EFAs and Children's Health

Swimming into soaring sales

By Heather Hudson

Though most health-conscious parents avoid pre-packaged and fast foods that drip with saturated and trans fats, many may not consider the good fats that are vital for their children's optimum health, both now and in the future. The result of a modern diet that is saturated with a dizzying array of processed foods, in addition to a society that regards fat as the enemy, children may be losing out on the building blocks of life. However, a growing number of scientific studies are proving to parents that essential fatty acids (EFAs) are integral to cognitive function and brain development, as well as the heart and cardiovascular system and visual acuity. Studies show essential fats may even minimize childhood learning and behavioural disorders.

Today, customers are coming to you for help because modified dietary sources are not providing them with the required amount of vitamins, minerals and essential nutrients. EFAs consist of two parts: omega-6 fatty acid – Linoleic Acid (LA) – and omega-3 fatty acid – Alpha Linoleic Acid (ALA). From these, the body can derive the other four essential acids: Gamma Linolenic Acid (GLA), Eicosapentaenoic Acid (EPA), Docosahexaenoic Acd (DHA) and Arachadonic Acid (AA).

Recent media focus has indicated both the importance of these fats as a life essential that the body can't produce on its own and the fact that the modern diet alone is often deficient in significant sources of EFAs. So, consumers are increasingly recognizing the importance of meeting or exceeding the recommended two servings of fish per week, often through a supplement, as shown in the 11 per cent rise in sales of cod liver oil and 44 per cent increase in salmon and fish oils in the 52-week period ending Oct. 2 2004.[1] Vegans typically take ground flax seeds or flax seed oil, which contain a high quantity of omega-3 in the form of ALA, which the body then converts into EPA and DHA. Fish oil is a direct source of EPA and DHA. →

ESSENTIAL TIPS: KIDS AND EFAS

In order to make EFAs appealing to children, manufacturers have developed a wide range of child-oriented products including fruit-flavoured oils, capsules, powders and even flax seed bars. It is important to stock a variety of supplements in different formats and flavours. Liquids are often appealing to children as they are easier for them to swallow and they deliver a higher concentration of EFA per dosage. Stocking up on flavoured products is important for a store with a large family consumer base, as supplements for children must be palatable. In addition, EFAs for children should contain high levels of Docosahexaenoic Acid (DHA) and Eicosapentaenoic Acid (EPA). (See sidebar 1)

One of the most highlighted functions of EFAs for children includes its role in mental functioning. As a result, parents will probably be looking for EFA products that relate to IQ as well as the alleviation of Attention Deficit Hyperactive Disorder (ADHD). Because fish oils are often marketed for their potential in helping kids learn, better sales may spike at the beginning of the school year. September is therefore a good time to enhance your display. However, while staying smart is important, your customers should also be informed about the value of EFAs for basic healthy functioning. The modern North American diet lacks the right balance of the appropriate types of fats, particularly omega-3s, meaning that supplementation is necessary for many individuals.

Increased awareness of the importance of "multi-talented" EFAs has meant brisker sales for retailers. Teresa D'Addario, manager and owner of Nature's Emporium Wholistic Market in Ontario, says she's seen a 20 to 25 per cent rise in sales of EFA products over the last few years. "Initially, I found that EFAs were targeted to kids with ADHD. Most customers buying it were looking for alternatives to traditional drugs, but now it's almost as popular as a multivitamin because it's so good for so many things."

Consumer response has flourished as a result of the mainstream media's focus on the role of omega-3 and DHA for children's overall proper development and as a result it is likely your customers will look for EFA products in the children's section. EFAs for children should be situated in a highly visual area within the children's health section – allocate an entire shelf, or approximately 15 per cent, to EFAs for children and include DHA-enhanced formulas in this area. Also, considering the recent popularity of EFAs in general, it is likely that most stores will have a section devoted solely to EFAs – about five to 10 per cent of the entire floor space. A subcategory within this section should represent EFAs positioned specifically for children's health.

Parents are cautious about supplementing for children due to the specific recommended daily amounts they require and, as such, will be more interested and comfortable purchasing products formulated for children. Therefore, grocery stores and pharmacies should situate EFAs for children's health (including DHA-enhanced infant formula) in the generic baby and kids health sections. Yet, given the popularity of EFAs and their common association to the world of supplements and natural health, many customers may subconsciously seek such products in the general supplement area. Therefore, to optimally promote and profit from popular EFAs, child-directed products should also be situated in the general supplement section alongside other fatty acid products or right beside kid's chewable multivitamins. Allocate 10 to 15 per cent of the children's and baby's health sections to EFAs and approximately 25 per cent of the total space devoted to EFAs in the general supplement section.

CROSSING OVER INTO A SEA OF OPPORTUNITY

There are a number of opportunities you can take advantage of to both help your customers recognize that EFA supplements can be integrated into their entire family's daily regimen and increase sales per visit. In order to increase cross-merchandising potential it may be prudent to create an end cap of EFAs for different stages of life: brain development for children; blood pressure and depression for pregnant women; general heart health for adults; visual acuity, prostate and cancer prevention for baby boomers; and arthritis and cardiovascular health for seniors. An EFA end cap should promote the age- and condition-specific activity associated with EFA supplementation as the multiple benefits associated to EFAs can highlight a different concern for every consumer. In order to promote EFAs to their full potential, it is important to situate them in a variety of sections and include information pamphlets that highlight the specific conditions they benefit as related to that category. For example, Omega-3 products can be located in the digestive health section with accompanying pamphlets that explain their ability to decrease intestinal inflammation and enhance mucosal integrity and healing.

Merchandising EFAs in the women's health section is a good way to increase cross-merchandising potential as well as double the impact on your target market that may be interested in EFA products for children (women are most often the parent shopping for family health). Pregnant women also frequent the women's health section so by promoting the link between a mother's intake of DHA and her baby's vision and brain development, you will prepare them for product choices they must make throughout all of the stages of their child's development, thus securing consumer confidence and repeat business. Udo Erasmus, a leading nutritional scientist, says babies derive benefit from three years before they are even conceived.[2] He claims that EFA deficiencies in the mother can have a detrimental effect on children for up to three years after they are corrected.

Personal care sections should also promote both omega-6 and omega-3 fatty acid products as they have an effect on helping the skin retain moisture. People with dry skin, eczema or other dermatological conditions may be deficient in EFAs and often benefit when sufficient supplies in their blood are restored. Including both children's and adults' EFA products to a skin care section will increase consumer awareness of the importance of incorporating these products into their daily regimen.

EFAS FOR CHILDREN'S HEALTH

Prenatally, DHA is integral to fetal brain and eye development. The maternal blood supply of DHA is vital to embryonic development in the first few weeks of pregnancy when brain cell division is most active. Later, DHA content of the cerebrum and cerebellum increases up to five times during the last trimester and again in the first 12 weeks after birth.[3] It is said that a mother must keep her stores of DHA high to meet her child's needs – from conception through nursing. The retina, which also contains a high concentration of DHA, develops rapidly in the last half of pregnancy. Studies indicate that DHA is an essential nutrient for developing optimum visual acuity.[4] Mothers with sufficient DHA levels may even prevent premature births. The Avon Longitudinal Study of Parents and Children claims that a mother-to-be who eats fish during the later stages of pregnancy is less likely to have a very small baby.

According to a study conducted at the University of Connecticut, pregnant women whose blood had more DHA had babies with heartier sleep patterns in the first 48 hours after delivery compared to those whose mothers consumed less of the compound. Infant sleep patterns are thought to reflect the maturity of a child's nervous system and have been associated with more rapid development in their first year of life. →

A UK study found a subtle but consistent link between eating fish during pregnancy and children's language and communication skills at 18 months. The largest effect was seen in a test of the children's understanding of words at the age of 15 months. Children whose mothers ate fish at least once a week scored seven per cent higher than those whose mothers never ate fish. The developmental scores were also higher among children who also ate fish at least once a week before their first birthdays.

SIDEBAR 1

INTERNATIONAL SOCIETY FOR THE STUDY OF FATTY ACIDS AND LIPIDS RECOMMENDED DOSAGE CHART

AGE	WEIGHT	DOSAGE
Infants (1-18 months)	0-15 lbs	32 mg/lb EPA+DHA
Children (1.5-15 yrs)		15 mg/lb EPA+DHA
Adults (15-115 yrs)		650 mg EPA+DHA
		220 mg EPA -minimum
		220 mg DHA -minimum
Lactating Women		300 mg DHA daily

In the first year of life, an infant's brain triples its size from birth and the foundations for intelligence, vision and language are built. Since the human brain is about 60 per cent fat, it requires fatty acids to properly develop. The increased intelligence and academic performance of breastfed compared with formula-fed infants has been attributed in part to the increased DHA content of human milk, though most leading formula makers now offer DHA-enriched versions.

Postnatal studies are also beginning to confirm the connection between DHA and intelligence. The University of Dundee in Scotland discovered that infants given a DHA-enriched formula had superior problem-solving ability at 10 months compared with infants who drank a low-DHA commercial product. In their study, starting shortly after birth, half the babies received a standard infant formula while the others received the same formula supplemented with AA and DHA. When tested at 10 months, both groups were equally able to solve simple mental problems, but when faced with a more complex mental challenge, those taking DHA-supplemented formula did better.[5]

Infants who have low amounts of DHA in their diet are shown to have diminished visual acuity. Infants fed DHA–enriched formulas have higher retinal photoreceptor sensitivity in response to light stimuli. Studies also demonstrated that infants breastfed for four to six months and then randomly assigned commercial formula or formula supplemented with DHA and ARA had significantly more mature visual acuity than un-supplemented infants at one year of age.[6]

Researchers from the University of Texas Southwestern Medical Center, Dallas, report that baby food fortified with DHA speeds up visual development in breastfed infants. Between six and 12 months, blood levels of DHA in breastfed infants tends to drop due to lower DHA stores in mothers and the introduction of DHA-poor solid foods to replace human milk. The team investigated whether taking supplemental DHA in solid foods could improve the visual development of around 50 breastfed infants. At six months the infants were randomly assigned to receive either one jar of baby food containing egg yolk enriched with DHA or a control baby food every day. Although many infants in both groups continued to be breastfed, blood levels of DHA decreased significantly between six and 12 months of age in control infants. In the DHA group, however, levels increased by 34 per cent.[7] Researchers found that the development of the retina and visual cortex correlated with DHA levels.

In addition, children whose mothers took supplements of DHA for the first four months of breastfeeding were found to perform better in attention tests than those without supplements, according to research presented at a Pediatric Academic Societies' Meeting in San Francisco.

EFAS AND BEHAVIOURAL DISORDERS

The focus of research for EFAs role in older children seems to be on behavioural disorders and chronic conditions. Though this research is still in a stage of infancy, there are a number of trials which may indicate how fatty acid supplements can help to alleviate a variety of symptoms.

Attention Deficit Hyperactivity Disorder (ADHD) – ADHD typically describes children who are inattentive, impulsive and hyperactive. Research has shown that fatty acid deficiency signs are unusually common in people with ADHD, dyslexia and autistic spectrum disorders.[8,9,10,11,12,13,14] They have also been linked with behaviour, learning and health problems in boys with and without an ADHD diagnosis[15], with the severity of reading, spelling and related difficulties in dyslexic children[16] and with visual, auditory and other features of dyslexia in adults.[17]

A 2002 study from Northern Ireland showed positive results regarding the effect of omega-3 fatty acids on dyslexic and hyperactive children. The study included 41 children with dyslexia in addition to ADHD, conditions that commonly occur together. Children who were given omega-3 and omega-6 oils with vitamin E added showed significant improvement, particularly those with ADHD symptoms such as learning difficulties, anxiety and hyperactivity. The authors concluded that it is probably the combination of EPA and DHA that is important in producing the positive effect.[18]

Hostility – Researchers report that young adults who have a high intake of omega-3 fatty acids may be less prone to hostility and a reduced risk of heart attacks. Hostility has been shown to predict both the development and manifestation of coronary disease.[19] The association of dietary omega-3 and omega-6 fatty acids with the level of hostility was studied in a sample of 3,581 young adults. Intake of fish, rich in omega-3s, was associated with lower odds of high hostility. Boys with low blood levels of omega-3 fatty acid concentrations appeared to have a greater number of behavioural issues, including temper tantrums, learning, and health problems.[20]

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