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Lancet study links autistic symptoms, MMR vaccine

Andrew Wakefield and colleagues generated intense controversy in the medical world this February when they reported evidence, in an article in the prestigious British journal *The Lancet*, that the measles-mumps-rubella (MMR) vaccine may cause gastrointestinal problems that in turn lead to autism. Based on this research, Wakefield has called for an end to combined MMR vaccinations, saying, "In all conscience I cannot support the idea of using all three vaccines together."

> Since their study was completed, Wakefield's team has seen 48 other children with behavioral problems beginning shortly after MMR vaccinations. Of these, he notes, 46 exhibited bowel abnormalities similar to those seen in the study subjects.

Wakefield et al. studied 12 consecutive children referred to a hospital because of a history of diarrhea and abdominal pain, along with a history of normal development followed by loss of language and other acquired skills. Eight of these children had developed autistic-like symptoms within two weeks of receiving MMR vaccinations, and five had experienced severe post-MMR symptoms including fever, rash, delirium, and/or seizures. In another child, development of autistic symptoms followed a measles infection.

The researchers report that "all 12 children had intestinal abnormalities," with eleven showing patchy, chronic inflammation of the colon, seven exhibiting abnormal growths of small nodules of lymphoid tissue, and two suffering from thrush-like ulcers. "The children show huge swellings in their small bowel," Wakefield said at a press briefing, "markedly in excess of anything seen before." MRIs, EEGs, and other neurological tests, on the other hand, were normal.

Since submitting their data on these subjects, Wakefield told reporters recently, his team has seen 48 other children with behavioral problems beginning shortly after MMR vaccinations. Of these, he said, 46 exhibited bowel abnormalities similar to those seen in the study subjects. "We were amazed there were so many," Wakefield told the *London Times*. "We expected there to be only one or two."

Noting that autism is genetically influenced, and that autistic children show signs of immune system dysfunction, the researchers suggest that the immune systems of individuals with certain genetic variants linked to autism "may not handle certain viruses appropriately, possibly including attenuated strains [those used in vaccines]." In these individuals, they suggest, the MMR vaccination may lead to gastrointestinal defects. Impaired intestinal function, in turn, may allow food byproducts called peptides—which can exhibit opium-like properties—to pass through the intestinal walls. Having escaped the intestines, the researchers speculate, these particles may disrupt normal brain function and development.

"Both the presence of intestinal inflammation and absence of detectable neurological abnormality in our children are consistent with an exogenous [outside] influence upon cerebral function," Wakefield et al. say.

Tests revealed that most study subjects had elevated urinary concentrations of methylmalonic acid, which the researchers say is "indicative of a functional vitamin B12 de-

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UCLA findings: Intensive intervention helps even low-functioning children

In 1987, Ivar Lovaas and colleagues at the UCLA Young Autism Project reported remarkable success using intensive behavior modification techniques with very young, mildly or moderately retarded autistic children. According to Lovaas et al., up to half of the children treated through the Young Autism Project are later able to succeed in regular first-grade classes, and have normal IQ scores (see ARRI 1/1).

> "Though no child had spoken in words at intake," Smith et al. say, "10 of the 11 children in the experimental group did so at the follow-up evaluation compared to 2 of the 10 children in the comparison group."

The researchers note, however, that little research has investigated the effects of such intensive interventions on children with severe retardation (IQs below 35). To determine how well such children fare in a Lovaas-type program, Tristram Smith and colleagues (including Lovaas) evaluated the progress of low-functioning autistic children who participated in an intensive early intervention.

Smith et al. compared 11 severely retarded autistic children who underwent intensive therapy (30 hours or more per week of one-on-one therapy, for two or more years) with 10 similar children who underwent minimal therapy (10 hours or less per week). Children in each group were approximately three years old at the time intervention began. Both groups were matched for IQ, and no children in either group were able to use speech to communicate.

Study participants were reevaluated when most were five to seven years of age. According to Smith et al., "the mean IQ of the experimental group increased from 28 at intake to 36 at follow-up," By contrast, they say, "the mean IQ of the comparison group decreased from 27 to 24."

The researchers also say that speech skills improved significantly in the intensively treated group, but not in the control group. "Though no child had spoken in words at intake," they say, "10 of the 11 children in the experimental group did so at the follow-up evaluation

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