Double-blind, placebo-controlled study of L-carnosine supplementation in children with autistic spectrum disorders.


Source

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Abstract

L-Carnosine, a dipeptide, can enhance frontal lobe function or be neuroprotective. It can also correlate with gamma-aminobutyric acid (GABA)-homocarnosine interaction, with possible anticonvulsive effects. We investigated 31 children with autistic spectrum disorders in an 8-week, double-blinded study to determine if 800 mg L-carnosine daily would result in observable changes versus placebo. Outcome measures were the Childhood Autism Rating Scale, the Gilliam Autism Rating Scale, the Expressive and Receptive One-Word Picture Vocabulary tests, and Clinical Global Impressions of Change. Children on placebo did not show statistically significant changes. After 8 weeks on L-carnosine, children showed statistically significant improvements on the Gilliam Autism Rating Scale (total score and the Behavior, Socialization, and Communication subscales) and the Receptive One-Word Picture Vocabulary test (all P < .05). Improved trends were noted on other outcome measures. Although the mechanism of action of L-carnosine is not well understood, it may enhance neurologic function, perhaps in the enterorhinal or temporal cortex.

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