

Biomedical Update:

Can antidepressants worsen depression?

The drugs used to treat depression may actually make many people more depressed over the long term, according to a recent literature review.

Giovanni Fava ran a Medline search for articles on negative long-term effects of antidepressants. "A number of reported clinical findings," Fava says, "point to the following possibilities: very unfavorable long-term outcome of major depression treated by pharmacologic means, paradoxical (depression-inducing) effects of antidepressant drugs in some patients with mood and anxiety disturbances, antidepressant-induced switching and cycle acceleration in bipolar disorder, occurrence of tolerance to the effects of antidepressants during long-term treatment, onset of resistance upon rechallenge with the same antidepressant drug in a few patients, and withdrawal syndromes following discontinuation of mood-elevating drugs."

Fava says that these effects can be explained by the "oppositional model" of drug tolerance. According to this model, continued drug treatment can cause the brain to react in ways that counter the drug's effects, leading to reduced effectiveness. Moreover, when a drug is discontinued, the brain's "oppositional" processes may continue, leaving an individual highly vulnerable to relapse.

"Can long-term treatment with antidepressant drugs worsen the course of depression?" Giovanni A. Fava, *Journal of Clinical Psychiatry*, Vol. 64, 2003, 123-33. Address: Giovanni A. Fava, Dipartimento di Psicologia, Viale Berti Pichat 5, 40127 Bologna, Italy.

Autistic children pay attention to sounds, but not to words

The brainwave patterns of autistic children indicate that they can correctly sense and pay attention to both simple and complex sounds, but fail to orient their attention to speech sounds.

Rita Ceponiene and colleagues evaluated the response of nine high-functioning autistic children and ten non-disabled children to simple tones, complex tones, and vowels, measuring the children's reactions to changes in the frequency or duration of a tone or vowel sound. They found that:

- Neither group of children exhibited deficits in the sensory processing of either tones or speech sounds.
- Non-disabled children were able to orient their attention to changes in simple tones,

complex tones, and vowels. Autistic children attended to changes in both simple and complex sounds, but paid no attention at all to changes in vowels.

In short, the researchers say, "there appears to be a striking dissociation between the sensory (normal) and attentional (impaired) processing of speech sounds in high-functioning children with autism."

They note that such a deficit, if it occurs in infancy, could "profoundly compromise the development of verbal and nonverbal communication skills in the affected children."

"Speech-sound-selective auditory impairment in children with autism: They can perceive but do not attend," R. Ceponiene, T. Lepisto, A. Shestakova, R. Vanhala, P. Alku, R. Naatanen, and K. Yaguchi, *Proceedings of the National Academy of Sciences*, Vol. 100, No. 9, April 29, 2003, 5567-72. Address: Rita Ceponiene, Center for Research in Language, University of California at San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0113, rceponiene@crl.ucsd.edu.

—and—

"Autistic kids grasp changes in music, not words," Alison McCook, Reuters, April 14, 2003.

SHOULD YOU VACCINATE?

ARI receives numerous inquiries from parents who are understandably concerned about vaccinating their autistic children or siblings who may share a genetic vulnerability. To receive our free Vaccine Information Letter, send a self-addressed stamped envelope (regular #10 envelope) with 60 cents U.S. postage.

Much of the advice contained in our Vaccine Information Letter may be found on our website at www.AutismResearchInstitute.com. Some important points are:

1. Don't vaccinate a sick child.
2. Delay vaccination as long as you can.
3. Space out the vaccines.
4. No mercury (thimerosal).

Schools and so-called "health professionals" often tell parents that they are legally compelled to vaccinate. However, the state laws differ greatly on this issue. Information on state laws, and a great deal of additional vaccine-related information, may be obtained at www.thinktwice.com or by phoning 505-983-1856 and asking for the New Atlantean Press catalog.

Holmes study: mercury levels in autistic hair indicate connection

Recent findings reported by Amy Holmes and colleagues are generating new controversy over the connection between mercury and autism.

Holmes et al. have expanded on an earlier study of hair mercury levels in autistic children, this time comparing mercury levels in first baby haircuts from 94 autistic children with levels in 45 non-disabled children. The mercury in samples from autistic children was negligible (0.47 parts per million), compared to 3.63 parts per million for controls. Moreover, the more severe the autistic children's symptoms were, the lower their mercury levels were, with the most severely affected children averaging only 0.21 parts per million. Additionally, autistic children's mercury levels—unlike those of the control children—were not related to maternal mercury exposure.

Study co-author Mark Blaxill says one explanation for the finding is that autistic children have a problem with metal uptake, which could indicate that they also have difficulty with the uptake of metals essential for normal brain development such as zinc, iron, and copper. Another explanation, he says, is that autistic children may be impaired in excreting mercury, a potent neurotoxin.

Behavioral psychologist Frank Marone has criticized the new study, saying that hair samples are not universally accepted as valid, and that that children with low hair levels "may simply have been exposed to less mercury." Blaxill responds that Marone has not read the study (which will not be published until September), was mistaken as to the study design and conclusions, and "neglect[ed] even a rudimentary attempt to review the facts." For example, he notes, the study was not—as Marone indicated—a test of the effects of mercury-containing vaccines on the risk of developing autism.

Says Blaxill, "The study compares relative rates of exposure in all measurable categories *except* childhood vaccines, and examines the only clinical samples available retrospectively [hair samples] that might speak to such exposures. It demonstrates clear evidence of different metabolism of mercury in autistic infants when compared to controls. That's all it does. But that's a lot."

Holmes et al.'s research will be published in the *International Journal of Toxicology* in September 2003.