

The Nourished Mind: DHA & Children's Brain Health

By Lisa Olivo, Nutraceuticals World

Parents are always looking for ways to help their children succeed. It's no secret that a child's development and long-term success in education is linked to his/her ability to read, focus and think critically. By the same token, a healthy diet and proper nutrition are also crucial for children's developing minds, and according to a study from the University of Oxford, can even help improve their academic performance.

In light of the groundbreaking evidence linking long chain omega 3 DHA and children's reading performance, AdoptAClassroom.org and life'sDHA, have partnered to raise awareness about children's nutrition and its importance in their education, through the Building Beautiful Minds campaign. With this partnership, life'sDHA, a trademark of DSM Nutritional Products Ltd., Basel, Switzerland, has donated up to \$25,000 for schoolbooks and supplies across the country through AdoptAClassroom.org, a non-profit organization that aligns community donors with teachers in need of resources. The focus of their message is to inform the public, especially parents, about the "4 Dimensions of a Beautiful Mind," such as the importance of nutrition, aerobic exercise and engaging a child's mind both educationally and socially.

In September life'sDHA and AdoptAClassroom.org hosted a luncheon to discuss the importance of omega 3 DHA supplementation in supporting healthy brain development in children. The event featured esteemed speakers such as Dr. Paul Montgomery and Dr. Alexandra (Alex) Richardson, lead investigators of the much publicized DHA Oxford Learning and Behavior (DOLAB) trial; Dr. David Perlmutter, MD, FACN, neurologist and author of *How to Raise a Smarter Child by Kindergarten*; and Elizabeth Somer, MA, RD, and author of *Eat Your Way to Happiness*.

The event fell on the day that the DOLAB trial from The University of Oxford was published in *PLoS ONE*, which reported that supplementation of 600 mg of algal DHA for 16 weeks improved reading and behavior in healthy, school-aged children with low reading scores (see *Table 1*). Significantly, the study reported the lowest performing readers improved most from omega 3 supplementation and as a result were afforded the opportunity to catch up to their peer group in reading.

Additionally, children receiving the DHA supplement showed marked behavioral improvement from ADHD (Attention Deficit Hyperactivity Disorder) symptoms. For an in-depth analysis on this study, a full review of the findings can be found [here](#).

While the children struggling most academically saw the greatest returns with DHA supplementation, Dr. Montgomery stressed how omega 3s are critical for all children—whether they are struggling

academically or not. “Omega 3 is really essential for brain development,” he explained. “Dietary intakes in Western countries have dropped substantially. Benefits for behavior and learning seem to be well advanced and well shared with a number of clinical groups. What the DOLAB study seems to add to all of this is that in healthy, normal kids, there would also seem to be benefits [to taking an omega 3 supplement], and that’s a really new finding.”

As nutraceuticals become more popular among consumers and more widely accepted in healthcare, parents are becoming more likely to look toward dietary supplements for support. According to a nutrition and education survey from the Building Beautiful Minds campaign, there appears to be an opportunity for companies looking to support this effort. The survey found that 62% of parents think nutrition for learning is extremely important, 33% think it is very important and 5% think it is somewhat important. Additionally, 85% of parents stated they would change their family’s diet to help with nutrition; 63% said they would add supplements; and an overwhelming 90% of parents said they were willing to add supplements for at least 6 months to see if it helped their child’s school performance.

At the luncheon, Dr. Perlmutter offered information on DHA regarding its anti-inflammatory traits and its ability to improve genetic makeup over time.

“When I was in medical school, we thought that genes were in a ‘glass case,’” he said. “However, our food choices, and how much stress we experience in our life, play an important role in determining our genetic future. The ‘IQ Gene’ is the BDNF gene [brain-derived neurotrophic factor] and we have direct control over it by getting aerobic exercise and by having adequate amounts of DHA in our diets. We have control over our children’s behavior, their activities and what they are exposed to— we have control of their genetic expression. Think of how empowering that is.”

Through his own work and in his own practice, Dr. Perlmutter has experienced first hand that DHA can improve childhood behavior. He pointed to examples of children who were struggling with ADHD or ADHD-like symptoms, and before prescribing a more serious medicinal intervention (such as administering Ritalin, which can now be prescribed to children as young as four years old), he looks to change the child’s diet, and add supplements such as probiotics and DHA to their routine. Often, the results are very positive.

“We have these situations unfortunately where some kids have genetic expression that is unfavorable or dysfunctional, where increased inflammation happens in their bodies, and believe it or not, the brain is subject to inflammation. Inflammation is thought to be one of the cornerstones of ADHD,” he said. Dr. Perlmutter went on to explain that “DHA is a powerful anti-inflammatory,” which can be used to support cognitive function in children (and adults) with issues such as ADHD.

Ingesting DHA during infancy can have lasting effects. When looking at the number of children with ADHD, 81% were not breastfed as infants. “One of the richest sources of DHA in nature is not anchovies, sardines or mackerel—it’s human breast milk,” he said. “And that breast milk is totally dependent on dietary sources of DHA in the mother.” Clearly, sufficient DHA at this critical time in a child’s

development can have long-term effects throughout ones lifetime.

So what should kids really be eating? Dr. Somer offered some information and parental advice. She explained that, to put it simply, children are just not getting the nutrition they need for healthy growth on a daily basis, noting that “numerous national nutrition surveys and studies have found that our kids are eating worse today than they did back in the 1970s.” She went on to say, “a study from the National Cancer Institute (USDA) found that most kids don’t even get one fruit in a day.” Additionally, “children are averaging—get this—30-50 mg a day of DHA in the United States. That’s just 5% of what was used in the DOLAB study.”

This lack of DHA and a proper diet can have grave consequences. “We’re gaining a body of evidence to show that in the short term, poor diet, including low intakes of DHA, result in reduced school performance, altered brain structure and function, poor academic achievement, [and] social and emotional problems,” said Dr. Somer.

To combat this serious social and health crisis, Dr. Somer advises parents to focus on common sense and simple nutrition. Her book *Eat Your Way to Happiness* outlines nutritious meals that aim to help kids meet their potential.

“Thousands of studies have found that kids who eat well, that don’t eat the typical Western diet, but eat a diet rich in fatty fish (salmon, mackerel, herring, sardines) ... fruits and vegetables, whole grains, and nuts, etc. ... those are the kids who are leanest, they have improved brain development and cognition, they have better behavioral patterns and they have a healthier future in store for them,” she said.