

# Autism Research Review

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

A quarterly publication of the Institute for Child Behavior Research

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

## Naltrexone: two more positive reports

Two new studies of naltrexone add evidence that the drug may help autistic children, and may be safer than many of the drugs now in use.

Researchers first tested naltrexone several years ago (see cover story in *ARRI* Vol. 1, No. 2). The drug blocks brain cell receptors for opioids—natural opium-like substances produced by the body—which may be unusually high in autistic persons.

High opioid levels may contribute to self-injury in the autistic, because opioids block pain. Also, permanently high opioid levels may make hugging and other physical contact less rewarding to autistic people than to normal individuals, who appear to experience an opioid "high" from such contact. Both opium addicts and animals given opiate drugs exhibit withdrawal and other symptoms similar to those of people with autism.

### Campbell results encouraging

When Magda Campbell and colleagues first tested naltrexone on eight autistic children in 1987, they found that the children on the drug had better eye contact and social behavior, as well as less aggression and stereotyped behaviors. In a new study, Campbell et al. again report encouraging findings.

In this experiment, the researchers tested differing doses of naltrexone on 10 autistic children ages three to six. They report that:

- The children were significantly less withdrawn at all dose levels.
- Stereotyped behaviors (hand-flapping, etc.) were greatly reduced at the highest dose level (2 mg/kg/day).
- The children verbalized more at the lowest dose (.5 mg/kg/day).

- Teachers noted significant behavior improvements at all dose levels.
- The only side effect noted was mild sedation in seven cases. The researchers believe that decreases of stereotypies, restlessness, temper outbursts, and other disruptive behaviors were unrelated to the "slight and transient" sedation.
- Results of liver function and cardiovascular tests were normal throughout the study. The tests were conducted because of concern raised by previous reports of liver test abnormalities in adult long-term naltrexone users.
- No changes in eating and sleep patterns or weight were seen, except in the case of one child whose autistic behaviors in-

cluded regurgitating his food. This behavior stopped while he was on naltrexone.

In this study—unlike Campbell's first study—aggression and self-injury were only slightly reduced by naltrexone in the overall group. However, one child who was both hyperactive and aggressive showed significant lessening of both behaviors on the drug.

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### A letter from Bruno Bettelheim (see page 6)

## Gentle Teaching: how effective?

"Gentle Teaching"—a totally non-aversive teaching approach that emphasizes bonding between teacher and student—does not handle all behavior problems, does not appear to cause greater bonding between staff and students than other techniques, and may be significantly less effective than mild aversives combined with rewards, according to a new study by Jennifer Jordan et al.

Jordan's report appears to be the first scientifically designed evaluation of the Gentle Teaching method. Developed by John McGee, Gentle Teaching emphasizes establishing a relationship or "bond" between teacher and student. McGee contends that "persons who persistently hit, bite, kick, scratch, self-stimulate, or withdraw have not bonded with their care givers," and that teachers must "help behaviorally involved persons move from a state of emotional distancing to one of meaningful human engagement so that they will find it unnecessary to express their needs through primitive or harmful responses."

In Gentle Teaching, training specific skills is secondary to promoting personal interaction between student and teacher. Gentle Teaching uses several standard techniques such as setting up "no-lose" learning situations, ignoring misbehavior, interrupting self-injury or aggression, and redirecting students to appropriate activities, but opposes the use of any punishments or aversive techniques, including verbal reprimands.

The aim of Gentle Teaching, according to McGee, is to turn every interaction into an opportunity for students to be rewarded. McGee also stresses that teachers must replace an "authoritarian" teacher-student relationship with one of "mutual interdependence" and "solidarity."

### Screening "clearly most effective"

Working with three retarded people whose behavior problems included stereotypy and aggression, Jordan and her colleagues compared Gentle Teaching and a procedure using a mild aversive, to see: a) which technique more effectively reduced stereotyped behaviors, b) which technique seemed to cause more bonding between students and teachers, and c) which technique had more effect on other behaviors such as aggression. The aversive used was facial screening, in which the teacher placed a hand over the eyes of the subject for a few seconds each time hand-waving or other self-stimulating behaviors occurred.

While the subjects improved under both training techniques, Jordan and colleagues say that "visual screening was clearly the most effective procedure for all subjects." Under Gentle Teaching, the average rate of stereotyped behavior was 54%; for visual screening, it was only 17% (and dropped to 5% in later sessions).

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