

Autism Research Review

I N T E R N A T I O N A L

A quarterly publication of the Autism Research Institute

Reviewing biomedical and educational research in the field of autism and related disorders

LEOMINSTER: is pollution a cause of autism?

"Our switchboard lit up like fireworks," ARRI was told by the producer of the *20/20* TV show after *20/20* recently aired the first segment of its story on the Leominster, Massachusetts cluster of autism cases. After several years of near-futile attempts to bring the story to national attention, parent Lori Altobelli finally achieved her goal. The possible link she discovered between autism and a toxic dumpsite in her neighborhood was at last out in the open. Reaction was so great that *20/20* broadcast a follow-up story the next week, and other national media, including the *Sally Jessy Raphael* television show, picked up the story.

Leominster had been the site of a Foster

Grant sunglass factory from 1936 to 1987, which exposed the neighborhood to toxic fumes and a great deal of dumping of liquid toxic wastes. At the time of the *20/20* airing, Mrs. Altobelli had found 43 autistic children born of at least one parent who had worked in the Foster Grant factory or had lived in the neighborhood. Now, following the media coverage, that number has been raised to well over 100 cases of autism (or autistic-like disorders).

When the ARRI published its first story on the possible Leominster toxic dump/autism connection (1990, ARRI 4/4), only 21 cases of autism had been located. Most of these families had lived downwind from the Foster Grant factory. Now the cluster includes many children of families who had lived near the Foster Grant plant, but had moved to other states, as well as parents (usually fathers) who had worked in the plant, but did not necessarily live in the neighborhood.

The latter cases, of parents who had been exposed to the toxic chemicals before the children were born, and whose children had not lived near the toxic site, are especially interesting to researchers, since they suggest the possibility of genetic damage. Stanford University researchers Roland Ciaranello

and Donna Spiker have initiated a study which will involve chromosome mapping of the children and their relatives. The Autism Research Institute is cooperating with the Stanford research team in this effort.

In a related development, the National Information System for Vietnam Veterans reports that autism is one of the many handicapping conditions said to result from exposure of the fathers to dioxin (Agent Orange) and other chemicals during the Vietnam war. The ARRI will monitor this possible relationship and report on it when more information becomes available.

Parents who believe their child's autism may have been the result of toxic exposure, either of the child or of one or both parents, are invited to write to the ARRI. We have started a database of such cases, both to serve the purposes of autism research and to provide helpful information to involved families, if and when such information becomes available.

If your child may be part of the Leominster cluster, contact Lori Altobelli, 77 Clubhouse Drive, Leominster, MA 01453.

If you are a parent who has been exposed to Agent Orange, call 1-800-922-1107, ext. 401 (in South Carolina, 1-800-922-9234, ext. 401) for more information.

Self-injurious behavior: controversial report issued

Long delayed because of pressure by anti-aversives groups,* the National Institutes of Health Consensus Conference Report on Treatment of Destructive Behaviors in Persons With Developmental Disabilities is now available to the public. The 559-page report details the findings of a panel of impartial experts appointed by NIH in 1989 to review decades of research into the treatment of severe self-injurious and aggressive behaviors. While recommending careful controls for aversive procedures, the panel found that in some cases aversives are necessary to control harmful behavior that cannot be successfully handled by other means. Publication of the NIH report was delayed for over a year by groups opposed to the use of aversives under any circumstances.

(Editor's note: see related articles in this issue about Alzheimer's-like brain damage caused by self-injury, and on self-choking successfully stopped by mild aversives.)

To obtain a copy of the NIH report (91-2410), write NICHD, Bldg. 31, Room 2A32, 9000 Rockville Pike, Bethesda, MD 20892.

*See "What happened to the aversives report?," *Science*, Aug. 21, 1990, pp. 980-981.

Auditory Integration Training—Update IV

The first experimental evaluation of auditory integration training (AIT) with autistic children has been completed, and the report has been submitted to a scientific journal by its authors, Bernard Rimland and Stephen Edelson.

The report abstract follows:

"A blind, placebo-controlled pilot evaluation of Berard auditory training was conducted. Seventeen children and adolescents, eight in the experimental group and nine in the control group, served as subjects. Subjects in the experimental group listened to electronically-modified music for two 30-minute sessions daily for 10 days, while subjects in the control group listened to the same music, not electronically modified, under identical conditions. Multiple assessment measures were administered before and after the 10 days of auditory training and at regular intervals for three months following the auditory training. Significant differences favoring the experimental group were found

on the Fisher's Auditory Problems Checklist ($p < .05$) and the Aberrant Behavior Checklist ($p < .05$). Five out of the eight experimental group parents correctly believed that their son/daughter had received auditory training, while only two out of the nine control parents thought their son/daughter had received the treatment rather than the placebo. No differences were found for other auditory and behavioral criteria."

Based on the generally positive results of the first small-scale pilot study, the authors have undertaken a much larger full-scale study involving over 200 autistic children and adults. Most of the experimental data have been collected, and the early stages of data analysis have begun.

In his updated afterword for the soon-to-be-published paperback edition of Annabel Stehli's *Sound of a Miracle*, Rimland wrote, "Quite apart from the scientific studies, there

continued on page 2