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## **Red Lights - Early Signs of Autism in Infants**

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In the early 1980s the International Autistic Society reported two cases of autism per every five thousand children. A widening of the definition of Pervasive Developmental Disorder in the DSM-IV (1994) by the American Psychiatric Association (APA) led to an increase in identified cases and a reported frequency of two cases per thousand children. Children were not diagnosed before school entry. In Israel, serious efforts were invested to persuade medical authorities to lower the age of diagnosis to the age of three. In the last decade with increasing awareness of the phenomenon of autism, diagnostic tools have improved and the age of diagnosis has been significantly lowered. In 2010 the phenomenon reached worrying dimensions with reports of one case per hundred children (1:100) in the USA and one per 200 children (1:200) in Israel.

Present knowledge is apparently just the tip of the iceberg. Throughout the world, substantial funds have been invested in research on autism, and findings indicate the influence of genetic factors associated with environmental aspects. Thousands of slight alterations appear in the chromosome sequence that usually present themselves in two variations: A and B. The assumption is that as the population grows, new mutations emerge in the human genome, adhering to the polymorphs of the chromosomes A or B and contributing to the development of the autistic syndrome (International HapMap, 2003). It is still not possible to isolate and distinguish genetic, environmental and neuro-developmental factors.

In Israel, children are usually diagnosed at an early age (two years) but even this age may be too late since the critical stage at which it is still possible to significantly influence development is in infancy.

The advantage of diagnosis during infancy stems from the dynamism of the brain at this stage. The most accelerated growth of neurons occurs in the first 18 months of life (Baumann, 1999), creating a complex texture of cells that control the baby's sensory-emotional-cognitive regulation. A baby that avoids interaction with the environment is usually inundated by sensory flooding, and cannot contain this overwhelming flooding. During the development of emotion, that influences interpersonal and social abilities, neurological and neuro-chemical systems are involved that control the level of emotional regulation (Trevarthen, 2000).

For many years, when parents of children with autism were asked when they first discerned that something was irregular in their child's development, they would answer in one of two ways: either "*our child developed normally until the age of one year and then the regression began*" or "*I felt from the start that something was not right with my child but everyone said that I was a hysterical mother*".

In certain cases, when a baby does not immediately react to their parents, the parents tend naturally to develop anxieties that may radiate to the baby and thus create a snowball effect. This means that it is essential to work with parents from this early stage (Alonim, 2004). A study conducted at the Mifne Center over the last decade concerning early treatment intervention for autism – examined 110 babies who were diagnosed with autism at the age of two-three years, using retrospective analysis of video-recordings of the first months of their lives by their parents (before any suspicion concerning defective development arose). In the video-records of 98 of the babies it was possible to identify early signs which pointed to autism characteristics and which were often sufficiently minor to be unnoticed by parents. Findings for six of the babies also showed pathological (physio-neurological) indices. In several cases, parents discerned problems but did not think them especially important, or were reassured that nothing was wrong by people in their environment. As a result of this study, the Mifne Center developed a tool to identify indices associated with pre-autistic characteristics in the first year of life – ESPASI (Alonim, 2007).

**The following signs relate to continuous attachment and interaction disorders during the first year of life and are defined as 'red lights':**

1. **Over-passivity: lack of crying, lack of movement, lack of interest in surroundings**  
– these are babies who are obviously passive and do not reveal any initial interest in their surroundings, as can be seen already from the age of three months.

2. **Hyper-activity: continuous crying (unrelated to any medical cause) and lack of physical tranquility** – symptom contrasting with the first symptom. These are children who cannot "find their place", moving or crying with an obvious restlessness during most hours of the day.
3. **Lack of desire or resistance to eat** – a large percentage of children within the autistic spectrum, already exhibit a failure to assimilate appropriate eating habits during the first weeks or months of their lives. Difficulties relating to: feeding, transition to fruits and solids, refusal to eat or non-assimilation of eating habits may testify to a lack of sensory regulation.
4. **No reaction to sound or parent's presence: does not turn head towards person, smile or mutter** – a baby with defective hearing, reacts to the presence of a parent and reacts to facial gestures. In the case of this sign a thorough hearing examination is essential in order to distinguish between lack of reaction to sound and lack of reaction to presence.
5. **Lack of direct eye contact with people (although eye contact with objects exists)** – the eye is the most sensitive facial organ and is considered a reflection of the soul. Eye contact has decisive emotional influence on mutual bonding with others. Babies who have difficulty making eye contact with people do not usually have difficulty making eye contact with objects.
6. **Withdrawal from parental touch (or touch of any other person)** – "Flooded" babies have sensory and tactile (skin) over-sensitivity and they may therefore recoil from or feel uncomfortable with physical contact.
7. **Delayed motor development** – the motor development of a baby with attachment and interaction disorder is often characterised by hypotonus (low muscle tone) and delayed motor development. Alternatively it is also possible to see babies with hypertonia (high muscle tone and rigidity). This sign is not significant since some babies diagnosed with autism exhibit rapid motor development.
8. **Accelerated growth of the circumference of the head in relation to starting point** - a study conducted by Courchesne (2003) found that a group of children diagnosed with autism had small head circumferences after birth, but within a year the circumference grew rapidly in comparison to the development of normal children. This sign is also not significant. Accelerated development of the head can also indicate other syndromes.

In order to ensure reliability of the baby's evaluation, compliance with the following points is required:

- a) **The existence of at least two of the eight signs (excluding signs 7 and 8 above), continuously during a period of at least three weeks justify evaluation.**
- b) **All relevant medical examinations (metabolic, neurological etc,) should be performed before investigating suspicion of an attachment or interaction development disorder.**

Identification and treatment in the first year of life and treatment by stimulation in amounts appropriate for the baby's needs, can alter the process of development for a baby that exhibits difficulties in sensory regulation and creation of bonding and prevent the development of autism.

**It is important to note that not all children with attachment and interaction difficulties will necessarily become autistic, but any child with autism initially exhibited an attachment or interaction development disorder in infancy.**

#### References

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1. American Psychiatric Association (APA), 1994. *Diagnostic and statistical manual of mental disorders*. 4th ed. Washington, DC: American Psychiatric Association.
2. Alonim, A. H., 2004. The Mifne Method. *Journal of Child and Adolescent Mental Health*, Vol. 16, pp.39-43.
3. Alonim, A.H. 2007. Infants at risk: early signs of autism: diagnosis and treatment. In: A.H.Alonim, S. Acquarone, G. Crespini, L. Danon-Boileau, S. Maestro, H. Massie, F. Muratori, M. Rhode & C. Trevarthen, eds. *Signs of autism in infants: recognition and early intervention*. London: Karnac Books. Ch. 7.
4. Bauman, M., 1999. Autism: clinical features and neurobiological observations. In: H.Tager-Flusberg, *Neurodevelopmental disorders*. Cambridge, MIT Press, pp.383-399.
5. Courchesne, E., Carper, R. & Akshoomoff, N., 2003. Evidence of brain overgrowth in the first year of life in autism. *Journal of the American Medical Association*, 290, pp.337-344.
6. International HapMap Consortium., 2003. A Haplotype map of the human genome. *Nature*, 437, pp.1299-1320.
7. National Autistic Society., 2005. *Public autism resource and information service*, [Online]. Available at: <http://www.info.autism.org.uk> [Accessed 1 November 2006].
8. Trevarthen, C., 2000. Autism as a neurodevelopment disorder affecting communication and learning in early childhood: parental origins, post-natal course and effective educational support. *Prostaglandins, leucotrienes and Essential fatty Acids*, 63(1), pp.41-46.