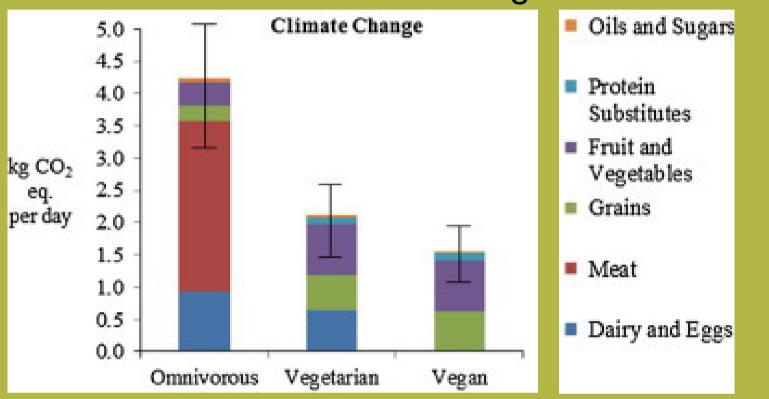
The Effects of a Mother's Vegan Diet on Fetal Development

Vegan Diet Effects on the Environment

- Meat and Dairy consumption play key roles in food related environmental impact
- Environmental burdens include agricultural land degradation, uncontrolled waste management, groundwater contamination, and greenhouse gas emissions due to livestock digestion



Fatty Acids and Development

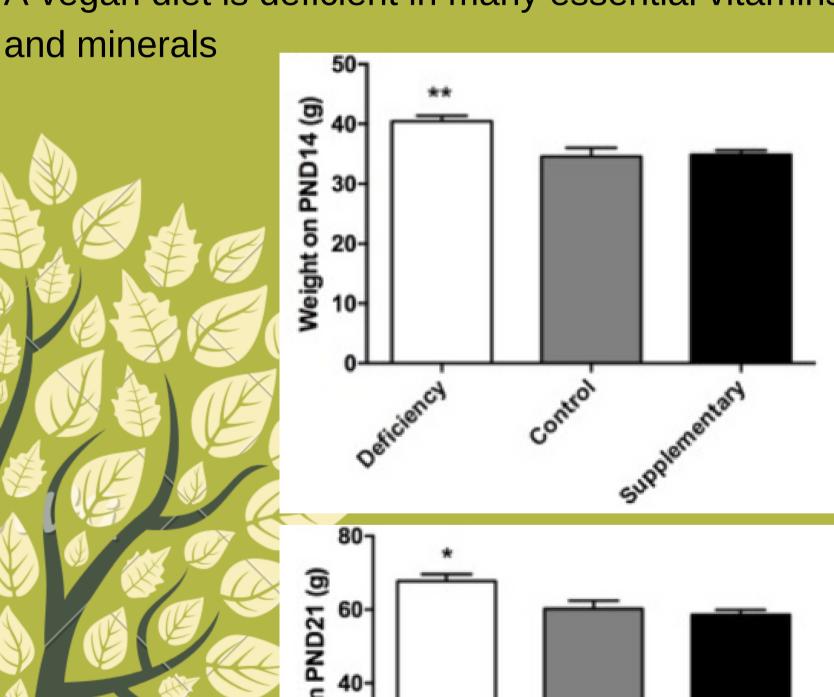
- Docosahexaenoic acid and arachidonic acid are long-chain polyunsaturated fatty acids (LC-PUFAs) that are transferred across the placenta and found in the brain/other organs during fetal development
- Low levels of docosahexaenoic acid from the retina and the brain could result in reduced visual function and learning deficits
- LC-PUFAs are central nutrients required for structural lipids and are fundamental to fetal and postnatal development and normal cell function
- The consumption of LC-PUFAs plays a beneficial physiologic and metabolic role in the health of offspring, protecting them from the onset of metabolic disease
- A vegan diet is deficient in many essential vitamins

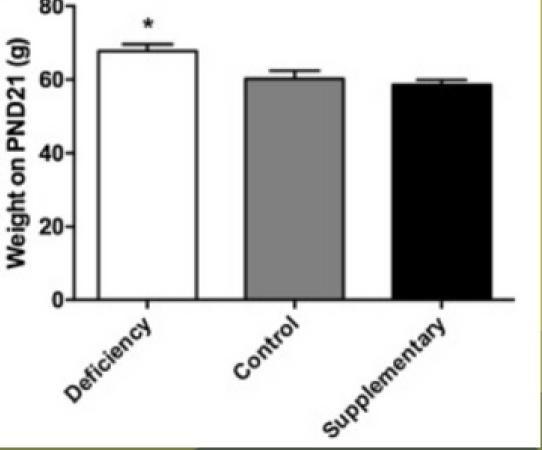
How to Supplement a Vegan Diet

- Supplementation of calcium, magnesium, and vitamin B12 may reduce the risk of decreased birth weight and severity of pre eclampsia
- Folate supplementation decreases risk of neural tube defects

How to be Sustainable

 Be more conscious about the decisions you are making, especially when grocery shipping





Goldstein B, Hansen SF, Gjerris M, Laurent A, Birkved M. (2016). Ethical aspects of life cycle assessments of diets. Food Policy. 59,139-151. doi:10.1016/j.foodpol.2016.01.006 Innis, S. M. (2005). Essential fatty acid transfer and fetal development. Placenta,26, S70-S75. doi:10.1016/j.placenta.2005.01.005

Aennitti, L. V., Oliveira, J. L., Morais, C. A., Estadella, D., Oyama, L. M., Nascimento, C. M., & Pisani, L. P. (2015). Type of fatty acids in maternal diets during pregnancy and/or lactation and metabolic consequences of the offspring. The Journal of Nutritional Biochemistry,26(2), 99-111. doi:10.1016/j.jnutbio.2014.10.001

Yang, R., Liu, S., Zheng, Y., Zhang, M., Dang, R., & Tang, M. (2018). Maternal diet of polyunsaturated fatty acid influence the physical and neurobehaviour of rat offspring. International Journal of Developmental Neuroscience,71, 156-162. doi:10.1016/j.ijdevneu.2018.09.005