

UPDATE: Allergies

Autism again linked to allergies

A recent population survey shows a link between autism and allergies—particularly those of the gastrointestinal system

Thomas Webb et al. analyzed data from the National Health Interview Survey, a Census Bureau survey of approximately 55,000 households. Respondents in households that included autistic children, the researchers found, were more likely to report digestive and food allergies than were respondents in households where no children were autistic. There was also a trend toward a positive association of autism with respiratory and skin allergies, but it did not reach statistical significance. However, autistic children were less likely to have asthma than were other children.

"This finding runs counter to trends in the general population, in which asthma rates are higher than digestive and food allergies," Webb says. "While there are few studies on this, some basic science research indicates that children with autism may have differences in the receptors on immune cells that respond to allergic stimuli."

"Cincinnati Children's study links autism and immunologic disorders," news release, Cincinnati Children's Hospital, May 1, 2004.

Antibiotic use may cause allergies

Mainstream medicine has consistently rejected charges that antibiotic treatment can upset immune system function and thus place children at risk for autism and other disorders with an autoimmune component. A new study, however, provides strong evidence of a link between frequent antibiotic use and immune system dysfunction.

Gary Huffnagle and colleagues gave mice antibiotics, and then fed them the yeast *Candida albicans*. (Increased growth of *Candida* in the gastrointestinal tract is a common side effect of antibiotic treatment.) The researchers then exposed the mice to common mold spores. The mice treated with antibiotics and colonized with *Candida* developed an allergic response in the lungs after mold exposure, while mice which did not receive antibiotics remained healthy. Similar findings were seen when the researchers challenged the antibiotic-treated animals with an egg protein often associated with allergies.

The researchers say the immune dysfunction seen in antibiotic-treated mice occurs when beneficial gut flora are killed by the drugs. "Antibiotics knock out bacteria in the gut, allowing fungi to take over temporarily until the bacteria grow back after the antibiotics are stopped," Huffnagle says. "Our research indicates that altering intestinal microflora this way can lead to changes in the entire immune system, which may produce symptoms elsewhere in the body."

Huffnagle notes that fungi in the gut can secrete compounds called oxylipins, and that an excess of oxylipins may prevent the development of regulatory T-cells, leading to an overreactive immune system response against allergens.

"Antibiotics alter GI tract microbes and increase lung sensitivity to allergens," news release, University of Michigan Health System, May 26, 2004.

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"Allergies may all be in the gut, study finds," Reuters, May 26, 2004.

Rep. Weldon (cont. from page 6)

So, as you can see, the work is really not being done. Not by the CDC. Not by the FDA. And, not by the NIH.

It is critical that we take action to eliminate the conflicts of interest that are inherent within the CDC's vaccine safety monitoring office, and that we ensure that there is a concerted and independent effort within the federal government to monitor for adverse reactions to vaccines. Unfortunately, this is not the case today.

I am working on legislation that will ensure that vaccine safety monitoring is completely independent..... As I develop this proposal, I will be working to ensure that those responsible for this duty are free from conflicts of interest and have as their sole focus the following:

- Determining what these adverse reactions are
- Understanding why some individuals have adverse reactions, and
- How we might best ensure that such reactions are avoided.

Autism is a difficult challenge facing our nation. We have made considerable progress through groups like DAN! and other autism organizations. The work you are doing here today, is work that must continue. I commend you for all that you are doing. I commend in particular, the researchers who are engaged to develop a deeper understanding of what is going on with these children and how we might improve their treatments. I am hopeful that those down at the NIH and the CDC will be more supportive of your work.

I also commend the parents who have failed to give up on their children. I commend you for your dedication to want the best for your children and for the sacrifices you have made for them.

I urge you to take your story to your Member of Congress and your Senator. Share it with all who are willing to listen. It is through your testimony that others will know of this hope.

Finally, let me know what I can do to help. I stand in partnership with each of you.

Thank you for inviting me to join you today. It has been a true honor.

Study implicates MMR (continued from page 1)

Noting that their findings conflict with those from epidemiological studies that claim no link between MMR and autism, Bradstreet and colleagues point out that "epidemiologic studies that have examined this relationship have lacked statistical power and have failed to test the correct hypothesis." The researchers say researchers should focus specifically on testing for viral persistence in subjects who have suffered autistic regression following exposure to live-virus vaccines.

Bradstreet concludes, "While MMR vaccine is generally considered safe, we propose a subset of genetically vulnerable children lack the ability to clear the vaccine strain of the virus and that this is—on the balance of the available biological data—a direct cause of their symptoms. We recognize the failure of epidemiology to validate these observations, and believe this specific hypothesis has never been adequately tested with any previous epidemiological study."

J.J. Bradstreet, J. El Dahr, A. Anthony, J.J. Kartzinel, and A.J. Wakefield, "Detection of measles virus genomic RNA in cerebrospinal fluid of children with regressive autism: A report of three cases," *Journal of American Physicians and Surgeons*, Vol. 9, No. 2, Summer 2004, 38-45. Full paper is available free of charge at <http://www.sarnet.org/lib/3cases.pdf>.

—and—

"New study supports possible link between MMR vaccine and autism virus detected in spinal fluid of children with autism, but not controls," news release, International Child Development Resource Center, June 10, 2004.

Secretin (continued from p. 2)

evidence links autism to altered glutamate activity, the researchers say that their findings "may explain the results of the [Karoly] Horvath study"—the first study to show dramatic improvement in autistic children following secretin treatment.

"Hormone may offer hope for treating some behavioral disorders," news release, American Academy of Neurology, April 27, 2004. The findings of Gruber et al. were reported at the annual meeting of the Academy in April 2004.

—and—

"The impact of early and late damage to the human amygdala on 'theory of mind' reasoning," P. Shaw, E. J. Lawrence, C. Radbourne, J. Bramham, C. E. Polkey, and A. S. David, *Brain*, May 20, 2004 (epub ahead of print).

—and—

"The amygdala is enlarged in children but not adolescents with autism; the hippocampus is enlarged at all ages," C. M. Schumann et al., *Neuroscience*, Vol. 24, No. 28, 2004, 392-401.

—and—

"Effects of secretin on extracellular amino acid concentrations in rat hippocampus," A. Kuntz, H. W. Clement, W. Lehnert, D. Van Calker, K. Hennighausen, M. Gerlach, and E. Schulz, *Journal of Neural Transmission*, Vol. 111, No. 7, July 2004, 931-9.