

Autism Fact Sheets: Supplements/Megavitamin Therapy

Definition:

These approaches recommend the use of food supplements and/or larger than normal amounts of vitamins to decrease behavior problems or improve language or social behavior in individuals with autism. Commonly recommended substances include DMG (dimethylglycine) & TMG (trimethylglycine), Vitamin B6, the mineral magnesium, Essential Fatty Acids (Omega-3), antioxidants and pycnogenol, a plant substance in a chemical family called bioflavonoids. The products are thought to have various health benefits, such as cancer prevention and immune system enhancement.

Rationale:

These approaches assert that people with autism are lacking in some normally occurring substance, including vitamins and minerals, or that their bodies are poor at making use of the nutrients available to them. Symptom reduction is proposed to be achieved by correct identification of the person's individual need for various concentrations of these substances followed by a life-long supplementation for inadequate amounts.

History:

Most of these treatment ideas can be traced to Pauling's orthomolecular hypothesis, which states that some forms of mental illness and disease are related to biochemical errors in the body. The most active current proponent of these treatments may be Bernard Rimland, Ph.D., of the Autism Research Institute.

Training:

Consult a physician prior to initiating approaches that rely on nutritional supplements or megadoses of any substance. Some resources state that minerals in particular should not be taken in amounts larger than the recommended daily allowances because, unlike vitamins, they are not broken down or excreted when taken in excess. Some vitamins taken in excess can also result in physical problems. For example, taking large amounts of vitamin B6 can lead to a loss of feeling in the arms and legs – known as peripheral neuropathy. Some vitamins and minerals may interact dangerously with medications already being taken.

*Programs and systems change often. It is important to ensure that you are using the most current information. This Fact Sheet was updated on **November 21, 2009**. Please check with <http://child-dev.com> for the most recent edition.*

Concerns:

Because there is currently no good evidence that individuals with autistic spectrum disorders have nutrient deficiencies, the value of the entire premise of these approaches is unclear. Furthermore, although there are some studies that report a favorable response to vitamin therapy, interpretation of these findings must be cautious, due to their serious methodological shortcomings. For example, several studies used very small sample sizes, employed imprecise outcome measures, used the same subjects in more than one study, and omitted collecting long-term follow-up data. In addition, some changes have been reported that are statistically significant, but not meaningful or practical. Another practical concern is possible withdrawal symptoms once a child has discontinued the megavitamin program. For many of the other treatments, only anecdotal evidence is available--no controlled studies have been done. There is strong evidence that DMG is not effective in improving social, language or other functioning in people with ASDs. However, there are many positive anecdotal reports about the benefits of DMG.

A final caution: For the most part, these products are sold without a prescription in drug and health food stores. Therefore providers will usually have no professional credentials or qualifications. Furthermore, there is no regulation of the supplement industry and no way to verify the quality and/or safety of the supplements themselves. Several vitamin manufacturers make claims about their multi-vitamins specifically for people with autism, although there has been no scientifically valid or reliable evidence to show that these are more or less effective than standard preparations.

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