

Biomedical/Education Update:

Early intervention: high rate of success in teaching speech

Forty percent of autistic children who receive early intervention are able to speak fluently by the age of nine, according to clinicians at the University of Michigan's Autism and Communication Disorders Center. Catherine Lord and colleagues found that only 14 percent of autistic children who received early intervention failed to develop any speech at all by that age.

The researchers also report that:

- Five percent of children receiving early intervention had virtually no signs of autism by the age of nine.
- Ten percent exhibited only mild social difficulties and/or repetitive behaviors or interests.
- Another 10 percent still exhibited significant autistic behaviors, but were able to be mainstreamed much of the time.

Overall, the researchers say, "One third [of the autistic children receiving early intervention] make incredible progress, with almost all children making real gains, even if they continue to have significant difficulties."

"Early intervention lessens impact of autism," news release, University of Michigan, June 14, 2004.

Aggressive behavior, fecal smearing can stem from treatable infections

Developmentally disabled individuals who exhibit aggression, rectal digging, and fecal smearing may be suffering from undiagnosed parasitic infections, notes a report by Nancy Brahm.

Brahm cites the case of a congenitally blind and profoundly mentally retarded 53-year-old man with a history of aggression and frequent fecal smearing. At the time of his admission to a care facility, the man was taking olanzapine and carbamazepine to control his aggression.

Routine laboratory work ordered by the care facility revealed the presence of two types of parasites, and the facility treated the man with anti-parasitic drugs. Following treatment, Brahm says, "The patient was less aggressive, fecal smearing had decreased, and he was more redirectable." In addition, doctors were able to discontinue the olanzapine.

Brahm concludes, "In order to avoid the inappropriate use of psychotropic medications for aggression associated with rectal dig-

ging and fecal smearing in this population, screening for parasitic infections must be part of the differential diagnosis of the etiology of these behaviors."

"Protozoal infections in the developmentally disabled: often overlooked cause of rectal digging and fecal smearing," Nancy Brahm, *Annals of Pharmacotherapy*, Vol. 38, Sept. 2004, 1542. Address: Nancy C. Brahm, Department of Pharmacy/Clinical and Administrative Sciences, University of Oklahoma, College of Pharmacy, 1110 N. Stonewall, Oklahoma City, OK 73117, nancy-brahm@ouhsc.edu.

Atypical movements in babies may signal Asperger's syndrome

Abnormal movements in infancy can be an early clue that a child has Asperger's syndrome, according to a recent study by the husband-and-wife team of Osnat and Philip Teitelbaum and their colleagues.

In 1998, the Teitelbaums viewed home videos of 17 infants later diagnosed as autistic, and reported that signs of abnormal development could be detected in all of them. (see ARRI 13/1). In their newer study, the researchers reviewed tapes of 16 children with Asperger's syndrome, taken when the children were babies. The researchers found that as infants, the children with Asperger's syndrome exhibited deficits in motor milestones including crawling, walking, lying down, sitting, and righting themselves when tipped. As in the case of autism, they say, "almost all of these problems can be interpreted as infantile reflexes 'gone astray,' i.e., some reflexes are not inhibited at the appropriate age in development, whereas others fail to appear when they should." Among common abnormalities seen in the early videos of the children with Asperger's syndrome:

- An asymmetrical pattern when moving. For instance, some of the children crawled on one knee while keeping just the foot of the opposite leg on the floor. Others extended only one arm in front of their bodies when prone.
- An inability to roll smoothly. Instead, the children tended to "log roll," moving their entire body at once instead of mastering a "corkscrew" roll in which the hips are followed by the torso and then the shoulders.
- A failure to sit independently by six months.
- A lack of a protective arm movements when falling.
- "Moebius mouth," characterized by a

triangular mouth with a flat lower lip and a protruding, "tented" upper lip. This can be a sign of congenital facial weakness.

The researchers say that no single pattern was seen in all of the children later diagnosed with Asperger's, but they recommend that pediatricians be alert for any of these signs of motor problems in infants. The Teitelbaums note that individuals with Asperger's syndrome typically are not diagnosed until the age of six or seven, and say that early diagnosis is crucial in order for children to receive early intervention.

The researchers also recommend that pediatricians use a "tilting test" to evaluate infants for possible Asperger's syndrome or autism. This test involves holding the baby vertically, slowly tilting the infant sideways to about 45 degrees, returning the baby to vertical, and then tilting the baby to the other side. The researchers say that babies without developmental problems typically keep their heads vertical during this procedure, while babies later diagnosed as autistic tend to keep their heads in line with their bodies.

"Eshkol-Wachman movement notation in diagnosis: The early detection of Asperger's syndrome," Osnat Teitelbaum, Tom Benton, Prithvi K. Shah, Andrea Prince, Joseph L. Kelly, and Philip Teitelbaum, *Proceedings of the National Academy of Sciences*, Vol. 101, No. 32, August 10, 2004, 11909-11914.

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"Infants' movements can signal a form of autism, UF study shows," news release, University of Florida, July 26, 2004.

— QUOTE —

"Conflicts of interest are rampant. When the *New England Journal of Medicine* published a study of antidepressants, we didn't have room to print all the authors' conflict-of-interest disclosures. We had to refer people to the website. I wrote an editorial for the journal, titled 'Is Academic Medicine for Sale?' Someone wrote a letter to the editor that answered the question, 'No. The current owner is very happy with it.' That sums up the situation nicely."

—Marcia Angell, *Harvard Medical School professor, former Editor-in-Chief of the New England Journal of Medicine and author of The Truth About the Drug Companies: How They Deceive Us and What to Do About It*, quoted by Peter Jaret in an interview in the *Los Angeles Times*, August 9, 2004