Autismo infantil: a vitamina B6 e o magnésio estão indicados?

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Niacin and vitamin B6 in mental functioning: a review of controlled trials in humans.
Resumo: Fifty-three controlled trials of the effects of niacin, vitamin B6, and multivitamins on mental functions are reviewed. The results are interpreted with emphasis on the methodological quality of the trials. It turns out that virtually all trials show serious shortcomings: in the number of participants, the presentation of baseline characteristics and outcomes, and the description of changes in concomitant treatments. Only in autistic children are some positive results found with very high dosages of vitamin B6 combined with magnesium, but further evidence is needed before more definitive conclusions can be drawn. For many other indications (hyperactive children, children with Down's syndrome, IQ changes in healthy schoolchildren, schizophrenia, psychological functions in healthy adults and geriatric patients) there is no adequate support from controlled trials in favor of vitamin supplementation.

Electrophysiological effects of fenfluramine or combined vitamin B6 and magnesium on children with autistic behaviour.
: Dev Med Child Neurol; 31(6):721-7, 1989 Dec. Martineau J; Barthelemy C; Roux S; Garreau B; Lelord G
Resumo: The authors compared the effects of fenfluramine or combined vitamin B6 and magnesium treatment on the evoked potential conditioning of 12 children whose autistic behaviour had improved clinically following treatment. The children who were clinically sensitive to combined vitamin B6 and magnesium developed a conditioning phenomenon and the fenfluramine-sensitive children showed an enhancement of the Cz evoked response amplitude. Results are discussed with reference to behaviour modifications observed during treatment.

Controversies in the treatment of autistic children: vitamin and drug therapy.
J Child Neurol; 3 Suppl:S68-72, 1988. Rimland B
A survey of approximately 4,000 questionnaires completed by parents of autistic children provided ratings on a variety of treatments and interventions. Among the biomedical treatments, the use of high-dosage vitamin B6 and magnesium (n = 318) received the highest ratings, with 8.5 parents reporting behavioral improvement to every one reporting behavioral worsening. Deanol (n = 121) was next most highly rated, with 1.8 parents reporting improvement to each one reporting worsening. Fenfluramine (n = 104) was third, with a ratio of 1.5:1. Thioridazine hydrochloride (Mellaril), by far the most often used drug on the list (n = 724), was fourth with a helped-worsened ratio of 1.4:1. The research literature on the use of vitamin B6-magnesium is briefly reviewed, and mention is made of recent findings regarding high-dosage folic acid in autism and biotin in Rett syndrome.

Long-term effects of combined vitamin B6-magnesium administration in an autistic child.
Biol Psychiatry; 21(5-6):511-8, 1986 May. Martineau J; Barthelemy C; Lelord G
Vitamin B6, magnesium, and combined B6-Mg: therapeutic effects in childhood autism.
Biol Psychiatry;20(5):467-78, 1985 May. Martineau J; Barthelemy C; Garreau B; Lelord G
This article reports the behavioral, biochemical, and electrophysiological effects of four therapeutic crossed-sequential double-blind trials with 60 autistic children: Trial A--vitamin B6 plus magnesium/magnesium; Trial B--vitamin B6 plus magnesium; Trial C--magnesium; and Trial D--vitamin B6. Therapeutic effects were controlled using behavior rating scales, urinary excretion of homovanillic acid (HVA), and evoked potential (EP) recordings. The behavioral improvement observed with the combination vitamin B6-magnesium was associated with significant modifications of both biochemical and electrophysiological parameters: the urinary HVA excretion decreased, and EP amplitude and morphology seemed to be normalized. These changes were not observed when either vitamin B6 or magnesium was administered alone.

Clinical and biochemical value of Magnesium + vitamin B6 combination in the treatment of residual autism in adults
Intérêt clinique et biochimique de l'association vitamine B6 + magnésium dans le traitement de l'autisme résiduel à l'âge adulte..
Therapie;39(6):661-9, 1984 Nov-Dec. Jonas C; Etienne T; Barthélemy C; Jouve J; Mariotte N

New developments in pediatric psychopharmacology.
Resumo: This is a report on recent developments in pediatric psychopharmacology: new drugs and new applications for established drugs. The drugs reviewed include imipramine, amitryptiline, lithium, piracetam, propranolol, tryptophan, clonidine, pyridoxine and fenfluramine. Putative indications include prepubertal depression, school phobia, anorexia nervosa, explosive-aggressive behavior, learning disabilities, attention deficit disorder (hyperactivity), Tourette's syndrome, autism, and the Lesch-Nyhan syndrome. Some of the information presented in this report must be regarded as [quot ]preliminary,[quot ] and caution is advised in its interpretation and application.

Clinical and biological effects of high doses of vitamin B6 and magnesium on autistic children.
País de publicação: ITALY
In 1973 Rimland reported that some autistic children responded favorably to high doses of vitamin B6. Since this finding, different studies were performed to identify apparently B6 responsive subjects and to critically evaluate clinical and biological B6 responsiveness. Magnesium was included because large doses of B6 might increase irritability. 44 patients (mean age 9.3 years) were examined. All selected children had marked autistic symptoms. The children received a complete diagnostic work-up, including psychiatric, psychological, neurological and medical evaluation. Clinical data were scored using an estimate of global clinical state and numerical rating on a 18 item scale (Behavior Summarized Evaluation). In a first open trial 15 out of 44 children exhibited moderate clinical improvement with worsening on termination of the trial. Thirteen responders and 8 non responders were re-tested in a 2-week crossover, double-blind trial and the responses to the open trial were confirmed. Biochemical data analysis revealed that a significant decrease in urinary homovanillic acid (HVA) levels was observed during B6-Mg administration. During B6-Mg treatment, middle latency evoked potentials exhibited a significant increase of amplitude.
**Effects of pyridoxine and magnesium on autistic symptoms--initial observations.**
J Autism Dev Disord;11(2):219-30, 1981 Jun. Lelord G; Muh JP; Barthelemy C; Martineau J; Garreau B; Callaway E
Resumo: In an open trial, a heterogeneous group of 44 children with autistic symptoms were treated with large doses of vitamin B6 and magnesium. Clinical improvement with worsening on termination of the trial was observed in 15 children. Thirteen responders and 8 nonresponders were retested in a 2-week, crossover, double-blind trial, and the responses to the open trial were confirmed.

**Biological and clinical effects of oral magnesium and associated magnesium-vitamin B6 administration on certain disorders observed in infantile autism (author's transl)**
Therapie;35(5):627-32, 1980 Sep-Oct. Barthelemy C; Garreau B; Leddet I; Sauvage D; Domenech J; Muh JP; Lelord G
País de publicação: FRANCE

**Plasma levels of folates, riboflavin, vitamin B6, and ascorbate in severely disturbed children.**
Resumo: The recent upsurge in megavitamin therapy raises questions about the role of vitamin deficiencies and dependencies in mental health. With this in mind, the plasma levels of folic acid, ascorbic acid, pyridoxine, and riboflavin were studied in approximately 125 children admitted to a child psychiatric unit. There were no apparent decreased levels of vitamins in these children in terms of their age, race, or psychiatric diagnosis. It is postulated that vitamin deficiencies per se cannot be proposed as etiological factors in any of the psychiatric deficits represented. Megavitamin therapy, if successful, is not effective due to correction of vitamin deficiencies as opposed to vitamin dependencies and may be due to the metabolic onus and consequent effects of such heavy doses of vitamins.

**Modifications in urinary homovanillic acid after ingestion of vitamin B6; functional study in autistic children**
Rev Neurol (Paris);134(12):797-801, 1978 Dec. Lelord G; Callaway E; Muh JP; Arlot JC; Sauvage D; Garreau B; Domenech J
País de publicação: FRANCE
Resumo: Basing their study on the investigations which led to the dopaminergic theory of the psychoses, the authors studied homovanillic acid (principal derivative from dopamine) levels in the urines of 37 autistic children, and 11 normal children acting as controls. The favourable action of vitamin B6 on autism, reported by anglosaxon authors, was confirmed in 15 of the children. Furthermore, vitamin B6 reduces homovanillic acid levels in 33 autistic children and increases them in all the control group children.
The effect of high doses of vitamin B6 on autistic children: a double-blind crossover study.
Resumo: The authors used data from an earlier nonblind study to identify 16 autistic-type child outpatients who had apparently improved when given vitamin B6 (pyridoxine). In a double-blind study each child's B6 supplement was replaced during two separate experimental trial periods with either a B6 supplement or a matched placebo. Behavior was rated as deteriorating significantly during the B6 withdrawal.

A 15-year follow-up of a boy with pyridoxine (vitamin B6)-dependent seizures with autism, breath holding, and severe mental retardation.
J Child Neurol;15(11):763-5, 2000 Nov. Burd L; Stenehjem A; Franceschini LA; Kerbeshian J
Resumo: Pyridoxine (vitamin B6) (2q31) dependency is a rare autosomal-recessive disorder that causes a severe seizure disorder of prenatal or neonatal onset. The abnormality appears to inhibit the binding of vitamin B6 to the enzyme glutamic acid decarboxylase-1, which is needed for the biosynthesis of gamma-aminobutyric acid (GABA). Most patients with pyridoxine-dependent seizures require lifelong treatment with pyridoxine. The full range of associated symptomatology is unknown since fewer than 100 cases have been reported. A majority of cases are mentally retarded. We report a 15-year-old boy with pyridoxine-dependent seizures, nonpyridoxine-dependent seizures, severe mental retardation, autistic disorder, aerophagia, breath holding, and self-injury. This complex outcome should alert clinicians to the wide range of neuropsychiatric outcomes associated with this disorder.

High dose vitamin B6 and magnesium in treating autism: response to study by Findling et al.

Critique of [quot ]Efficacy of vitamin B6 and magnesium in the treatment of autism[quot ].

High-dose pyridoxine and magnesium administration in children with autistic disorder: an absence of salutary effects in a double-blind, placebo-controlled study.
Comment In: J Autism Dev Disord. 1998 Dec;28(6):581-2 Findling RL; Maxwell K; Scotese-Wojtula L; Huang J; Yamashita T; Wiznitzer M
Resumo: Several reports have described salutary effects such as decreased physical aggression and improved social responsiveness being associated with the administration of high doses of pyridoxine and magnesium (HDPM) in open-labeled and controlled studies of patients with autism. Despite this fact, this intervention remains controversial. A 10-week double-blind, placebo-controlled trial was undertaken to examine both the efficacy and safety of HDPM in autism. Twelve patients were enrolled, and 10 patients (mean age 6 years 3 months) were able to complete the study. HDPM at an average dose of 638.9 mg of pyridoxine and 216.3 mg of magnesium oxide was ineffective in ameliorating autistic behaviors as assessed by the Children's Psychiatric Rating Scale
(CPRS), the Clinical Global Impression Scale, and the NIMH Global Obsessive Compulsive Scale. Furthermore, no clinically significant side effects were noted during HDPM administration. A trend for a transient change on the CPRS was found that was possibly due to a placebo response. This study raises doubts about the clinical effectiveness of HDPM in autistic disorder.

**Efficacy of vitamin B6 and magnesium in the treatment of autism: a methodology review and summary of outcomes.**


Resumo: Pauling's orthomolecular hypothesis appeared in 1968, stating that some forms of mental illness and disease are related to biochemical errors in the body. Vitamin therapy is believed to be a means of compensating for such errors. There have been few empirical studies on vitamin therapy in individuals with autism. This article presents a critical analysis of the 12 published studies located through an extensive computerized search. Studies were systematically evaluated to provide an objective assessment of empirical evidence supporting the efficacy of vitamin treatment. The majority of studies report a favorable response to vitamin treatment. However, interpretation of these positive findings needs to be tempered because of methodological shortcomings inherent in many of the studies. For example, a number of studies employed imprecise outcome measures, were based on small samples and possible repeat use of the same subjects in more than one study, did not adjust for regression effects in measuring improvement, and omitted collecting long-term follow-up data. Recommendations are offered to assist researchers in designing future investigations.

**Brief report: lack of response in an autistic population to a low dose clinical trial of pyridoxine plus magnesium.**

J Autism Dev Disord;23(1):193-9, 1993 Mar. Tolbert L; Haigler T; Waits MM; Dennis T