

GrowBaby REFERENCES FOR METABOLIC PROGRAMMING, FETAL PROGRAMMING, &
NUTRITION DURING PREGNANCY, 1ST-4TH TRIMESTER

FETAL PROGRAMMING AND METABOLIC PROGRAMMING

Barker, David, Nutrition in the Womb, 1st Ed, USA, 2008

Dominguez-Salas P, Moore SE, Cole D, da Costa KA, Cox SE, Dyer RA, Fulford AJ, Innis SM, Waterland RA, Zeisel SH, Prentice AM Hennig BJ DNA methylation potential: Dietary intake and blood concentrations of one-carbon metabolites and cofactors in rural African women. *Am J Clin Nutr* 2013 Jun;97(6):1217-27. doi: 10.3945/ajcn.112.048462. Epub 2013 Apr 10.

Murphy Paul, Annie, Origins, New York, NY, Free Press, 2010

Sanders TAB and British Nutrition Foundation: Nutrition and Development Short and long term consequences for health. Wiley-Blackwell West Sussex UK, 2013

Stone, P. Michael, Stone, Leslie K., Functional Nutrition in OB, Promoting Developmental Programming of Health not Disease during Pregnancy, 2012 May 23

The Power of Programming: Developmental Origins of Health and Disease. *American J. Clin Nutr.* Dec 2011 Supplement.

ALLERGY

Hong X, X Wang: Early life precursors, epigenetics and the development of food allergy. *Semin Immunopathol* 2012;34(5):655-669.

Prescott S, R Saffery: The role of epigenetic dysregulation in the epidemic of allergic disease. *Clin epigenet* 2011;2:223-232.

Grieger JA, LG Wood, VL Clifton: Improving asthma during pregnancy with dietary antioxidants: the current evidence. *Nutrients* 2013;5:3212-3234.

Litonjua AA: Childhood asthma may be a consequence of vitamin D deficiency. Channing Laboratory and Pulmonary and Critical Care Division, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts 02115, USA. *Curr Opin Allergy Clin Immunol*, 2009 Jun;9(3):202-7. doi: 10.1097/ACI.0b013e32832b36cd.

AUTISM

Schmidt, RJ, RL Hansen, J, J Hartiala, H Allayee, LC Schmidt, DJ Tancredi, F Tassone, I Hertz-Piccolto : Prenatal Vitamins, One-carbon Metabolism Gene Variants, and Risk for Autism. *Epidemiology* 2011;22: 476-485.

Schmidt RJ, DJ Tancredi, S Ozonoff, RL Hansen, J Hartiala, H Allayee, LC Schmidt, F Tassone, I Hertz-Picciotto: Maternal periconceptual folic acid intake and risk of autism spectrum disorders and developmental delay in the CHARGE (Childhood Autism Risks from Genetics and Environment) case-control study. *AJCN* 2012;96:80-89.

Siniscalco, D A Cirillo, JJ Bradstreet, N Antonucci: Epigenetic findings in autism:new perspectives for therapy. *Int J Environ Res Public Health* 2013;10;4261-4273.

James SJ, S Melnyk, S Jernigan, S Lehman, L Seidel, DW Gaylor, MA Cleves: A functional polymorphism in the reduced folate carrier gene and DNA hypomethylation in mothers of children with autism. *Am J Med Genet B Neuropsychiatr Genet.* 2010;153B(6):1209-20.

BREAST FEEDING

Amin S, Merle K, Orlando M, Dalzell L, Guillet R: Brainstem Maturation in Premature Infants as a Function of Enteral Feeding Type, *Pediatrics* 2000; 106(2):318-322

Beaudry M, Dufour R, Marcoux S: Relation between infant feeding and infections during the first six months of life. *J Pediatrics* 1995; 126:191-197

Ben-Jonathan, N., & Hnasko, R. Dopamine as a prolactin (PRL) inhibitor. October 13, 2010. [PubMed.gov](http://pubmed.gov): U.S. National Library of Medicine

Brewer, Sarah, Bhattacharya, Shaoni, Davies, Justine, et al., *The Pregnant Body Book*, New York, NY, DK Publishing, 2011, 175

Burr M, Limb E, Maguire M, et al: Infant feeding, wheezing, and allergy: a prospective study. *Arch Dis Child* 1993; 68:724-728

Cohen R, Mrtek M, Mrtek R: Comparison of maternal absenteeism and infant illness rates among breast-feeding and formula-feeding women in two corporations, *American J Health Promot* 1995; 10(2):148-153.

Cushing A, Samet J, Lambert W, Skipper B, et al: Breastfeeding Reduces Risk of Respiratory Illness in Infants, *American J Epidemiology* 1998; 147(9):863-70.

Davis M: Review of the evidence for an association between infant feeding and childhood cancer, *International J Cancer (Suppl.)* 1998; 11:29-33.

Dewey K, Heinig MJ, Nommsen-Rivers L: Differences in morbidity between breast-fed and formula-fed infants, *J Pediatrics* 1995; 126(5):696-702.

Dewey K, Heinig MJ, Nommsen L: Maternal weight-loss patterns during prolonged lactation. *American J Clin Nutrition* 1993; 58:162-166

Duncan B, Ey J, Holberg C, Wright A, Martinez F, Taussig L: Exclusive breast-feeding for at least 4 months protects against otitis media, *Pediatrics* 1993; 91(5):867-872

Enger S, Ross R, Paganini-Hill A, Bernstein L: Breastfeeding experience and breast cancer risk among postmenopausal women, *Cancer Epidemiol Biomarkers Prev* 1998; 7(5):365-369.

Ford R, Taylor B, Mitchell E: Breastfeeding and the Risk of Sudden Infant Death Syndrome, *Internat J Epidemiology* 1993; Vol 22, pp 885-890.

Gerstein H: Cow's milk exposure and type I diabetes mellitus, *Diabetes Care* 1994; 17(1):13-19.

Goldman A: The immune system of human milk: antimicrobial, anti-inflammatory and immunomodulating properties, *Pediatric Infect Dis J* 1993; 12(8):664-672

Greco L, Auricchio S, Mayer M, Grimaldi M: Case control study on nutritional risk factors in celiac disease, *J Pediatric Gastro & Nutr* 1997; 7(3):395-399.

Hahn-Zoric M, Fulconis F, Minoli I, et al: Antibody responses to parenteral and oral vaccines are impaired by conventional and low protein formulas as compared to breast-feeding, *Acta Paediatr Scand* 1990; 79:1137-1142. Hanson L: Non-breastfeeding – The Most Common Immunodeficiency, *HK J Paediatrics* 1998; 3:5-8.

Heinig MJ, Dewey K: Health advantages of breastfeeding for infants: a critical review, *Nutrition Research Reviews* 1996; 9:89-110.

Heinig MJ: Health effects of breast feeding for mothers: a critical review, *Nutrition Research Reviews* 1997; 10:35-56.

Jacobson S, Chiodo L, Jacobson J: Breastfeeding effects on intelligence quotient in 4- and 11-year-old children, *Pediatrics* 1999; 103(5):71.

Jensen C.L., Maude M., Anderson R.E. & Heird W. C. Effect of docosahexaenoic acid supplementation of lactating women on the fatty acid composition of breast milk lipids and maternal and infant plasma phospholipids, February 08, 2012, PubMed.gov: U.S. National Library of Medicine

Jacobson, H: *Mother Food: food and herbs that promote milk production and a mother's health.* Rosalind Press: 6, 24- 44, 96, 118-123, 126-136, 144-153, 160-163

Kalkwarf HJ, Specker BL: Bone mineral loss during lactation and recovery after weaning, *Obstet Gynecol* 86:25, 1995. Kalkwarf HJ, Specker BL, Heubi JE et al: Intestinal calcium absorption of women during lactation and after weaning, *Am J Clin Nutr* 63:526, 1996

Koletzko S, Sherman P, Corey M et al: Role of infant feeding practices in development of Crohn's disease in childhood, *Brit Med J* 1989; 298:1617-1618

Kramer M: Do breast-feeding and delayed introduction of solid foods protect against subsequent obesity? *J Pediatrics* 1981; 98(6):883-887.

Kramer M, Chalmers B, Hodnett E, Zinaida S et al: Promotion of Breastfeeding Intervention Trial (PROBIT): A Randomized Trial in the Republic of Belarus, *JAMA* 2001; 285:413-420.M

Kuzela A, Stifter C, Worobey J: Breastfeeding and mother-infant interactions, *J Reproductive Psychol* 1990; 8:185-194

Labbok, G Hendershot. Does breastfeeding protect against malocclusion? An analysis of the 1981 child health supplement to the national health interview survey. *American J Preventative Medicine* 1987; 3(4):227-232.

DK Lambert, RD Christensen, E Henry, GE Besner, VL Baer, SE Wiedmeier, RA Stoddard, CA Miner, and J Burnett: Necrotizing enterocolitis in term neonates: data from a multihospital health-care system, *Journal of Perinatology* 2007; 27: 437-443.

Lucas A, Cole T: Breast milk and neonatal necrotizing enterocolitis, *Lancet* 1990; 336:1519-1523

Lucas A, Morley R, Cole T, et al: Breast milk and subsequent intelligence quotient in children born preterm, *Lancet* 1992; 339:261-264.

Mahan, Kathleen L., Escott-Stump, Sylvia, Raymond, Janice L, editors, Krause's Food and the Nutrition Care Process, 13th Ed, St. Louis (MO), Elsevier Saunders, 2012, ch 16, 366 p.

McNeilly A: Lactational amenorrhea, *Endocrinol Metab Clin North Am* 1993; 22(1): 59-73.

Newcomb P, Storer B, Longnecker M, et al: Lactation and a reduced risk of premenopausal breast cancer, *N Engl J Med* 1994; 330(2):81-87.

Perez-Bravo F, Garrasco E, Gutierrez-Lopez M et al: Genetic predisposition and environmental factors leading to the development of insulin-dependent diabetes mellitus in Chilean children. *J Mol Med* 1996; 74:105-109.

Pisacane A, Graziano L, Mazzarella G, Scarpellino B, Zona G: Breastfeeding and urinary tract infection, *J Pediatrics* 1992; 120(1):87-89.

Popkin B, Adair L, Akin J, Black R, Briscoe J, Flegler W: Breast-feeding and diarrheal morbidity, *Pediatrics* 1990; 86(6):874-882. Provisional Committee for Quality Improvement, Sub-Committee on Hyperbilirubinemia, American Academy of Pediatrics: Practice parameters: management of hyperbilirubinemia in the healthy term newborn, *Pediatrics* 1994; 94:558-561.

Saarinen U, Kajosaari M: Breastfeeding as prophylaxis against atopic disease: prospective follow-up study until 17 years old, *Lancet* 1995; 346:1065-1069

Sepehri H, Renard, C & Houdebine, L.M. Beta-glucan and pectin derivatives stimulate prolactin secretion from hypophysis in vitro, 1990. PubMed.gov: U.S. National Library of Medicine

Singhal A, Cole T, Lucas A: Early nutrition in preterm infants and later blood pressure cohorts after randomized trials, *Lancet* 2001; 357:413-19. U.S. Department of Health and Human Services. Healthy People 2010: Conference Edition- Vols I and II. Washington, DC: U.S. Dept. Health and Human Service, Office of the Assistant Secretary for Health, Jan. 2000. pp. 2, 47-48.

Von Kries R, Koletzko B, Sauerwald T, et al: Breast feeding and obesity: cross sectional study. *Brit Med Journal* 1999; 319:147-150. Maternal Health References: Chua S, Arulkumaran S, Lin I, Selamat N, Ratnam

Whittemore A, Harris R, Itnyre J, and the Collaborative Ovarian Cancer Group: Characteristics relating to ovarian cancer risk: collaborative analysis of 12 US case-control studies. II Invasive epithelial ovarian cancers in white women. *American J Epidemiology* 1992; 136(10):1184-1203. Zheng T et al: Long-Term Breastfeeding Lowers Mother's Breast Cancer Risk, *American J Epidemiology* 2001, 152:1129-1135

DEPRESSION AND POST PARTUM DEPRESSION

Hibbeln, Joseph R. Research Report: Seafood consumption, the DHA content of mothers' milk and prevalence rates of postpartum depression: a cross national, ecological analysis. *J of Affective Disorders*. 2002.

Liu Y, SK Murphy, AP Murtha, BF Fuemmeler, J Schildkraut, Z Huang, F Overcash, J Kurtzberg, R Jirtle, ES Iversen, MR Forman, C Hoyo: Depression in pregnancy, infant birth weight and DNA methylation of imprint regulatory elements. *Epigenetics* 2012;7(7):735-746.

Mokhber, N, Namjoo M, Tara F, Boskabadi H, Rayman MP, et al. J Effect of supplementation with selenium on postpartum depression: a randomized double-blind placebo-controlled trial, Department of Psychiatry, Ibn-Sina Hospital, Mashhad University of Medical Sciences, Mashhad, Iran. *J Matern Fetal Neonatal Med*. 2011 Jan;24(1):104-8. doi: 10.3109/14767058.2010.482598. Epub 2010 Jun 8.

Rafflelock, Dean, Rountree, Robert, Hopkins Virginia, Block Melissa, et al. *A Natural Guide to Pregnancy and Postpartum Health*. New York, (NY): Penguin Putnam; 2002. 15 p.

EPIGENETICS, LIFESTYLE AND FOOD

Alegria-Torres JA, A Baccarelli, V Bollati: *Epigenetics and lifestyle* 2011;3(3):267-277.

Landecker H: Food as exposure: Nutritional epigenetics and the new metabolism. *BioSocieties* 2011;6:167-194.

Malireddy S, SR Kotha, JD Secor, TO Gurney, JL Abbott, G Maulik, KR Maddipati, NL Parinandi: Phytochemical antioxidants modulate mammalian cellular epigenome: implications in health and disease. *Antioxidants Redox Signaling* 2012;17(2):327-339.

FETAL DEVELOPMENT

Black, Maureen M.: Effects of vitamin B12 and folate deficiency on brain development in children, NIHPA, 2008 June, 29

Bourre, JM: Effects of nutrients (in food) on the structure and function of the nervous system: update on dietary requirements for brain. Part 1: micronutrients, French Academy of Medicine., Department of Neuro-pharmaco-nutrition. *J Nutr Health Aging*, 2006 Sep-Oct;10 (5):377-85

Bourre, JM: *J Nutr Health Aging*, 2006 Sep-Oct;10(5):386-99, Effects of nutrients (in food) on the structure and function of the nervous system: update on dietary requirements for brain. Part 2 : macronutrients, French Academy of Medicine, Department of Neuro-pharmaco-nutrition. *J Nutr Health Aging*, 2006 Sep-Oct;10(5):386-99

Brewer, Sarah, Bhattacharya, Shaoni, Davies, Justine, et al., *The Pregnant Body Book*, New York, NY, DK Publishing, 2011, 76-77, 92-95, 106-109, 114-125, 132-139, 142-147, 149-155, 158, 161-167, 172 , 176-177, 184-185

Dobbing J, Sands J. Quantitative growth and development of human brain. *Arch Dis Child*. 1973;48:757-767.

Goodnight W, Newman, R; Optimal nutrition for improved twin pregnancy outcome, Society of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC, USA, *Obstet Gynecol* .2009 Nov; 114(5):1121-34 doi:10.1097/AOG.0b013e318bb14c8.

Innis, Sheila, M., Dietary (n-3) Fatty Acids and Brain Development, *Journal of Nutrition*, American Society for Nutrition, 2007

Teyler, Timothy J., Discenna, Pascal, The role of hippocampus in memory: A hypothesis , Neurobiology Program, Northeastern Ohio Universities College of Medicine, Rootstown, OH 44240 USA

Menella Julie A., Jagnow, Coren P., Beauchamp, Gary K.; Prenatal and Postnatal Flavor Learning by Human Infants, *Pediatrics*. 2001 June; 107(6): E88.

MACRONUTRIENTS

Bowden, Ph.D., C.N.S., Jonny, Tannis, M.S., R.H.N, Allison, 100 Healthiest Foods to Eat During Pregnancy, Introduction, Pg 13,

Dowhan, William, The role of phospholipids in cell function, *Advances in Lipobiology*, Vol 2, 1997, 79-107

Halvorsen BL, Carlsen MH, Phillips KM, Bohn SK, Holte K, Jacobs DR Jr, Blomhoff R. Content of redox-active compounds (ie, antioxidants) in foods consumed in the United States. *Am J Clin Nutr*. 2006 Jul;84(1):95-135. 2006. PMID:16825686.

Institute for Functional Medicine, Detox Core Food Plan/Low GI Core Food Plan, Handout, IFM, 2012, Print

Institute for Functional Medicine, Phytonutrient Spectrum, Handout, IFM, 2011, Print

Institute Of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington D.C.: National Academies Press, 2005

Mahan, Kathleen L., Escott-Stump, Sylvia, Raymond, Janice L, editors, Krause's Food and the Nutrition Care Process, 13th Ed, St. Louis (MO), Elsevier Saunders, 2012, ch 16, 356, 367 p.

Mateljan, George, World's Healthiest Foods, Health Promoting Nutrients, 749, 752 p.

Mattei, Josiemer, Hu, Frank, B, Camposa, Hannia: higher ratio of beans to white rice is associated with lower cardiometabolic risk factors in Costa Rican adults, Am J Clin Nutr. 2011 Sep;94(3):869-76. doi: 10.3945/ajcn.111.013219. Epub 2011 Aug 3.

Prenatal and postnatal supplementation with a mixture of *B. bifidum* BGN4, *B. lactis* AD011, and *L. acidophilus* AD031 is an effective approach in preventing the development of eczema in infants at high risk of allergy during the first year of life. *Pediatr Allergy Immunol.* 2010 Mar;21(2 Pt 2):e386-93. Epub 2009 Oct 14.

WebND, Plant Protein Combinations: www.wednd.com/plant-protein-combinations.php, 2014

MECHANISMS REVIEWS

Vo T, DB Hardy: Molecular mechanisms underlying the fetal programming of adult disease. *J. Cell Commun. Signal.* 2012; 6:139-153.

Chen M, L Zhang: Epigenetic mechanisms in developmental programming of adult disease. *Drug Discov Today* 2011;16:1007-1018.

Koletzko, B, B Brands, L Poston, K Godfrey, H Demmelmair, for the Early Nutrition Project: Early nutrition programming of long-term health. *Proceedings of the Nutrition Society* 2012;71:371-378.

McMullen S, Langley-Evans SC, Gambling L, Lang C, Swali A, McArdle HJ: A common cause for a common phenotype: the gatekeeper hypothesis in fetal programming. *Med Hypotheses.* 2012 Jan;78(1):88-94. Epub 2011 Nov 1.

Thompson LP, Al-Hasan Y. Impact of oxidative stress in fetal programming. *J Pregnancy.* 2012;2012:582748. Epub 2012 Jul 11.

Ubeda N, Reyes L, González-Medina A, Alonso-Apperte E, Varela-Moreiras G. Physiologic changes in homocysteine metabolism in pregnancy: A longitudinal study in Spain. *Departamento de Ciencias Farmacéuticas y de la Alimentación, Facultad de Farmacia, Universidad CEU San Pablo, Madrid, Spain. Nutrition.* 2011 Mar 1.

METABOLIC SYNDROME

Brenseke B, MR Prater, J Bahamonde, JC Gutierrez: Current thoughts on Maternal Nutrition and Fetal Programming of the Metabolic Syndrome. J Pregnancy 2013, Article ID 368461.

Diabetes: Gestational, Offspring diabetes

Lehnen H, U Zechner, T Haaf: Epigenetics of gestational diabetes mellitus and offspring health: the time for action is in early stages of life: Molecular Human Reproduction 2013; 19(7):415-422.

METHYLATION-PREGNANCY-DIET

Bibi S, Qureshi, Ahmad M, Qureshi PM, Memon A, Qazi RA. Hyperhomocysteinaemia, vascular related pregnancy complications and the response to vitamin supplementation in pregnant women of Pakistan, J Pak Med Assoc. 2010 Sep;60(9):741-5

Birth Defects Res A Clin Mol Teratol. 2006 Apr;76(4):230-6, Neural tube defects and maternal biomarkers of folate, homocysteine, and glutathione metabolism, Zhao W, Mosley BS, Cleves MA, Melnyk S, James SJ, Hobbs CA, Section of Birth Defects Research, Department of Pediatrics, Arkansas Children's Hospital Research Institute, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, USA

Black, Maureen M.: Effects of vitamin B12 and folate deficiency on brain development in children, NIHPA, 2008 June, 29

Dominguez-Salas P, SE Cox, AM Prentice, BJ Hennig, SE Moore: Maternal nutritional status, C1 metabolism and offspring DNA methylation: a review of current evidence in human subjects. Proc Nutr Soc 2012;71:154-165.

Parle-McDermott A, M Ozaki: The impact of nutrition on differential methylated regions of the genome. Adv Nutr 2011;2:463-471.

MICRONUTRIENTS

MINERALS

Bland, Jeffery S., Costarella, Linda, Levin Buck, et al., Liska, Deann, Quinn, Sheila, Lukaczer, Dan, Jones, David S., Lerman, Robert H, editors, Clinical Nutrition: A Functional Approach, 2nd ed, Gig Harbor, WA, IFM, 151-186 p., 2004

Choline and risk of neural tube defects in a folate-fortified population. Low levels were a risk factor and higher levels were a protective factor for NTDs. Epidemiology. 2009 Sep; 20(5): 714-9.

Delange, F.: The role of iodine in brain development. Delange International Council for Control of Iodine Deficiency Disorders, 153 Avenue de la Fauconnerie, B-1170 Brussels, Belgium. Proc Nutr Soc. 2000 Feb;59(1):75-9.

Food and Nutrition Board, Institute of Medicine. Iodine. Dietary reference intakes for vitamin A, vitamin K, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. Washington, D.C.: National Academy Press; 2001:258-289.

Frederickson, Christopher J., Suh Won, Sang, Silva David, et al., Importance of Zinc in the Central Nervous System: The Zinc-Containing Neuron, Jnutrition, The American Society for Nutritional Sciences, 2000

Goldberg, Jeffrey L., Genes and Development, How does an axon grow?, Dec. 2013, <http://genesdev.cshlp.org/content/17/8/941.full>

Levander OA, Whanger PD. Deliberations and evaluations of the approaches, endpoints and paradigms for selenium and iodine dietary recommendations. J Nutr. 1996;126(9 Suppl):2427S-2434S.

Mahan, Kathleen L., Escott-Stump, Sylvia, Raymond, Janice L, editors, Krause's Food and the Nutrition Care Process, 13th Ed, St. Louis (MO), Elsevier Saunders, 2012, ch 16, 349, 354-355, 358-360 p.

Mateljan, George, World's Healthiest Foods, Health Promoting Nutrients, 738, 744, 760, 762, 776, 780, 802

Maternal zinc deficiency in rats affects growth and glucose metabolism in offspring inducing insulin resistance postnatally. Jnutrition 2010, Sep;140(9): 1621-7

Maternal dietary choline deficiency alters angiogenesis in fetal mouse hippocampus. Proc Natl Acad Sci USA. 2010 Jul 20; 107(29):12834-9.

Murray, Michael, Pizzorno, Joseph, Pizzorno, Lara, The Encyclopedia of Healing Foods, New York, NY, Atria Books, 2005, 96-135 p.

Wu BT, Dyer RA, King DJ, Richardson KJ, Innis SM. Early second trimester maternal plasma choline and betaine are related to measures of early cognitive development in term infants. Nutrition and Metabolism Research Program, Child and Family Research Institute, Department of Paediatrics, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada. PLoS One. 2012;7(8):e43448. doi: 10.1371/journal.pone.0043448. Epub 2012 Aug 20.

Zimmermann MB, Jooste PL, Pandav CS. Iodine-deficiency disorders. Lancet. 2008; 372(9645):1251-1262.

Zimmerman MB, Iodine Deficiency in Pregnancy and the Effects of Maternal Iodine Supplementation on the Offspring: A Review, AJCN: 2009; 89; 668S-672S

VITAMINS

Bland, Jeffery S., Costarella, Linda, Levin Buck, et al., Liska, Deann, Quinn, Sheila, Lukaczer, Dan, Jones, David S., Lerman, Robert H, editors, Clinical Nutrition: A Functional Approach, 2nd ed, Gig Harbor, WA, IFM, 98-145 p., 2004

Camargo, C., et al. Maternal Intake of Vitamin D during pregnancy and Risk of Recurrent Wheeze in Children at 3 Years of Age. *American Journal of Clinical Nutrition* 85: 788-795, 2007.

Eyles D, Burne T, McGrath J: Vitamin D in fetal brain development, Queensland Centre for Mental Health Research, The Park Centre for Mental Health, Wacol, QLD, Australia. *Semin Cell Dev Biol.* 2011 Aug;22(6):629-36. doi: 10.1016/j.semcdb.2011.05.004. E pub 2011 Jun 6.

Mateljan, George, *World's Healthiest Foods, Health Promoting Nutrients*, 750, 756-757, 764, 766, 768, 772, 784, 786, 788, 790, 792, 794, 796, 798, 800

Molloy AM, Kirke PN, Brody LC, Scott JM, Mills JL, Effects of folate and vitamin B12 deficiencies during pregnancy on fetal, infant, and child development. School of Medicine, Trinity College Dublin, Ireland.

Aśok C Antony: *In utero physiology: role of folic acid in nutrient delivery and fetal development*, American Society for Clinical Nutrition, 2007

Maden M, Holder N. *Bioessays.* 1992 Jul;14(7):431-8. Retinoic acid and development of the central nervous system. Developmental Biology Research Centre, King's College London, UK. *Bioessays.* 1992 Jul;14(7):431-8.

Wrzosek M, Łukaszkiwicz J, Wrzosek M, Jakubczyk A, Matsumoto H, Piątkiewicz P, Radziwoń-Zaleska M, Wojnar M, Nowicka G: *Vitamin D and the central nervous system*, Department of Pharmacogenomics, Medical University of Warsaw, Żwirki i Wigury 61, PL 02-091 Warszawa, Poland, 2013

De-Regil LM, Fernández-Gaxiola AC, Dowswell T, Peña-Rosas JP. Folate supplementation prevents NTDs: Effects and safety of periconceptional folate supplementation for preventing birth defects. *Cochrane Database Syst Rev.* 2010 Oct 6;(10):CD007950.

MOTHER'S DEVELOPMENT

Barker, David, *Nutrition in the Womb*, 1st Ed, USA, 2008

Brewer, Sarah, Bhattacharya, Shaoni, Davies, Justine, et al., *The Pregnant Body Book*, New York, NY, DK Publishing, 2011, 96-97, 182-183

Lohninger A, Radler U, Jinniate S, Lohninger S, Karlic H, Lechner S, Mascher D, Tammaa A, Salzer H. Relationship between carnitine, fatty acids and insulin resistance, Center for Physiology and Pathophysiology, Institute of Medical Chemistry, Medical University of Vienna, Währingerstrasse 10, Vienna, Austria. *Gynakol Geburtshilfliche Rundsch.* 2009;49(4):230-5. doi: 10.1159/000301075. Epub 2010 May 19

Mahan, Kathleen L., Escott-Stump, Sylvia, Raymond, Janice L, editors, *Krause's Food and the Nutrition Care Process*, 13th Ed, St. Louis (MO), Elsevier Saunders, 2012, ch 16, 351-352 p.

Mulder EJ, Robles de Medina PG, Huizink AC, Van den Bergh BR, Buitelaar JK, Visser GH. Prenatal maternal stress: effects on pregnancy and the (unborn) child. *Early Hum Dev.* 2002 Dec; 70 (1-2):3-14.

Murkoff, Heidi, Mazel, Sharon, *What to Expect When You're Expecting: Nine Months and Counting, The Fourth Month*, 4th Ed, New York (NY), Workman Publishing, 2008, 216-217 p.

Ringseis R, Hanisch N, Seliger G, Eder K. Low availability of carnitine precursors as a possible reason for the diminished plasma carnitine concentrations in pregnant women.

Institute of Animal Nutrition and Nutrition Physiology, Justus-Liebig-University, Giessen, Germany. *BMC Pregnancy Childbirth.* 2010 Apr 25;10:17.

Welberg LA, Seckl JR, Holmes MC. Prenatal glucocorticoid programming of brain corticosteroid receptors and corticotropin-releasing hormone: possible implications for behavior. *Neuroscience.* 2001;104(1):71-9

Weinstock M. The potential influence of maternal stress hormones on development and mental health of the offspring. *Brain Behav Immun.* 2005 Jul;19(4):296-308

Rees, William, Wilson, Riona, Maloney, Christopher: *Sulfur Amino Acid Metabolism in Pregnancy: The Impact of Methionine in the Maternal Diet*, Journal of Nutrition, 2006

NEUROIMMUNE-NEUROCOGNITIVE

Auestad N, Halter R, Hall RT, et al. Growth and development in term infants fed long-chain polyunsaturated fatty acids: a double-masked, randomized, parallel, prospective multivariate study. *Pediatrics.* 2001;108:372-381.

Auestad N, Scott DT, Janowsky JS, et al. Visual, cognitive, and language assessments at 39 months: a follow-up study of children fed formulas containing long-chain polyunsaturated fatty acids to 1 year of age. *Pediatrics.* 2003;112:e177-e183.

Bauer LA, O'Connor J, Pan DA, et al. The fatty acid composition of skeletal muscle membrane phospholipids: its relationship with the type of feeding and plasma glucose levels in young children. *Metabolism.* 1998;47:106-112.

Birch EE, Hoffman DR, Uauy R, et al. Visual acuity and the essentiality of docosahexaenoic acid and arachidonic acid in the diet of term infants. *Pediatr Res.* 1998;44:201-209.

Birch EE, Garfield S, Hoffman DR, et al. A randomized controlled trial of early dietary supply of long-chain polyunsaturated fatty acids and mental development in term infants. *Dev Med Child Neurol.* 2000;42:174-181.

Birch EE, Hoffman DR, Castañeda YS, et al. A randomized controlled trial of long-chain polyunsaturated fatty acid supplementation of formula in term infants after weaning at 6 wk of age. *Am J Clin Nutr.* 2002;75:570-580.

Birch EE, Castañeda YS, et al. Visual maturation of term infants fed long-chain polyunsaturated fatty acid-supplemented or control formula for 12 months. *Am J Clin Nutr.* 2005;81:871-879.

Birch EE, Garfield S, Castañeda YS, et al. Visual acuity and cognitive outcomes at 4 years of age in a double-blind, randomized trial of long-chain polyunsaturated fatty acid-supplemented infant formula. *Early Hum Dev.* 2007;83:279-284.

Brenna JT, Varamini B, Jensen RG, et al. Docosahexaenoic and arachidonic acid concentrations in human breast milk worldwide. *Am J Clin Nutr.* 2007;85:1457-1464.

Colombo J, Kannass KN, Shaddy DJ, et al. Maternal DHA and the development of attention in infancy and toddlerhood. *Child Dev.* 2004;75:1254-1267.

Crawford MA. The role of essential fatty acids in neural development: implications for perinatal nutrition. *Am J Clin Nutr.* 1993;57(suppl):703S-710S.

Dobbing J, Sands J. Quantitative growth and development of human brain. *Arch Dis Child.* 1973;48:757-767.

Farquharson J, Cockburn F, Patrick WA, et al. Infant cerebral cortex phospholipid fatty-acid composition and diet. *Lancet.* 1992;340:810-813.

Farquharson J, Cockburn F, Patrick WA, et al. Effect of diet on infant subcutaneous tissue triglyceride fatty acids. *Arch Dis Child.* 1993;69:589-593.

Farquharson J, Jamieson EC, Logan RW, et al. Age- and dietary-related distributions of hepatic arachidonic and docosahexaenoic acid in early infancy. *Pediatr Res.* 1995;38:361-365.

FAO/WHO Joint Expert Consultation. Lipids in early development. In: *Fats and oils in human nutrition. Report of a joint expert consultation. Food and Agriculture Organization of the United Nations and the World Health Organization. FAO Food and Nutr Pap.* 1994;57:49-55.

Gibson RA, Neumann MA, Makrides M. Effect of increasing breast milk docosahexaenoic acid on plasma and erythrocyte phospholipid fatty acids and neural indices of exclusively breast fed infants. *Eur J Clin Nutr.* 1997;51:578-584.

Haggarty P, Page K, Abramovich DR, et al. Long-chain polyunsaturated fatty acid transport across the perfused human placenta. *Placenta.* 1997;18:635-642.

Helland IB, Smith L, Saarem K, et al. Maternal supplementation with very-long-chain n-3 fatty acids during pregnancy and lactation augments children's IQ at 4 years of age. *Pediatrics.* 2003;111:e39-e44.

Hoffman DR, Wheaton DKH, James KJ, et al. Docosahexaenoic acid in red blood cells of term infants receiving two levels of long-chain polyunsaturated fatty acids. *J Pediatr Gastroenterol Nutr.* 2006;42:287-292.

Hoffman DR, Birch EE, Castañeda YS, et al. Maturation of visual and mental function in 18-month old infants receiving dietary long-chain polyunsaturated fatty acids (LCPUFAs). *FASEB J.* 2003;17:A727-A728. Abstract 445.1.

Hoffman DR, Birch EE, Castañeda YS, et al. Visual function in breastfed term infants weaned to formula with and without long-chain polyunsaturates at 4 to 6 months: a randomized clinical trial. *J Pediatr.* 2003;142:669-677.

Horrocks LA, Yeo YK. Health benefits of docosahexaenoic acid. *Pharmacol Res.* 1999;40:211-225

Innis SM. Perinatal biochemistry and physiology of long-chain polyunsaturated fatty acids. *J Pediatr.* 2003;143(suppl 4):S1-S8.

Innis SM, Gilley J, Werker J. Are human milk long-chain polyunsaturated fatty acids related to visual and neural development in breastfed term infants? *J Pediatr.* 2001;139:532-538.

Jensen RG. Lipids in human milk. *Lipids.* 1999;34:1243-1271.

Jorgensen MH, Hernell O, Hughes EL, Michaelsen KF. Is there a relation between docosahexaenoic acid concentration in mothers' milk and visual development in term infants? *J Pediatr Gastroenterol Nutr.* 2001;32:293-296.

Kris-Etherton PM, Harris WS, Appel LJ. Fish consumption, fish oil, omega-3 fatty acids, and cardiovascular disease. *Circulation.* 2002;106:2747-2757.

Koletzko B, Agostoni C, Carlson SE, et al. Long chain polyunsaturated fatty acids (LC-PUFA) and perinatal development. *Acta Paediatr.* 2001;90:460-464.

Laugharne JDE, Mellor JE, Peet M. Fatty acids and schizophrenia. *Lipids.* 1996;31(suppl):S163-S165.

Makrides M, Neumann MA, Byard RW, et al. Fatty acid composition of brain, retina, and erythrocytes in breast- and formula-fed infants. *Am J Clin Nutr.* 1994;60:189-194.

Martinez M. Tissue levels of polyunsaturated fatty acids during early human development. *J Pediatr.* 1992;120(suppl):S129-S138.

Michael K Georgieff: Nutrition and the developing brain: nutrient priorities and measurement. *Am J Clin Nutr* 2007;85(suppl):614S–20S.

Morse, Nancy, Benefits of Docosahexaenoic Acid, Folic Acid, Vitamin D and Iodine on Foetal and Infant Brain Development and Function Following Maternal Supplementation during Pregnancy and Lactation *Nutrients* 2012, 4, 799-840;

Neuringer M, Anderson GJ, Connor WE. The essentiality of n-3 fatty acids for the development and function of the retina and brain. *Annu Rev Nutr.* 1988;8:517-541.

O'Keefe JH, Harris WS. From Inuit to implementation: omega-3 fatty acids come of age. *Mayo Clin Proc.* 2000;75:607-614.

Salem N, Wegher B, Mena P, Uauy R. Arachidonic and docosahexaenoic acids are biosynthesized from their 18-carbon precursors in human infants. *Proc Natl Acad Sci USA*. 1996;93:49-54.

Simopoulos AP, Leaf A, Salem N. Workshop on the essentiality of and recommended dietary intakes for omega-6 and omega-3 fatty acids. *J Am Coll Nutr*. 1999;18:487-489.

Smuts C, Huang M, Mundy D, et al. A randomized trial of docosahexaenoic acid supplementation during the third trimester of pregnancy. *Obstet Gynecol*. 2003;101:469-479.

Spencer SJ: Perinatal nutrition programs neuroimmune function long term: mechanisms and implications. *Frontiers in Neuroscience* 2013;7(144):1.

Steele, Caroline, Maternal DHA Intake During Pregnancy and Lactation: Important for Mothers and Babies, *Pediatric Perspectives*, Volume 7, Series 7, 2008, Newsletter

The British Nutrition Foundation. Recommendations for intakes of unsaturated fatty acids. In: *Unsaturated Fatty Acids: Nutritional and physiological significance: The Report of the British Nutrition Foundation's Task Force*. London: Chapman & Hall; 1992:152-163.

OBESITY

Akbus PT et al: *J Maternal Fetal Neonatal Med*. 2013 Apr 8, Lowered serum total L-carnitine levels are associated with obesity at term pregnancy, *J Maternal Fetal Neonatal Med*. 2013 Apr 8.

Pico C, A Palou: Perinatal programming of obesity: an introduction to the topic. *Frontiers in Physiology* 2013: 4(255)1. Doi:10.3389/fphys.2013.00255.

Pico C, M Palou, T Priego, J Sanchez, A Palou: Metabolic programming of obesity by energy restriction during the perinatal period: different outcomes depending on gender and period, type and severity of restriction. *Frontiers in Physiology* 2012: 3(436)1. Doi:10.3389/fphys.2012.00436.

Sarr O, K Yang, TRH Regnault: In Utero Programming of Later Adiposity: The role of fetal Growth Restriction. *J. Pregnancy* 2012, Article ID 134758.

Sullivan EL, KL Grove: Metabolic imprinting of obesity. *Forum Nutr* 2010;63:186-194.

Alfaradhi, M.Z. S. E. Ozanne Developmental programming in response to maternal overnutrition *Frontiers in Genetics* June 2011;Volume2-Article27

Obesity endocrine dysfunction programmed in pregnancy and lactation:

Lisboa PC, E de Oliveira, E Gaspar de Moura: Obesity and endocrine dysfunction programmed by maternal smoking in pregnancy and lactation. *Frontiers in Physiology* 2012: 3(437).

SCHIZOPHRENIA

Brown AS: The environment and susceptibility to schizophrenia. *Prog Neurobiol* 2011;93(1)23-58.

Jongbloet PH, ALM Verbeek, M den Heijer, N Roeleveld.: Methylenetetrahydrofolate reductase (MTHFR) gene polymorphisms resulting in suboptimal oocyte maturation: a discussion of folate status, neural tube defects, schizophrenia and vasculopathy. *J Exp Clin Assisted Reproduction*. 2008;5:5.

Nyaradi A, J Li, S Hickling, J Foster, WH Oddy: The role of nutrition in children's neurocognitive development, from pregnancy through childhood. *Frontiers in Human Neuroscience* 2013;7(97)1.

Marques AH, TG O'Connor, C Roth, E Susser, AL Bjorke-Monsen: the influence of maternal prenatal and early childhood nutrition and maternal prenatal stress on offspring immune system development and neurodevelopmental disorders. *Frontiers in Neuroscience* 2013;7(120):1.