



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Get a Head Start II	
Abstract Objectives/Goals To see if infants receiving the Long Chain Polyunsaturated Fatty Acids (LCPUFAs) such as Docosahexaenoic acid (DHA) and Arachidonic acid (ARA) have an affect on the development of visual, mental, and motor skills. It is hypothesized that the DHA and ARA will make a difference in the development of the infants. The infants that do receive the DHA and ARA will be able to perform more tasks on average that the group that does not. Methods/Materials 10 infants that received DHA and ARA through mother milk or Enfamil LIPIL acting as the variable group 10 infants that received formula that did not contain DHA and ARA acting as the control group Procedure- Acquire the twenty infants for testing and monitor their development for eighteen months. Infants were tested in categories of mental, motor, and visual skills to see if DHA and ARA make a difference in brain and eye growth in sixty-three total activities. Results Docosahexaenoic acid (DHA) and Arachidonic acid (ARA) help to stimulate eye and brain neurons therefore stimulating development and growth. After the period of eighteen months, the infants that received the DHA and ARA amino acids via breast milk or Enfamil LIPIL showed faster development in visual, mental, and motor skills compared to the control group that did not receive DHA and ARA in the formula milk. A thirty percent difference was noted between the variable and control groups. Nearly seven of ten infants from the variable group were able to complete the various tasks, versus only four of ten from the control group accomplished their tasks. Conclusions/Discussion It can be concluded that the infants that received Docosahexaenoic acid (DHA) and Arachidonic acid (ARA) are able to complete more tasks involving motor, visual, and mental skills than those infants who do not receive these vital acids. DHA and ARA make a substantial difference in the visual and mental development of the infant. In addition, these nutrients help the infant to be able to get a head start on life by stimulating their brain and eye neurons.	
Summary Statement To help show the importance of amino acids in early development of infants to get a head start on life.	
Help Received Dr. Vaseema aided in testing portion for safety precautions.	