

Attention and Learning Deficit Disorders: Impressions of Combined Treatment with Amino Acids and Hemi-Sync®

Posted By [The Monroe Institute](#) On February 25, 2009 @ 5:59 pm In [ADD/ADHD, Attention, Children, Fall 1994, Peter J. Van Der Schaar, Qualitative, Quantitative, Research, The Journal, clinical trial, hyperactivity, nutrition](#) | [Comments Disabled](#)

by **Peter J. Van Der Schaar, MD, PhD**
Fall 1994

Peter J. Van Der Schaar has been a Monroe Institute® [Professional Member](#) ^[1] since the fall of 1991. A former cardiovascular surgeon, he now directs the International Biomedical Center, Leende, Netherlands. Dr. Van Der Schaar is dedicated to adding a holistic dimension to his practice of medicine. Cardiovascular and cancer patients constitute 75 percent of the center's caseload, while an additional 10 percent are learning-disabled children. The following report describes preliminary results of a study that employed a special set of [Hemi-Sync](#) ^[2] tapes for Attention Deficit Disorder (ADD) in conjunction with amino acid therapy for a group of twelve children.

Introduction

Attention and learning deficit disorders are increasingly recognized as being caused by nutritional deficiencies (1), food intolerance (2), resistance to thyroid hormone (3), artificial food additives (4), cerebral glucose metabolism (5), lead intoxication (6), zinc status (7,8), and other factors. This syndrome is usually accompanied by hyperactivity. Only a few reports are available on amino acid balance in these children (9).

Patients, Materials, and Methods

This study included three female and nine male children with attention and learning disorders, aged from five to thirteen years at admission (mean 8.5 years). Ten patients were referred by a pediatric psychologist and two children were referred by friends. Eight patients underwent EEG testing and four of these had already received six months of treatment in our center. The EEG will not be discussed here. Serum amino acid balance was determined in six of the children (Aatron Medical Services, Inc., Hawthorne, CA).

All children received amino acid supplementation from the onset of their treatment, in combination with vitamin B6 and restriction of refined carbohydrate consumption. Five children also received the Sornson/Monroe (10) Hemi-Sync ADD tapes (12 and 16 Hz) at the same time. Three children started with these tapes three, four, and six months later, while continuing their nutritional supplementation. All observations were made after at least seven months of treatment. The longest observation period with nutritional supplementation is more than five years (mean 3.2 years).

Results

In all cases in which amino acids were determined, low levels of taurine and asparagine were found, suggesting problems with neurotransmission. In addition to low taurine levels, low cystine levels were a constant finding, which is suggestive for food or food additives intolerance. In three children, low levels of the glycogenic amino acids were also found. Another constant finding in these children was malabsorption, confirmed by protein flocculation tests (Sandor-Augusti), and suggested by low levels of the urea cycle amino acids. After supplementation of amino acid compounds with vitamin B6 as a coenzyme, all patients showed gradual, marked improvements after three to six months.

The most striking initial improvements were that patients were less tired and hyperactive at school although not at home. Then, between three and six months, improvement in learning, concentration, and attention also could be noticed at home. These findings were confirmed by standard psychological tests. The amino acid treatment usually has to be maintained for at least three to four years to have a lasting result. Three children temporarily discontinued supplementation during six weeks of vacation. After only one week, the symptoms reoccurred. We have the strong impression that when new patients used amino acid supplementation in combination with the Hemi-Sync ADD tapes, initiation of improvement was achieved much faster. The effect of the tapes in patients pretreated with amino acids was less obvious.

In children who used the tapes from the onset of therapy, the following differences were observed:

- * When using the amino acids only, the first improvements were noticed at school, i.e., better attention, better scores. At home, the hyperactivity and midday tiredness often showed an increase at first, followed by gradual improvement after several months. With the tapes, in all but one child, the hyperactivity was much less noticeable. Behavior usually improved within two to three weeks.
- * The children using the tapes had fewer objections to taking the amino acid supplementation and obeying the diet restrictions.
- * Three children preferred the A-type tape (12 and 16 Hz), but after two to three months they wanted to change it for the B tape (8,16, and 24 Hz).
- * One child could not make up his mind and had no tape preference.
- * One patient did not tolerate the tapes, which made him nervous. The others used them for an average of five months and then did not feel the need for them anymore.

Discussion

Hyperactivity and learning and attention deficit disorders in children are complex conditions with multiple approaches for treatment, including dietary measures, nutritional supplementation, remedial teaching, vision correction, and elimination of toxic substances. It is unlikely that one single mode of treatment can achieve optimal results in these cases, but amino acid supplementation must play an important role. Many of these children appear to have some degree of malabsorption, which may be responsible for an insufficient metabolic supply of amino acids. This aspect has not received sufficient attention until now and seems to be critical in view of the role of amino acids in neurotransmission. The other, no less important, factor is that the Hemi-Sync technology has proven its value in improving effective cerebral function—apparently with children as well as adults.

The data suggests that a combined approach with amino acids and Hemi-Sync may achieve a faster and more balanced improvement than nutritional measures alone. Reciprocally, it seems logical that for the best results with Hemi-Sync, an optimal biochemical substrate is desirable. In view of the results achieved with this combination of therapeutic measures, it also seems logical to recommend them as a standard component in the treatment of children with hyperactivity and learning and attention deficit disorders.

Summary

This study included twelve children with attention and learning deficit disorders. Serum amino acid analysis in six children showed that all had deficits in levels of taurine, asparagine, and cystine, while three patients also had low levels of glycolytic amino acids. All patients showed a malabsorption in the Sandor-Augusti hypo-protein profile. All patients receiving amino acid supplementation showed moderate to outstanding results. These results could be optimally enhanced by Hemi-Sync at the onset of amino acid supplementation. But, even after six months' pretreatment with amino acids, Hemi-Sync was a valuable addition to the treatment. It is recommended that amino acid supplementation and Hemi-Sync form a standard part of the treatment of learning and attention deficit disorders.

Literature

1. Kaplan, B. J., et al. 1989. Overall nutrient intake of preschool hyperactive and normal boys. *Journal of Abnormal Child Psychology* 17 (2): 127-32.
2. Bunday, S., and V. Sunday. 1990. Why the lack of treatment for hyperactive children? *Journal of Nutritional Medicine* 1: 361-63.
3. Hauser, P., A. J. Zimetkin, and P. Martinez. 1993. Attention deficit-hyperactivity disorder in people with generalized resistance to thyroid hormone. *New England Journal of Medicine* 328: 997-1001.
4. Pollock, I. 1991. Hyperactivity and food additives. *Bibliotheca Nutritio Ex Dieta* (48): 81-89.
5. Zimetkin, A. J., T. E. Nordahl, and M. Gross. 1990. Cerebral glucose metabolism in adults with hyperactivity of childhood onset. *New England Journal of Medicine* 323:1361-66.
6. Lead detection and abatement report. 1992. 2-1.
7. Budyk, R. 1990. Zinc deficiency in attention deficit hyperactivity disorder. *International Journal of Neuroscience* 52 (3-4): 239-41.
8. McGee, R., et al. 1990. Hyperactivity and serum and hair zinc levels in eleven-year-old children from the general population. *Biological Psychiatry* 28 (2): 165-68.
9. Bornstein, R. A., et al. 1990. Plasma amino acids in attention deficit disorder. *Psychiatry Research* 33 (3): 301-6.
10. Hemi-Sync®. Robert Monroe, The Monroe Institute, 365 Roberts Mountain Road, Faber, VA 22938. Hemi-Sync ADD tapes. Robert O. Sornson, EdS

Hemi-Sync® is a registered trademark of Interstate Industries, Inc.

© 1994 by [The Monroe Institute](http://www.monroeinstitute.org) ^[3]

Article printed from The Journal: <http://www.monroeinstitute.org/journal>

URL to article: <http://www.monroeinstitute.org/journal/attention-and-learning-deficit-disorders-impressions-of-combined-treatment-with-amino-acids-and-hemi-sync/>

URLs in this post:

[1] Professional Member: <http://www.monroeinstitute.org/journal/professional-membership/>

[2] Hemi-Sync: <http://www.monroeinstitute.org/journal/hemi-sync/>

[3] The Monroe Institute: <http://www.monroeinstitute.org>