

### **Research: Autism can be identified before the age of one year**

Researchers from the Weizman Institute have discovered that the areas of the brain responsible for language skills are less successfully synchronized in the case of autism

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Every day not a few children are diagnosed as suffering from the syndromes within the autism spectrum. The proportion of those diagnosed with autism of one kind or another has tripled over the last decade. In Israel official statistics stand at one child per two hundred and in the USA one per hundred. It is usual practice to diagnose the syndrome at about three years old or later, but a new Israeli study has shaken the autism diagnostic world, claiming that it is possible and desirable to diagnose the child even before the age of one year and until the age of a year and a half and then, with intervention it is possible to alter the fate of the child who suffers from a communications development disorder and to seriously alleviate the child's condition.

### **A Biological Diagnosis Method**

A research team under the leadership of the Neuro-biological scientist Dr. Ilan Dinstein from the Weizmann Institute found that certain areas of the right and left regions of the brain, responsible for language skills are less well synchronized in infants and babies suffering from autism. If the synchronization between these two areas is weaker, the child will exhibit greater communication difficulties. This interesting finding was discovered after the measurement of neuron activity in the brains of infants during sleep with the help of an MRI scan. Researchers from the Weizman Institute conducted the study on 72 infant participants ranging in age from 1 to 3.5 years at the University of California at San Diego.

*"In a normal brain, even during sleep, neurons in the different areas of the brain are responsible for the same functioning continuing to be synchronised in their activity" explains Dr., Dinstein. "The study that we conducted showed that in most autistic infants' brains the 'sync' is much weaker in areas relating to language and communication abilities. During the development of the brain, so that it can function normally, there must be synchronization between the different parts. The neurons should send and receive messages in the correct manner in order to function properly. This finding can produce a diagnostic method for autism in one year old infants."*

*"Today there are often mistaken diagnoses of autism" explains Dr. Dinstein. "If a child aged 1.5 years does not speak, this may seem to the environment to be autistic, but at the age of three it is often revealed that this was just a case of delayed speech or a developmental*

*problem of another kind. It is important to find a biological method to diagnose infants already at a very early age."*

### **Early Symptoms that can Testify to the Existence of Autism**

The study that was published in the scientific journal **Neuron**, is in line with the work in this field by Dr. Hanna Alonim, the founder and director of the **Mifne Center** for early therapeutic intervention for autism, where she treats babies that exhibit difficulties in forming relationships up to the age of 18 months. According to Dr. Alonim's research, that has studied the issue over a decade, including the use of videofilm of babies who were laterdiagnosed as autistic, there are 8 signs that can be recognized even before the age of a year, which can testify to a communication development disorder. She notes that early diagnosis can lead to a significant improvement and even a decisive change for the child. Two of the eight signs, appearing sequentially over a period of three or more weeks may indicate a developmental disorder. Dr. Alonim notes that before diagnosing the child with autism, various other medical problems should be negated and indicates that not every communication development problem leads to autism, but every case of autism begins with a communication development disorder.

The pre-autism characteristic signs are:

1. Excessive –passivity : a child that does not react.
2. Hyperactivity: continuous lack of tranquility.
3. Lack of desire or resistance for eating or feeding.
4. Lack of reaction to parent's voice or presence.
5. Recoil from touch by parent or another person.
6. Lack of direct eye contact, but ability to follow objects.
7. Delay in motor development followed by high muscle tension and rigidity.
8. Accelerated growth of the head circumference in relation to the starting point.

The article in Hebrew can be found at:

<http://www.mako.co.il/home-family-toddlers/education/Article-8ac63714e5bc031006.htm&sCh=28350a2610f26110&pId=1950692751>

