

PECS markedly improves language skills and social communication skills, reduces problem behaviors

The first empirical study of the PECS (Picture Exchange Communication System) method affirms anecdotal evidence that the program is highly effective in teaching communication skills, can foster the development of spoken language, and can improve social skills and reduce behavior problems.

PECS is a pictorial system for developing communication skills in autistic or other language-impaired children. Through PECS training, nonverbal or minimally verbal children learn to give picture cards to other individuals in order to obtain desired objects. Gradually, additional skills are added, as the

All three children in the study by Charlop-Christy et al. showed dramatic increases in spontaneous speech and imitation when using PECS. In addition, all three showed marked increases in social-communicative behaviors, joint attention and social play, and significant reductions in problem behaviors.

children learn to use PECS skills in different environments and with different people, to identify different picture cards, to make several-word sentences using word strips, to answer the question "What do you want?" using PECS cards and sentence strips, and to make comments (e.g., "I see cat," "I have book"). The system is widely used, but has not previously been evaluated in a controlled study.

Marjorie Charlop-Christy and colleagues worked with three autistic boys (a 12-year-old, a five-year-old, and a three-year-old), all of whom had language skills below the two-year level. The researchers report that all three children were quickly and successfully trained to use PECS, with the training requiring an average of 170 minutes and 246 total trials.

All three children showed dramatic increases in spontaneous speech and imitation once they began using PECS. (One child, for instance, exhibited spontaneous speech in only 28 percent of baseline trials, but in 100 percent of post-training trials and 93 percent of followup sessions one year later.)

The researchers say, "It is important to note that the emergent speech produced by the children in this study occurred with novel persons, in two non-training sessions, and with stimuli not directly included in the training settings." They say the PECS approach may be particularly successful in promoting generalization of skills because it incorporates child-selected reinforcers, and uses multiple settings and trainers in the child's natural environment.

Charlop-Christy et al. note that all three of the children they studied had some imitation skills, which may have contributed to

their success with PECS. Children with more impaired imitation skills, they suggest, may not show an equally marked improvement in speech production.

The researchers also report that all three of the children in the study showed marked increases in social-communicative behaviors such as eye contact, joint attention and social play during PECS training, as well as significant reductions in problem behaviors. "A 70 percent or greater reduction was observed for 10 of 12 [problem] behaviors," they say, "and four behaviors were eliminated."

Charlop-Christy et al. conclude, "These findings together support the use of PECS by providing the first empirically controlled data on the PECS program."

"Using the Picture Exchange Communication System (PECS) with children with autism: Assessment of PECS acquisition, speech, social-communicative behavior, and problem behavior," Marjorie H. Charlop-Christy, Michael Carpenter, Loc Le, Linda A. LeBlanc, and Kristen Kellet, *Journal of Applied Behavior Analysis*, Vol. 35, No. 3, Fall 2002, 213-31. Address: Linda A. LeBlanc, Department of Psychology, Western Michigan University, 1903 W. Michigan Ave., Kalamazoo, MI 49008-5052.

Deadline approaches for fenfluramine heart damage compensation claims

The deadline is approaching for filing a claim if you or your child have been harmed as a result of taking the drug fenfluramine (marketed under the names Pondimin and Redux, or as "Fen-Phen").

Fenfluramine, a diet drug, received intense publicity in 1982 when an uncontrolled study of three autistic children published by Edward Ritvo suggested that the drug dramatically reduced autistic symptoms. Later large-scale, multicenter studies failed to support this finding (see "Vitamin B6 vs. fenfluramine: a case study in medical bias," *ARRI* 5/1).

In the late 1990s, researchers reported that fenfluramine can cause serious, permanent, and potentially fatal heart damage. As a result of a class action settlement agreement, the drug's manufacturer is required to pay for the medical care of individuals who file claims showing that they were damaged by fenfluramine.

To file a claim if you or your child have been damaged by fenfluramine, you must act by May 3, 2003. For information, contact the AHP Settlement Trust, P.O. Box 7939, Philadelphia, PA 19101-7939, 1-800-386-2070, www.settlementdietdrugs.com.

Higher rate of birth complications seen in autistic children

Autistic individuals are more likely than other individuals to have experienced complications during gestation or birth, according to a new study from Australia.

Emma Glasson and colleagues examined the birth records of 465 autistic individuals born in Western Australia between 1980 and 1995. (The sample included all known people diagnosed with an autistic spectrum disorder in this birth cohort.) The prevalence of obstetrical complications in this group was compared to that of three control groups: the autistic individuals' siblings, a randomly selected group of non-autistic controls, and the siblings of the non-autistic controls.

The researchers report, "Compared to the controls, the autism cases experienced more difficulties during pregnancy, labor, delivery, and during the neonatal period." In particular, they say, the autism group was characterized by increased maternal age, threatened miscarriage before the 20th week of development, fetal distress, and elective caesarean birth. Autistic individuals were also more likely to be firstborns. Children diagnosed with Asperger syndrome or pervasive developmental disorder not otherwise specified (PDD-NOS) experienced complications similar to those seen in the autistic group, but tended to have fewer of these complications.

The researchers note, too, that siblings of the autistic children, while not autistic themselves, also experienced a higher rate of birth complications than did the other control groups. This indicates, they say, that there is "a big genetic component" involved in autism, and that the obstetric complications may stem in part from an underlying genetic vulnerability.

"Autism and obstetric complications: are children who develop autism different before they are born?" E. Glasson, C. Bower, B. Petterson, G. Chaney, N. de Klerk, and J. Hallmayer, presentation to the World Autism Congress, November 2002. Address: Emma Glasson, Centre for Health and Ageing, Edith Cowan University, Western Australia.

—and—

"Autism more likely in c-sections," Judy Skatssoon, *Herald Sun* (Australia), November 6, 2002.

SCHOOLS AND SERVICES REFERRAL LIST

The Autism Research Institute maintains a list of schools and services for autistic individuals. If your facility should be included on our list, and you believe it may not be, please send a self-addressed, stamped envelope to receive our referral list questionnaire.