleasure, warmth, security, sound that is essential to the development of the vestibular nervous system (8). Seeing the world from varying angles is experienced - not only via changes in position in space by being carried, but also by moving closer and further away from objects of fixation as the mother moves. Touch could be characterized as constant, with fluctuations in pressure, quick/light

touches, friction, and temperature. Carrying a baby offers realistic sensory inputs natural to human and environmental experience, while containers often shield these inputs from becoming a part of neurological growth.

Carrying your baby at all times or leaving him/her unattended is certainly not the answer – everything in moderation is the key to a successful and holistic plan. Carrying, tummy time, sitting time, rest (potentially per container), and physical play with opportunity to move about are all equally important. Containers can offer safety and convenience at important times, yet the long-term implications of overuse are dramatic and a factor that is quite obviously changing our population as a whole

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Resources:
(1) Effective Neurological Management of Sensory Processing Disorder, Course Workbook, www.crosscountryeducation.com, Written & Presented by Charlene Young, OTR/L, CEAS.
(2) Young, Charlene. Speaker notes.
(3) National Association for Sport and Physical Education
(4) Education Advocate, A Publication of the Commonwealth Education Organization. May/June 2008, Vol. 9, No. 3
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(6) Autism Society of Michigan
(7) Understanding Sensory Processing/Integration with Remediation Strategies for the Home/School Environment, Course Workbook, Written by Cynthia Ann Clemens, OTR/L.
(8) 43 Reasons to Carry Your Baby
http://www.instinctiveparenting.com/flex/43_reasons_to_carry_your_baby/73/1