

## Research Highlights: The Benefits of DHA During Pregnancy and While Breastfeeding

Docosahexaenoic acid, DHA, is a long chain omega-3 fatty acid that is found throughout the body. More specifically, it is a major structural fat in the brain and the retina of the eye and is a key component of the heart. A growing body of research continues to support the important role that DHA plays for both mother and baby. Specifically, DHA is important for optimal infant brain, eye and nervous system development, and has been shown to support a healthy pregnancy. Below are research highlights from studies examining the role of DHA in health and development during pregnancy and while nursing. (Please refer to the list of references.)

- DHA is the most abundant fatty acid in the brain and eyes (retina). DHA represents about 97% and 93% of all omega-3 fatty acids in the brain and eyes, respectively.<sup>1,2</sup>
- DHA is important for healthy visual and mental development of the infant in utero and throughout infancy.<sup>1-4</sup>
- Breast milk is the optimal method for infant feeding. DHA is always present in human breast milk.<sup>5</sup>
- The developing infant receives DHA from the mother through the placenta during pregnancy and in breast milk after birth.<sup>5-7</sup>
- Expert panels recommend that DHA intake be 200-300mg per day for pregnant and nursing women.<sup>8-9</sup>
- On average, pregnant and nursing women in North America consume 60-80mg of DHA a day, only 20-40% of the recommended intake.<sup>10-11</sup>
- Breast milk DHA levels are dependent on the mother's diet.<sup>12-24</sup> Because of a low DHA dietary intake, American women reportedly have lower DHA levels in their breast milk than their international counterparts.<sup>5</sup>
- Maternal DHA supplementation was shown to increase the mother's blood and breast milk DHA levels. This, in turn, elevated the blood DHA levels of both the fetus and breast-feeding infant.<sup>12-13, 24-30</sup>
- Higher levels of DHA in breast milk were associated with an infant's ability to easily adjust to changes in surroundings (measured using Brazelton Neonatal Behavioral Assessment scale).<sup>31</sup>
- Maternal DHA supplementation during lactation resulted in mental development advantages in children.<sup>32-35</sup>
- Improved psychomotor development (such as eye-hand coordination) at 2.5 years of age.<sup>34</sup>
- Improved attention skills at 5 years of age.<sup>35</sup>
- A study using a statistical model of risk-benefit analysis, designed by Harvard Center for Risk Analysis, estimated that increasing maternal DHA intake by 1 g/day increases child IQ by 1.3 points.<sup>36</sup>

- Supplementation with DHA during pregnancy benefits both mother and baby by extending the length of gestational age. Meta-analyses of studies conducted to date show that maternal DHA supplementation was associated with a greater length of pregnancy averaging 1.6 to 2.6 days closer to term.<sup>37-39</sup> One study demonstrated a 6 day increase in the length of gestational age.<sup>39</sup>
- Decreased look duration at 12 months and reduced distractibility at 24 months.<sup>40</sup>
- Sustained improvements in Mental and Psychomotor Development.<sup>41</sup>

## References

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