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RESEARCH HIGHLIGHTS:

The Importance  
of DHA  
Beyond Infancy



## RESEARCH HIGHLIGHTS:

### The Importance of DHA Beyond Infancy

Docosahexaenoic acid, DHA, is an omega-3 fatty acid that is found throughout the body. More specifically, it is an important structural fat in the brain and eyes and a key component of the heart. A growing body of research continues to support the role that DHA plays in maintaining good health throughout life. DHA is important for brain and eye development and function throughout the lifecycle. DHA plays a critical role during the first years of life as it continues to be important for the support of optimal visual and cognitive outcomes.<sup>1-3</sup> Below are research highlights from studies examining the role of DHA in health and development in early life.

- DHA is the predominant omega-3 fatty acid found in the brain. DHA represents about 97% of all omega-3 fatty acids in the brain and 93% of all the omega-3 fatty acids in the eye (retina).<sup>4-6</sup>
- Uptake of preformed DHA by the brain is significant between ages 2 and 5 and supports the substantial accumulation of DHA by the brain during this critical growth period.<sup>7</sup>
  - Including DHA in the diet is associated with higher scores on tests of visual and neural development in infants and children.<sup>1</sup>
- Many people believe that eating foods like flax and walnuts will provide all the omega-3 fatty acids they need, however, these foods are sources of another omega-3 fatty acid called alpha-linolenic acid, or ALA. The body's production of DHA from ALA is limited.<sup>8-9</sup>
  - Including preformed DHA in the diet is the most reliable way to ensure that DHA is available to support optimal brain and eye development and function.<sup>10-11</sup>

- Children ages 1-5 years were shown to have low DHA intakes ranging from 30-50 mg/day.<sup>12-13</sup>
  - This is because the primary dietary sources of DHA are fatty fish and organ meats which are not popular food choices for young children.<sup>14</sup>
  - Modest intakes of DHA-rich weaning foods, toddler foods and supplements increase tissue DHA levels which are associated with improved neurologic outcomes in infants toddlers and children.<sup>15-18</sup>
  - DHA supplementation is accepted and well tolerated by children.<sup>14,17</sup>
- One-year-old infants who received DHA-supplemented baby food since weaning showed improved vision, equivalent to 1.5 lines on the eyes chart, compared to those who received baby food that did not contain DHA.<sup>16</sup>
- Higher levels of DHA are associated with higher scores on a listening comprehension and the Peabody Picture Vocabulary Test vocabulary test (PPVT) in preschool children.<sup>18</sup> Higher scores on the PPVT in preschool children are associated with school readiness and a predictor of better school success.<sup>19</sup>
- Higher levels of red blood cell DHA are associated with higher test scores using the Hopkins Verbal Learning Test (HVLT) in school children 7-9 years of age. HVLT is a test of cognition designed to record memory and learning skills.<sup>17</sup>
- Signs of cardiovascular disease have been detected early in life.<sup>20</sup>
  - DHA supplementation has been shown to improve blood lipid profiles and restore endothelial function in children with high cholesterol levels.<sup>21-22</sup>
  - DHA has been shown to reduce blood pressure in the early years of life. Blood pressure tracks from childhood into adult life. Supplementation may reduce the risk of cardiovascular disease later in life.<sup>23</sup>

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