

Autism Research Review

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

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

New warning about drug danger

A San Francisco researcher warns that as many as 7,500 mentally handicapped individuals may suffer each year from a serious reaction to neuroleptic drugs (Haldol, chlorpromazine, etc.), and that this reaction "may, in fact, be a significant contributor to unexplained death among members of this population."

Symptoms of the drug reaction, called "neuroleptic malignant syndrome," include fever, severe muscle rigidity, profuse sweating, rapid heartbeat and breathing, pallor, a mask-like expression, tremulousness, incontinence, inability to speak, delirium, stupor, and/or coma. The syndrome may be caused by the blocking of dopamine receptors by the drugs, resulting in disruption of the body's temperature regulating and muscle control mechanisms.

While neuroleptic malignant syndrome is a well-known drug complication, Boyd says that "the disorder is thought to be largely unrecognized and underreported even within the psychiatric community." Although statistics suggest that the syndrome affects only about one percent of individuals taking neuroleptic drugs, Boyd's research indicates that the incidence is significantly higher in the retarded population—and that the effects are often more serious. "Of particular interest," he says, "is the high fatality rate (21%) that is approximately double the rate reported for the 'general' population in the most recent retrospective reviews." Boyd says the higher fatality rate for retarded individuals could be due to an innate susceptibility or "might be a function of other characteristics associated with mental retardation, such as behavioral characteristics (e.g., poor verbal abilities, a tendency toward withdrawal, presence of stereotypies) or setting characteristics (poorly trained caregivers) that in turn result in the delayed recognition of and appropriate response to neuroleptic malignant syndrome."

Boyd notes that the syndrome is more common in males than in females, and often follows the introduction of a new neuroleptic drug or an increase in dosage. In addition, it often is linked to high dosages, and is most common with the drug Haldol (haloperidol). In all but one of the 29 cases Boyd recently reviewed, the syndrome occurred in individuals taking multiple neuroleptic drugs or a high-potency single drug. But he notes the syndrome can be "insidious," sometimes striking people taking low doses of medication or those who have been

on stable dosages for long periods. Resuming administration of neuroleptic drugs following an episode of neuroleptic malignant syndrome is "problematic," Boyd notes, with the risk of recurrence being particularly high if the drug is re-started within two weeks following the episode.

Boyd recommends that practitioners prescribing neuroleptic drugs reexamine the need for such treatments, consider the use of non-neuroleptic drugs, educate caregivers about the symptoms of neuroleptic malignant syndrome, and use the lowest effective dosages. "'Rapid neuroleptization' via intramuscular injection of a high-potency neuroleptic seems particularly ill-advised," he cautions. He suggests that individuals with a history of neuroleptic malignant syndrome wear MedicAlert bracelets to warn medical personnel about their susceptibility to the disorder.

"Neuroleptic malignant syndrome and mental retardation: review and analysis of 29 cases," Richard D. Boyd; *American Journal on Mental Retardation*, 1993, Vol. 98, No. 1, pp. 143-155. Address: Richard D. Boyd, Golden Gate Regional Center, 120 Howard Street, San Francisco, CA 94105.

Vitamin B6 controls seizures

German researchers plan to conduct a large-scale, multi-center trial of vitamin B6 in the treatment of seizures, following a pilot study showing that B6 effectively controlled infantile spasms (a form of seizure) in nearly one-third of study subjects.

J. Pietz and colleagues administered massive doses of B6 (300 mg/kg/day) to 17 children, some with brain damage and others with seizures of unknown origin. None of the children had classic B6-dependency seizures (which occur in children with inborn abnormalities in B6 metabolism). "Within four weeks," the researchers say, "all responders [five of the 17 subjects] were free of seizures." None of the subjects have since exhibited infantile spasms, although two developed different types of seizures.

Side effects reported by the researchers included loss of appetite, restlessness, gastritis, and vomiting; in all cases, side effects were eliminated by reducing the B6 dosage. The few side effects, the researchers

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Non-aversive treatments:

Progress reported, but no breakthroughs

Aversive procedures—for instance, water sprays or mild electric shock—are sometimes used to stop head-banging, eye-gouging, and other forms of severe self-injury (SIB) or aggression. Aversives are considered unnecessary and objectionable by certain groups and individuals, and frequent attempts have been made, at both the state and federal level, to enact legislation that would ban the use of such procedures.

Despite the attempts to ban aversives, even those who oppose them most ardently acknowledge that non-aversive methods often fail to stop SIB. The very vocal TASH (The Association for Persons with Severe Handicaps) published a report in 1991 stating that non-aversive methods are effective in only 60% of cases. Anti-aversives advocate Robert Horner stated in 1988, "We do not believe that a comprehensive, non-aversive technology for behavior management already exists...that will be effective with all individuals in all settings." Anne Donnellan and Gary LaVigna, both outspoken opponents of the use of aversives,

acknowledge that they may be required after at least three attempts to use non-aversives have failed.

In 1989, in response to growing pressure from anti-aversives groups to ban the use of aversive procedures entirely, the U.S. government awarded a 5.5 million-dollar grant to a multi-university research team, headed by Robert Horner et al., to study the effectiveness of existing non-aversive techniques, to develop new techniques, and to disseminate information about non-aversive approaches to professionals and parents. At the time, the hope of some participants was that such methods could completely replace the use of aversives, with similar or even better results in controlling behavior problems.

Five years later, the news from the researchers involved in the project is mixed: significant strides have been made in refining existing non-aversive techniques, but non-aversive procedures are still far from universally effective—and few new ap-

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