



# A Clinical Study: The Benefits of Mammalian Omega 3 on Children with Learning/Behavioural Problems





Progressively during the study,  
the children began ...

- speaking
- expressing themselves
- making friends
- learning new things
- reading & doing math, some at advanced levels.



# Clinical results showed dramatic improvements in areas including:

- improved imagination
- decreased aggression
- improved sleep patterns
- improved attention span
- improved interpersonal skills, sociability, making friends & holding conversations
- improved verbal & communication skills



- Laboratory analysis demonstrates that fat tissues and blood sera of mammals contain a form of Omega 3s unique to mammals and quite distinct from those found in fish.
- Both seal oil and cod liver oil are rich in Omega 3 PUFAs (20%) with anti-inflammatory effects. But these oils are structurally different in the distribution of n-3 PUFAs on the triglyceride molecules. (Seal EFA's have DHA, EPA, and DPA located primarily in the terminal sn-1 and sn-3 positions of the triglyceride molecule. Fish EFAs are primarily in the sn-2 position – a version appropriate to this “cold blooded” species.) This location might favor the uptake of Omega 3 PUFAs from Seal Oil compared with that from cod liver oil and result in different physiological effects. (National Institute of Nutrition and Seafood Research, 2003).
- Some species of seal, in particular, certain of the harp seal populations have large percentages of DPA ( Docosa Pentanoic Acid present in the blubber. DPA is not present in any significant amount in fish oil.



- Studies have shown that **depressed patients** taking Omega 3 PUFAs showed dramatic improvements. Omega 3 polyunsaturated fatty acids (PUFA) are essential to proper brain development and mood stability. Research has shown that Docosahexanoic acid (DHA) is a main component of the synaptic membranes and a lack of it has been linked to depression.
- **Pre-term infants** lose out on a rich supply of Omega 3 DHA , which has been shown to lead to higher risks for neurological deficits, such as learning disabilities, social/behavioral problems and significantly lower scores on IQ tests. (American Journal of Clinical Nutrition, 2002)



- Helland et al., reported higher IQ at the age of 4 years in term infants supplemented with LC-PUFAs(Long Chain Polyunsaturated Fatty Acids) during pregnancy and lactation. (Journal of Nutrition, 2004 Jan; 134:183-186).
- In a study of nearly 100 boys, those with lower levels of Omega 3 fatty acids demonstrated more learning and behavioral problems (such as temper tantrums and sleep disturbances) than boys with normal levels of Omega 3 fatty acids. At this point in time, eating foods high in Omega 3 fatty acids is a reasonable approach for someone with ADHD. (University of Maryland Medicine, 2002).



- Due to today's hectic lifestyle and the desire for convenience, adolescents are eating less fish and marine mammals, resulting in a deficiency in the Omega 3 Long Chain PUFAs. Data collected by the USDA from 1909 to 2000, show that Omega 6 was 0.1% of the calories in the US diet at the turn of the century (consistent with evolutionary norms). Presently, they are 20% of all calories in the US diet, the majority of which comes from pre-packaged and manufactured foods that use vast amounts of vegetable oils.
- There is increasing evidence that today's youth are consuming excessive amounts of saturated fat and highly unbalanced amounts of Omega 6 (far too much) and Omega 3 (far too little). As a result of this deficiency, their bodies are showing a **ratio of 20-30:1** (Omega 6 to Omega 3), whereas the **ideal ratio is 1:1**.



# METHODOLOGY

- Three separate three phase studies were conducted in June 2007, April 2008 and May 2009 over a duration of approximately 9 weeks. Forty-two children were included, ranging from ages 3 to 19 years, who were living in the Northern Ontario towns of Timmins & Iroquois Falls (Canada).
- The objective of the study : to evaluate the benefits of a natural product (Omega 3) on children with learning/behavior problems and to record any changes in their lives, particularly in areas relating to brain function such as attention span, concentration, focus, sleep & speech.
- A liquid form of mammalian omega 3, fortified with 500 IU of natural vitamin D3 (Cholecalciferol) per 2.50 ml was used in this trial (registered as Omega 3 Sublingual D study sponsored by the Balanced Heart Mission with product provided by Aum Inc.).





- Study participants were administered 2.5ml bid (2x/day) Omega 3. (While this is the recommended dosage guideline for adults, filed by Aum Inc. with Health Canada as per Natural Health Products Regulations, the slightly increased amount was considered beneficial to help offset the anticipated Omega 3 deficiency.)
- The parents of the participants were interviewed and given a detailed questionnaire which they were required to fill out progressively and then fully complete at the end of each phase of approximately 3 weeks (after finishing a 100ml bottle of Omega 3). This was then repeated twice, for a total duration of 9 weeks. An interview with the parents took place at the end of each phase and the results were discussed and recorded . Parents were encouraged to speak with the nurse at any time during the study if any questions arose in regards to their child and his/her results.

# RESULTS

- Each study was made up of three phases each of three weeks duration for a total of nine weeks. In total, 42 children participated, ranging in age from 3 to 19 years of age.
- As the study progressed noticeable improvements were obvious in specific areas.
  - ✓ **Sleep Disturbances** were 33% in Phase 1, dropping to 9% in Phase 3.
  - ✓ **Language Barriers** were 40% in Phase 1, dropping to 14% in Phase 3.
  - ✓ **Aggressive Behaviors, including Temper Tantrums** were 26% in Phase 1, dropping to 7% in Phase 3.
  - ✓ **Frequent Tears & being whiny** held 44% of the children in Phase 1, but was reduced to 19% by Phase 3.
  - ✓ **Moodiness and Frustration** was widespread with 56% of the children in Phase 1 showing these signs, reduced to 16% in Phase 3.
  - ✓ **Urinary Issues** produced a surprising result with 21% of children in Phase 1 down to only 7% by Phase 3.



- Sleep improvements resulted in memory of dreaming. Some reported more recollection and increased colour and vibrancy of their dreams.
- Some changes were subtle and only in speaking with the parents did these changes get recognized. Things like self-worth & self-confidence may not have been noticed immediately since these are more emotional in nature.
- Many children were more able to express their needs in a confident manner. Their perception of self increased. They seemed to view themselves as more worthy, having sensed an increase in self control and who they really are.



- Children previously diagnosed with behavioral problems, including ADD, ADHD and Autism, responded rapidly without any side effects.
- In two cases the 2<sup>nd</sup> dose was given earlier in the day to encourage a better sleep pattern.
- One child was reported to have an increase in behavioral issues during the first week. These problems disappeared dramatically thereafter.
- Greatly enhanced family relationships were reported across the entire participant base due to the multiple areas of improvement. In addition to family harmony, relationships at school and with peers showed improvement.



- When a child can leave a special education class to return to a regular classroom with peers, is able to keep up scholastically and sometimes excel, is beyond words. This child now gains a new respect of self, perceiving themselves in a whole new fashion as to how they fit in society and family.
- Percentages cannot communicate the powerful emotional experience of witnessing such dramatic changes in one's child.

**No words can convey the feelings of a mom whose teenage son told her that he loved her for the first time.**