



# Speak New Formulation



## in Autistic Syndrome Disorders

**Verbal apraxia is a neurologically based motor planning speech disorder of unknown etiology that prevents normal speech development**

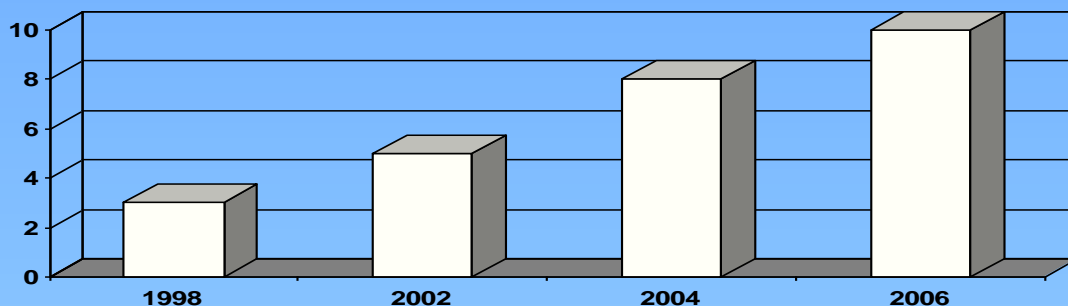
SpeechNutrients™  
Pediatrician  
formulated



# Speak

## Autism Spectrum Disorder (ASD) is on the rise at an alarming rate

Cases per 1,000 children



	1998	2002	2006	2012(P)
Patient Numbers (under age 20)	400,000	530,000	640,000	830,000

An estimated 50% of children with autism have *apraxia*.  
In addition, there are 20,000 to 50,000 children in the US who  
have *apraxia*, but are not ASD.

### References

- (1) Poster presented at American Speech Language Hearing Association Annual Convention: November 18, 2004:Pittsburg, PA.
- (2) Agin MC, Geng LF, Nicholl MJ, *The Late Talker; What to Do If Your Child Isn't Talking Yet*, New York, NY:St. Martin's Press; 2004.
- (3) Kent RD, Research on speech motor control and its disorders: a review and prospective. *J. Commun Disord*, 2000;33(5):391-427;quiz 428.4) Nijland L, Maassen B, van der Meulen S. Evidence of motor programming deficits in children diagnosed with ASD. *J Speech Lang Hear Res* . 2003; 46(2):437-450.(5) Sokol RJ, Vitamin E and neurologic deficits. *Adv Pediatr*. 1990;37:119-148.(6) Sokol RJ. Vitamin E and neurologic function in man, *Free Radic Biol Med* 1989; 6(2):189-207 (7) Traber MG, Packer L, Vitamin E: beyond antioxidant function. *Am J Clin Nutr*. 1995; 62(6 Suppl):1501S-1509S. (8) Traber MG. How much vitamin E? ...Just enough! *Am J Clin Nutr*. 2006;84(5):959-960.(9) Morris CR, Agin MC "Syndrome of Allergy, Apraxia and Malabsorption: Characterization of a Neurodevelopmental Phenotype that responds to Omega 3 and Vitamin E Supplementation" - *Alternative Therapies* July/Aug. 2009) Vol 15, No 4. (10) Agin M. Verbal apraxia and the role of essential fatty acids:the perspective of a developmental pediatrician. Paper presented at:Research Workshop on Fatty Acids in Neurodevelopmental Disorders (FAN 2001). September 20-22, 2001;Oxford UK.(11) Katz R, Agin M. Outcomes of essential fatty acid supplementation in verbal apraxia :an analysis of professional anecdotal reports. Paper presented at:Research Workshop on Fatty Acids in Neurodevelopmental Disorders (FAN 2001). September 20-22, 2001;Oxford UK. (12) Roth R, Agin M. Outcomes of essential fatty acid supplementation in verbal apraxia: Paper presented at:Research Workshop on Fatty Acids in Neurodevelopmental Disorders (FAN 2001). September 20-22, 2001;Oxford UK.(13) Bourre JM, Effects of nutrients (in food) on the structure and function on the nervous system: update on the requirements for brain. Part 1:micronutrients *J Nutr Health Aging* 2006;10(5):377-385.(14) Virmani A, Gaetani F, Binienda Z. Effects of metabolic modifiers such as carnitines, coenzyme Q10, and PUFAs against different forms of neurotoxic insults: metabolic inhibitors, MPTP, and methamphetamines. *Ann N Y Acad Sci* 2005 Aug;1053:183-191.(15) Nakamura MT, Cho HP, Xu J, Tang Z, Clarke SD. Metabolism and functions of highly unsaturated fatty acids: an update *Lipids*, 2001:38(9)961-954.(16) Volk EE, Hornstra G. Relationship between Vitamin E requirement and polyunsaturated fatty acid intake in man: a review *Int J Vitam Nutr Res*. 200;70(2):31-42.

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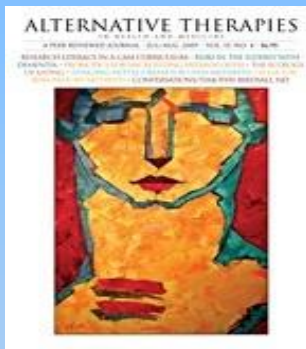
## Solution

Various studies have suggested that PUFAs with eicosapentaenoic acid (EPA) and DHA provided improvements in speech production and coordination in children with verbal apraxia. (2,10,11,12).

In addition, PUFA supplementation increases utilization of vitamin E in the body (13-16) . These two supplements may have a synergistic effect at higher doses.

**Study:** A total of 187 children with verbal apraxia received vitamin E+polyunsaturated fatty acid supplementation. Supplementation consisted of 280 mg DHA and 695 mg EPA per dose in liquid or capsule form, given with meal 1 to 3 times daily. A celiac panel, fat-soluble vitamin test and carnitine level were obtained in patients having blood analyzed (9).

The case series was published in the July/August 2009 edition of Alternative Therapies in Health and Medicine and represents the most comprehensive summary of children with apraxia to date.



*According to the findings in the study,*  
*“Use of high-dose PUFA and vitamin E in children with a history of VA appeared to lead to rapid clinical improvement of many symptoms of this neurological condition in a large cohort.”\**



**Results:** A common clinical phenotype of male predominance, autism, sensory issues, low muscle tone, coordination difficulties, food allergy, and GI symptoms emerged. In all 181 families (97%) reported (9):

- Improvements in number of areas including speech, imitation, coordination, eye contact, behaviour sensory issues, and development of pain sensation
- Comorbidity was 65% with ASD
- ASD symptoms are similar (hypertonia, poor imitation skill inability to integrate sensory perceptions).

**Conclusion:** “The authors have found a new syndrome of allergy, apraxia and malabsorption (SAAM), which is likely one class of a larger apraxia phenotype often coexists with ASD and vice versa, suggesting overlap in these conditions that requires further characterization. We also have identified a disease paradigm of neurological dysfunction emulating symptoms of low vitamin E bioavailability in VA independent of genotype that responds to a safe nutritional intervention”(9)\*.

\* Morris, Claudia R, and Ag Marilyn C. Syndrome of Allergy, Apraxia, and Malabsorption: Characterization of a Neurodevelopmental Phenotype that Responds to Omega 3 and Vitamin E Supplementation. Alternative Therapies in Health and Medicine 2009; Vol. 15, No. 4: 32-41.

# Speak

## Properties

Speak is a dietary supplement (1,5 ml per twist off capsule) containing pharmaceutical grade Omega3 in combination with GLA and two specific types of Vitamin E e Vitamin K. Speak is a patented formulation from CHRCO (Children`s Hospital and Research Center Oakland - USA ).

## Speak

Each 1200 mg twist off capsule of Speak contains:

Nutrient	Specific Name	Per capsule
Omega-3	EPA-eicosapentaenoic acid	725 mg
Omega-3	DHA-docosahexaenoic acid	275 mg
Vitamin D3	Cholecalciferol	800 IU
Vitamin E	D-alpha tocopherol	500 IU
Vitamin E	Gamma tocopherol	200 mg
GLA	Gamma-Linolenic Acid	60 mg
Vitamin K1	Phytonadione	1 mg
Vitamin K2	Menaquinone	150 mcg

Capsule contents: gelatine, purified water USP, glycerin USP

## Dosage Recommendations

Suggested dosage plan for those not currently taking fish oil or vitamin E supplements:

SPEAK™	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number of SPEAK™ twist off capsules/day	1	1	2	2	3	3	4	4	5	5	6	6

\* Start with one twist off capsule of SPEAK™ daily for two weeks and then gradually increase by one capsule every two weeks. For children under 65 kilos, the supplementation is usually 2 to 4 capsules per day, while for those over 65 kilos the supplementation could be from 4 capsules to 6 capsules per day. Recommended for at least 4 months.

♦ Take speak capsules with meals.

♦ Twist off the capsule and squirt it directly into the mouth and follow with food. Or serve it on a spoon.

## Possible Side Effects

Moodiness, irritability, and emotional outbursts are sometimes reported in children in the first few days / weeks of Omega 3 Supplementation. Some children may experience loose stools when they begin supplementation with oil-based capsules: this usually resolves quickly (5 days).

## Presentation

Speak is presented in plastic bottles of 60 capsules x 1,5 ml

## For more Information:

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