Volume 17, No. 1

2003

Autism Research Review

INTERNATIONAL

A quarterly publication of the Autism Research Institute

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

California data: autism rates continue to soar

A new report (April 2003) by the California Department of Developmental Services (DDS) reveals that the rate of autism continues to escalate at an alarming rate.

The report shows that the prevalence of autism in California increased 634 percent in the 15 years from 1987 to 2002, with the number of cases in California rising from 2,778 to 20,377.

Moreover, the prevalence of autism has doubled in just the past four years. In the calendar year 2002 alone, California added 3,575 new cases. These figures do *not* include any children with full-syndrome autism who are under the age of three, or any children with diagnoses such as pervasive developmental disorder or Asperger's syndrome who do not meet the full criteria for autism.

Autism, the report notes, is the only developmental disability to show such explosive growth. Other disabilities, including mental retardation, epilepsy and cerebral palsy, have, as expected, increased slowly from 1987 to 2002, and in proportion to the population growth of California.

Individuals with autism, who once comprised only 3.5 percent of the caseload of DDS, now comprise nearly 12.5 percent. It is also notable that there has been no "diagnostic shift" from mental retardation to autism, which refutes claims that the dramatic rise in autism cases is due merely to better diagnosis of children formerly labeled as mentally retarded.

Additionally, a marked increase in the proportion of autistic individuals who are not mentally retarded (from 19 percent in 1987 to 56 percent in 2002) strongly suggests the emergence of a new phenotype of autism.

Similar increases in autism are being reported in other states and other countries, and previous research (see ARRI 16/3) indicates that the increase is not attributable to changes in diagnostic criteria, increased physician awareness of autism, or immigration patterns.

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"Autism spectrum disorders: changes in the California caseload, an update: 1999 through 2002," California Department of Developmental Services, april 2003. The report is available online at www.dds.ca.gov.

Study: thimerosal/autism link 'seems to be confirmed'

A new study "provides strong epidemiological evidence for a link between mercury exposure from thimerosal-containing childhood vaccines and neurodevelopment disorders," according to its authors. Thimerosal, which is nearly 50 percent mercury, was widely used in childhood vaccines until recently.

Mark Geier and David Geier conducted a two-phase study to investigate the levels of mercury to which children were exposed through thimerosal-containing vaccines, and the effects of thimerosal on the incidence of neurological and heart disorders.

The researchers found that thimerosal-containing vaccines have exposed children to mercury levels that "far exceed" the maximum permissible levels for daily oral ingestion of methylmercury set by the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA). (The researchers used methylmercury guidelines because the government has never established guidelines for ethylmercury, the form of mercury in vaccines.) They note, "The fact that mercury in the vaccines is given by injection rather than by oral ingestion only makes the exposure levels worse," because research on mice shows a higher concentration of foreign particles in the organs following intravenous or intramuscular injections than following oral ingestion. Instantaneous mercury levels in children receiving thimerosal-containing vaccines exceeded EPA standards by up to 150-fold, and FDA guidelines by up to 37-fold.

The researchers also compared the incidence of neurodevelopment disorders and heart disease in children who received thime-

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L-carnosine reduces autistic symptoms, seizures

The amino acid L-carnosine can cause major global improvements in autistic children, according to a recent report.

In a double-blind, placebo-controlled study, Michael G. Chez and colleagues gave either a placebo or 800 mg/day of powdered L-carnosine (divided into two 400 mg doses) to 31 autistic children for eight weeks. The researchers tested the children before, during, and after supplementation using both clinical evaluations and parental reports.

Chez and colleagues report that children taking the L-carnosine showed "demonstrable improvements" in core symptoms. "It affected language, receptive language, eye contact, [and] communication," Chez noted in an interview with NBC. Behavior and communication improved by 16 percent in the treated group, and social interaction by 27 percent.

Chez and colleagues note that the reason for L-carnosine's effects is not known, but speculate, "It is believed that it acts to modulate neurotransmission and affect metal ion transfer of zinc and copper in the entorhinal cortex. This may enhance neurological function or act in a neuroprotective fashion."

In a separate study, Chez et al. tested the effects of L-carnosine on seven children with intractable epilepsy. After 10 weeks of treatment, five of the seven children exhibited improved EEG readings, and all seven had fewer seizures.

Chez has treated a large number of other children with L-carnosine, and reports that 90 percent improve when taking the supplement. The only side effects, he says, are irritability, hyperactivity, or insomnia if the dosage is too high.

L-carnosine supplements are available in health food stores. Chez recommends administering 5 mg of zinc and 50 IU of vitamin E along with each dose of the amino acid, to enhance its effects.

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"Double-blind, placebo-controlled study of L-carnosine supplementation in children with autistic spectrum disorders," M. G. Chez, C. P. Buchanan, M. C. Aimonovitch, M. Becker, K. Schaefer, C. Black, and J. Komen, *Journal of Child Neurology*, Vol. 17, No. 11, November 2002, 833-7.

—and—

"L-carnosine therapy for intractable epilepsy in childhood: effect on EEG," M. G. Chez, C. P. Buchanan, and J. Komen, *Epilepsia*, Vol. 43, No. 7, 2002, 65.

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