

## **Extended Restraint and Autism Spectrum Disorder**

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**Abstract:** *Genetic research shows there are clusters of genes that may be involved in ASD but suggests that environmental triggers are significant as well. This article asks if child restraint and concomitant time in child seats could be a one of those triggers.*

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The ‘refrigerator mother’ image still haunts us, and the vaccine fight is only now waning. It makes it a bit dicey to suggest parents might be contributing to any part of the ASD mystery. That said, as parents, we consider our actions in microscopic detail, hoping to find something that will help our children. We ask ourselves, “What might we now be doing that could have unintentional ramifications for infants and toddlers?” If we have family members on the ASD spectrum we are especially vigilant. There is a dearth of help in understanding those early months and years before our concerns sharpen. It is difficult to spend baby days alerting ourselves to odd moments during the day, but we tend to do it.

There is a sharp rise in the number of youngsters being diagnosed with ASD – Autism Spectrum Disorder. One child in 68 is now considered to be autistic. The C.D.C. found a 78% increase in youngsters with these issues from 2002 to 2011 (Boyle, et.al., 2011; Kogan, et.al., 2007) and the increase is continuing. So we are alert to interactions and verbalizations.

The rapid rise in the rate of autism over the last 20 years rules out a singular genetic determinant, though recent work at numerous ASD research sites have identified several dozen genes potentially associated with autism (news releases from Child Study Center at Yale University; Mahajan, & Mostofsky, 2015). The gene CHD8 (D’Gama, et. al, 2015) has emerged as one of the strongest candidates. Recent studies identified several dozen genes potentially associated with autism, adding the caveat that these genes provide the backdrop, but environmental triggers also appear to be involved. We look to environmental factors that might be acting as stressors to inhibit the disrupted developmental processes that then present as symptoms and contribute to the stereotypical rigidity, communication patterns and lack of social connection to others.

Brain research also provides evidence that those with high IQs have a different constitutional configuration in gray matter and may utilize input in a different manner than children with lower IQ’s (Sousa, 2009; Butz&Ooven, 2013; Bock&Eide, 2014; van Duijvenvoorde et. al, 2008). There is also evidence that overexcitability is common with extremely bright children (Shaw, et. al. 2006). To this point, the suggested connections with ADHD is still being researched, but it may open up new ways of thinking about young minds and stimulation. Another interesting sidelight is the hypothesis that overexcitability in the amygdala of the brain contributes to elective mutism (Stein, et. al, 2010). This is a cluster of ideas that suggests interesting ramifications about a change in understanding how brains work, what might act as triggers, the format for susceptibility to those triggers and a connection to how we might parent and teach infants and young children.

It is possible that we could inadvertently be triggering responses that we could mitigate if we were attuned to points in the support and nurturing of infant and toddlers that were unsettling to them? What might contribute to children responding to being thwarted, with “ASD like” symptoms? In our routines with infants and toddlers are we doing anything that leads them to self soothe and withdraw?

Long term car seat restraint may be contributing to the number of youngsters who are “tuning out” during infancy and failing to successfully negotiate developmental steps that are crucial for socialization and language development. What personal and social cues does the child miss from these repetitive periods of confinement, strapped in and “alone” in the midst of careful parenting? Is it possible the lack of stimulation, along with stimulation needs initiates a shut-down process for infants and toddlers who cannot address the needs while restrained?

Everything a baby experiences establishes synapses or neuronal connections, which lay the foundation of intellectual and emotional development. How much intellectual growth is lost in those car seat hours? What

behaviors are substituted by the child to deal with the constant thwarting of physical developmental imperatives that are a natural part of human infancy?

Car seats, of course, are restraining, and many children are involved in transportation in these devices on a daily basis. They cut off developmental practice in the physical realm, the social realm, and the intellectual realm because they do not allow parents in the front seat to do more than comfort the child. Car Seats are rear facing in those first months which neither allows a view of others nor stimulating views out any window as well as halting head and trunk stimulation.

This is a critical period for infants, who learn social cues and language from facial expression and mimicking parent coos and contact (Hoehl, Wiese, & Striano, 2008). They have an insistent need for stretching, pressing, pushing and engaging strengthening as a natural part of infant activity. Physical development in infants and toddlers is important because children change and grow more within the first 24 months of life than they ever will again (Paus, et.al., 2001).

The amount of time involved in driving could be a caution, but the current parental practices take this restraint much further. The child is often moved from the car in a portion of the car seat, going into stores, restaurants, additional homes in the seat, still restrained. The practice of holding the child in the store, letting them maximize stimulation and connection is rare, as the parents place the car seat restrained child in the cart, hands freed to complete utilitarian tasks.

In the home the pursuit of safety continues, with the child secured in the high chair, safely tucked into baby seats with belts and playpens that confine the child, and again, limit socialization, exploration and the child's developmental imperatives to work on and negotiate physical challenges. A child crying from a bump or scrape is disquieting and many of us are quite impassioned in our self-recrimination, working tirelessly to "child proof" the home and minimize the smallest incursion into potential danger. Again, these are worthy parenting practices, but it may serve children to allow more exploring, more freedom of movement.

It will certainly be useful to increase the amount of intentional connecting with the child, stimulating listening, increasing holding and intentionally increasing sensory input. It may make little difference, but it increases connection time, and is in line with parenting suggestions by child development specialists.

As we, as parents consider the value of enhancing stimulation and lessening restraint, it may be useful to review summary findings from research literature reviews by the National Institutes of Health. They posit there is most likely a genetic predisposition with ASD, with environmental stressors triggering the onset of autism. Thus, if we have an increased potential for autism, this information can be supportive of our prevention efforts.

- Some case reports show that profound institutional privation can result in quasi-autistic symptoms. Children genetically predisposed to autism are likely not immune to the effects of psychological privation, and in fact could be more sensitive to them.
- Researchers are investigating the possibility that a set of unstable genes may interfere with brain development, resulting in autism under certain conditions.
- Many researchers suspect that autism results from genetically mediated vulnerabilities to environmental triggers.
- There is disagreement about the magnitude, nature, and mechanisms for such environmental factors, but researchers have found seven genes prevalent among many individuals diagnosed as autistic.
- There appears to be a heritable component of autism. Originally hinting toward this was the observation that there is about a 60% concordance rate for autism in identical twins, while non-identical twins and other siblings only exhibit about 4% concordance rates.
- A number of studies reveal that there are definite physical changes in the brains of individuals on the autism spectrum. We do not know if the brain changes precipitate ASD or are concomitant with ASD. The frontal lobes, cerebellum, hippocampus and amygdale are enlarged, while the corpus collosum is smaller than normal. Axons link our brain cells together, and in autistic individuals there are too many of these in local areas of the brain, and not enough linking different areas together. It is not known yet if these changes in the brain are the cause, or just effects, of Autism Spectrum Disorders.
- The recent research on orphans gives an odd weight to this question of the impact of restraints and lack of contact with infants. The distress suffered by boys who are institutionalized as infants, in environments lacking in stimulation that would allow for natural developmental process, is showing up at least three times as dramatically. Further, though we cannot tell why, boys do not recover from the asylum assault, while

girls, later adopted into good situations, do make some IQ and social improvements (St.Petersburg-USA Orphanage Rescue Team, 2008).

- Restraint plays a role with some youngsters with ASD, as discovered by Temple Grandin, who found the use of restraint devices actually calmed youngsters with ASD. Is this because of the part restraint played in the first place?

What irony if parents spend all this time and money on precautions and protection of the infant, physically, and for the sake of well-meaning legal requirements, and the infant ends up missing developmental imperatives for the sake of a safe ride in the car or safety in the pursuit of family tasks. Refrigerator mothers, Bettelheim? No! This is not about good or bad parenting. This is a clarion question many parents are asking.

Is there something we could do in place of strapping the child in this particular conformation of restraint? Are there alternatives to keeping a child safe without holding them in place for lengthy periods of time? It could be important to ascertain connections or to rule them out. Anecdotal situations suggest that forcing restraint on some children creates a strong unflagging negative response.

How can we increase the warmth, the touch, the lap sitting? How does a child with a pressing biological need to explore, to soak in every aspect of each moment, to connect with Mom and Dad for socialization cues, pass the time? Do they learn how to get needs met, or learn how to become self-involved and withdraw to successfully pass the hours of "safe" childhood? That negotiated, those social and physical proclivities and drives inhibited, at what point does the biological and social imperative kick back in that presses for human contact, for fulfillment of social needs, connection?

Suggestions for increasing connections and positive responses to developmental press:

1. If the infant is particularly resistant to car seats, have the parent take turns sitting in the back with the infant.
2. Provide reflector and stimulation in the visual range of the child, safe objects, of course, but permitting the child to see his or her own visage and movements while strapped in.
3. Remove the child from the car seat, holding them and carrying them in stores, or use body slings that hold them close to the body and free hands. As soon as practical, turn the child to the front to increase visual stimulation and interaction with the environment.
4. Developmental press suggests that children will alert us when the needs are real. Our work is to find a way to respond to that need. If a child screams, it is not as important to stop the noise for others as it is to find what is wrong and soothe the child.
5. Socialization and learning to attend to those around us needs to occur in early infancy and continue with high frequency. Children mimic parents' responses to others, so chatting, smiling, and interacting with others is important socialization for early childhood.
6. Learn the different cries and the infant and toddler as they emerge, and support the child who is frantic or bored with a change of pace. Most children respond to a change in stimulation or focus with increased interest in the novelty presented. It is an effective socialization technique.

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