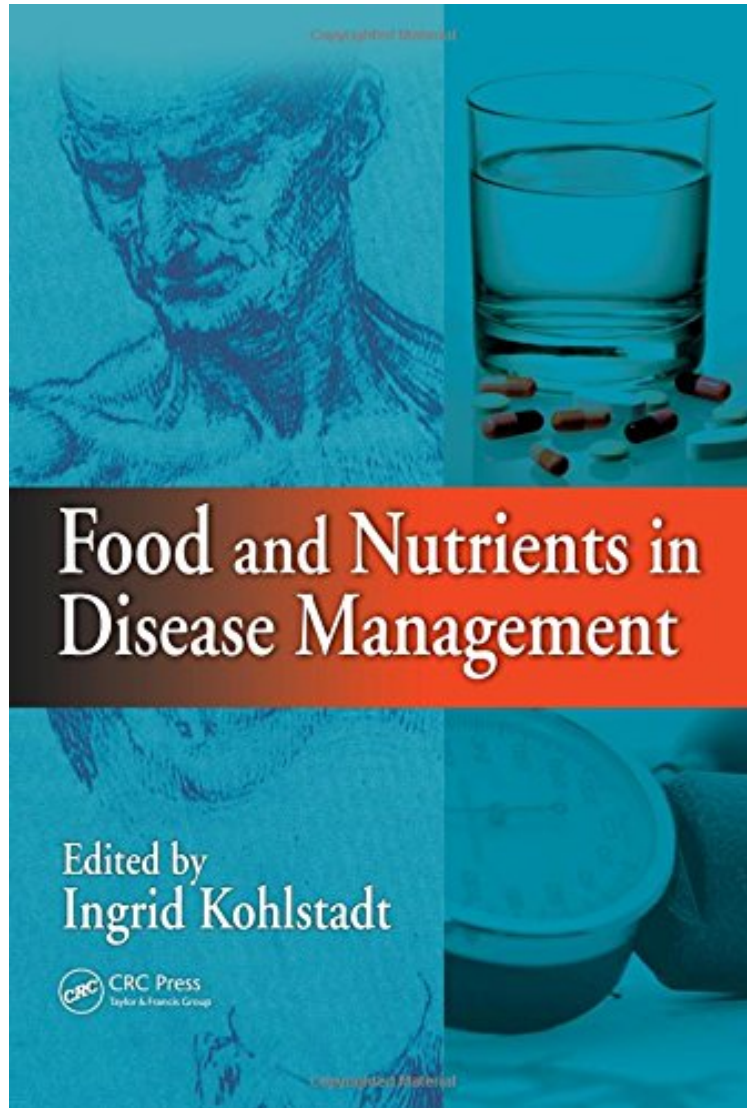


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Food and Nutrients in Disease Management

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From CRC Press : Food and Nutrients in Disease Management before purchasing it in order to gage whether or not it would be worth my time, and all praised Food and Nutrients in Disease Management:

2 of 2 people found the following review helpful. very resourceful and scientificBy mCaelumThis book is great! I find myself using it all the time too look up specific conditions. It has a wide array of therapies for all the common diseases and digestive disorders. What makes this book stand out from the rest is the fact that it doesn't just tell you what nutrients would be good, it focuses on the FOOD!1 of 3 people found the following review helpful. nutrition bookBy Misty B. Kosciuskogreat delivery for book but the book is not what I expected. It's so detailed and hard to follow. Not

something I'd use to make references to in practice.²¹ of 22 people found the following review helpful. Issues in Autism By Kent Heckenlively I thought the chapter on autism was wonderful and wrote this article about it. [...] Solving the Autism Puzzle - The Fatty Acid Question and "Big, Fat Neurons"! Neuron By Kent Heckenlively, Esq. (Author's note - Further discussions with Dr. Kane have allowed me to significantly improve and deepen the science of this article. Worth reading again!) Let me be clear. I hate the expression "autism puzzle." The only time I'll have the slightest affection for it is when it's used in a sentence such as "The autism puzzle has been solved." This article delves into theories which will hopefully bring that day closer. I don't say the theory expressed here is true. But it's interesting. And I believe it's worth discussion. In the recently published book, "Food and Nutrients in Disease Management", (\$133 on) edited by Ingrid Kohlstadt is a chapter entitled "Autistic Spectrum Disorder: Dynamic Intervention for Neuronal Membrane Stabilization" by Patricia Kane, Ph.D., Annette Cartaxo, M.D., and Richard Deth, Ph.D. In the chapter a number of interesting claims are made. I believe they're consistent with the experiences of many people with autism, and if verified, provide a clear picture of what has gone wrong with the disease, and more importantly, the road out of autism and other neurological disorders. The discussion begins with evidence of neuroinflammation discovered by Dr. Andrew Zimmerman and his colleagues at Johns Hopkins in 2005. This neuroinflammation upsets the balance between excitatory and calming neuro-transmitters, causing the glutamate system to become overexcited and GABA production to be curtailed. This results in the development of autistic symptoms and other neurological disturbances such as seizures. Two biomarkers of this glutamate excitotoxicity are mitochondrial dysfunction involving 1) viral exposures which damages the mitochondrial membrane resulting in formation of swellings (dendritic beading) along the nerve dendrites and 2) the formation of lipid rafts, ceramides within the cells impairing membrane function. The authors assert that the appearance of dendritic beading is indicative of a damaged mitochondrial membrane, made up of fatty acids called cardiolipin, after exposure to a virus. They have also observed that calcium dysregulation is also an accompaniment to mitochondrial dysfunction, leading inevitably to oxidative stress. The authors have examined red cell fatty acid analysis for the past 12 years through a biomedical analysis at BodyBio (Dr. Kane's company) on thousands of children with autism and other disorders with testing by the Peroxisomal Disease Laboratory of the Kennedy-Krieger Institute at Johns Hopkins University. They have hypothesized that autism is the result of a disturbance in cellular function due to toxic insult. Specifically, there's a build-up of very long chain fatty acids (VLCFAs) which causes impairment in the functioning of the peroxisome. The peroxisome is a cellular organelle responsible for critical cellular functions such as detoxification, creating cellular fatty acid structures (phospholipids), generating bile acids necessary for digestion, and breaking down very long chain fatty acids. In discussing autism with me, Dr. Kane suggested I imagine the very long chain fatty acids as prison bars, imprisoning the cell so that these rigid structures form lipid rafts not allowing the organelles (organs within the cell like the mitochondria and peroxisome) and the cell membrane to perform its fluid, vibrating function, but rather leave it static, like a couch potato. The cell membrane is composed of 50% phospholipids, which are critical for the health and vitality of cellular function. The cellular membrane should be viewed as something akin to a port, the skin of the cell from which the cell receives nutrients from the outside world. If the docks aren't in good shape then the cell can't get the material it needs to function properly and cannot expel what it does not need. Because of the disruption in the cell membrane, the formation of lipid rafts due to toxic insult, receptors such as the dopamine receptor that Dr. Richard Deth has written so much about relating to autism, is not embraced properly by the phospholipids, leading to distortion of the cell and the ability of the receptors like dopamine to sit properly in the membrane. Phosphatidylcholine makes up 50% of the outer lipid membrane and is the most powerful tool we have in our arsenal to heal the membrane, heal the brain. The authors write, "Peroxisomal disorders are characterized by an accumulation in tissue and body fluids of renegade fatty acids: saturated and mono-unsaturated VLCFAs (very long chain fatty acids), odd chain fatty acids, and branched chain fatty acids, pristanic and phytanic, which are normally degraded within the peroxisome, but instead can accumulate and form lipid rafts, or ceramides, which derange cell membrane structure. The accumulation of renegade or VLCFAs reflects blocked detoxification and methylation pathways, and may be characteristic in autism, PDD, seizure disorders, stroke, neurological disease and states of neurotoxicity." In essence, the buildup of very long chains causes swelling or edema of the cell from the buildup of very long chain fatty acids. Harvard autism neurologist Dr. Margaret Bauman originally found that children with autism had "big, fat neurons" while Dr. Kane discovered that children with autism had "big, fat peroxisomes" after examining the levels of very long chain fatty acids in red cell studies from Johns Hopkins. In 1996 Dr. Kane had proposed that autism may be the aftermath of a toxic insult, a viral infection which evoked hepatic encephalopathy, resulting in hyperammonemia and suppression of several key enzymes, such as carbamylphosphate synthetase, glutamine synthetase and ornithine transcarbamylase. The high levels of ammonia would cause an "increase in brain edema (water) and a deterioration in neuropsychological function." The ammonia would also cause abnormalities in neurotransmitters and induce injury to astrocytes which are already under oxidative stress. For this and a number of other reasons, Kane believes the oxidative stress should be viewed as the result of a toxic event, rather than the cause of autism. Kane asserts that because of this, treating a patient with anti-oxidants is a little like pouring water on a house after it's already burned to the ground. She suggests "treatment should be centered on re-building membrane structure and thereby stabilizing membrane function." This

involves clearing the body of ammonia, very long chain fatty acids, and giving the cells those building blocks which they've long been denied. Another problem which has attracted the authors' attention is her finding of increase in the white matter in the brains of children with autism after observing the buildup of DMAs in the red cell fatty acid test from Johns Hopkins. Normally these markers are low, showing demyelination in children with pervasive developmental delay and seizures. In autism, there is instead a state of overmyelination. Dr. Bauman notes in her recently updated book on autism that the most likely explanation for the increase in brain size is "the presence of abnormal myelin production." In their work Drs. Kane and Cartaxo (a developmental pediatrician) have also noted that about one-third of the autistic children tested have low cholesterol. Low cholesterol is yet another indicator of poor cell membrane integrity. Because of my complete dedication to you readers I had my daughter's blood tested by the Peroxisomal Disease Laboratory of the Kennedy-Krieger Institute of Johns Hopkins University through BodyBio for the presence of abnormal fatty acids. (Yes, you may address me by my Native American name, "Don't-have-a-buck" for my propensity to test all of these various theories!) My daughter tested high for levels of very long chain fatty acids which form these lipid rafts (indicating neuroinflammation) high levels of DMAs (myelin markers, also showing neuroinflammation), and low in essential fatty acids. In resolving these issues it's Kane's approach to "burn" off the very long chain fatty acids, "build" by supplementing the essential chain fatty acids necessary for proper neuron development, and "balance" the other fatty acids. This usually involves the "intravenous administration of phosphatidylcholine (Lipostabil), folic acid, (Leucovorin) reduced glutathione (Wellness Pharmacy) and phenylbutyrate, appropriate co-enzymes, such as vitamins and minerals, and balanced essential fatty acids (including oral supplementation with evening primrose oil, egg yolk, meat fat, sunflower oil, flax oil, high EPA fish oil, wild salmon, sardines) targeted to the patient's individual results." In my discussions with Dr. Kane she was also able to relate these theories to many other therapies which have been used in autism. Hyper-baric oxygen therapy (HBOT) for example is quite good for burning off the very long chain fatty acids she's seen in many autistic children. However, it will also burn off the essential fatty acids as well and can destabilize the neurons. Therefore, as a result, those children most likely to benefit are those who already have a good balance of essential fatty acids so that they can handle the decrease. Dr. Kane has been using the short chain fatty acid, phenylbutyrate for the past 14 years for children with seizure disorders, post stroke, brain injury, and autism. She found that phenylbutyrate as a prescription or over the counter, burned off very long chain fatty acids, but without the complications of HBOT. Phenylbutyrate though must be used with balanced essential fatty acids and phosphatidylcholine to keep the cells healthy. Children with seizures are more likely to have a buildup of very long chain fatty acids, but an exceptionally low amount of total lipid content within their cells, and thus HBOT treatment may increase their seizure activity. The high level of myelin marker DMAs (indicating brain inflammation), elevation of very long chain fatty acids (also from brain and liver inflammation) with low essential fatty acid levels from my daughter's test also explains the failure of her stem cell treatments last year. Her body didn't have enough short chain fatty acids to provide the raw materials necessary for the stem cells to flourish. In a similar vein, the ketogenic diet, which involves eating a great deal of fat, causes the body to burn off very long chain fatty acids forming lipid rafts or ceramides, but may not fully resolve the problem unless the essential fatty acids, phosphatidylcholine and butyrate are given. This may be why approximately one-third of the children who have success on the diet have their seizures reappear after stopping the diet. There is no need to use the severe restrictions of the ketogenic diet as Kane describes in another chapter of the book, "Food and Nutrients in Disease Management" on seizures. Kane has a diet called the Membrane Stabilizing Diet and can be found in the Detox Book for Patients. The question of susceptibility genes for autism has also drawn a great deal of attention from Dr. Kane, although she notes there has been a lack of consistent findings. She observes that certain genes can lead to an increased immune reactivity that may be turned on during fetal development due to the mother's exposure to toxins or after the child is born in relation to heavy metals, chemicals, virus, toxic mold, or pesticides. She has had several patients with gross exposure to heavy metals such as arsenic from the city's water supply, as well as methylmercury during fetal development from the mother's daily consumption of white albacore tuna, and massive metallic mercury exposure from a spill at the mother's dental clinic. One point that is often misunderstood is that heavy metals are liquid soluble and reside in cells. It is impossible to detoxify heavy metals bound to proteins like metallothionein or within the nervous system with chemical chelators like DMSA or DMPS. These children had gross developmental abnormalities from heavy metal poisoning which were resolved through the intravenous administration of Lipostabil (phosphatidylcholine), Leucovorin (folic acid), glutathione, and phenylbutyrate. It is Kane's opinion that "in-born" errors of metabolism don't present any greater challenges than those errors of metabolism which are acquired later in life. Dr. Kane's lipid therapy treatment has also impacted her own life. When her son was 18 months old he had a severe stroke which left him in such a debilitated state the doctors told her she should place him in an institution. She believes this happened as a result of her dentist putting pure mercury into a filling and covering it with amalgam. She believes this mercury went straight into her child during her pregnancy as well as while she was breast-feeding. She states the only medical reason a child can have a stroke before the age of 3 is due to an ornithine transcarbamylase deficiency (this enzyme detoxifies ammonia). As the enzyme ornithine transcarbamylase is suppressed with exposure to mercury, ammonia levels rise, and the child has repeated strokes. She was able to save her son's life by using lipid

therapy and within a few months had completely recovered. Dr. Kane went on to work with children whom everybody else had given up on, children with brain injury, intractable seizures, global development delay, and autism. Although Dr. Kane's son completely recovered from the stroke, unfortunately, when he went away to college he was exposed to an array of neurotoxins. He worked in an enclosed space with acrylic paint (arsenic, lead, cadmium), soldering lead/copper in his art work, and also received a meningitis vaccination required by the university (he had never been vaccinated previously). He had not one stroke, but a series of strokes, and began exhibiting autistic symptoms. In a panic Dr. Kane called her long-time friend Dr. Bernie Rimland and asked if he'd ever heard of adult-onset autism. After receiving a negative answer from Dr. Rimland she went to the library desperate to find an answer. She found a case of a brother and sister with adult-onset autism from the cluster of cases from the mercury exposure at Minamata Bay, Japan in the 1950s. The exposure of mercury had suppressed the enzyme ornithine transcarbamylase causing an increase in ammonia and autistic symptoms. (There's also a report in Medline of adult-onset autism in a 31 year-old man from infection by the herpes virus and Dr. Kane told me she had seen a case of West Nile dementia in a 70 year-old man that presented with autistic symptoms.) For the second time in his life, Dr. Kane's son started on lipid therapy and he again recovered. In Dr. Kane's view autism is best described as a disruption of cellular lipid metabolism. She believes the starting point for this discussion is viral in nature, and complicated by heavy metals such as lead, mercury, or cadmium, pesticides, toxic mold exposure, chemicals, Lyme disease and other infections. Each one of these environmental insults on its own, or in combination, can disrupt lipid metabolism. Personally, I believe Dr. Kane's work to be an important contribution to addressing autism. She has presented her work at Columbia University, the NIH, Johns Hopkins, as well as many other medical institutions. This work seems to be well-known, as I had no difficulty in getting my regular pediatrician to sign off on these tests. After having so many tests done at labs of unknown quality it was refreshing to see this last set being sent off to Johns Hopkins. I'll keep you posted as to what happens next. Kent Heckenlively is Legal Editor of Age of Autism

Food and nutrients are the original medicine and the shoulders on which modern medicine stands. But in recent decades, food and medicine have taken divergent paths and the natural healing properties of food have been diminished in the wake of modern technical progress. With contributions from highly regarded experts who work on the frontlines of disease management, *Food and Nutrients in Disease Management* effectively brings food back into the clinical arena and helps physicians put food and nutrients back on the prescription pad. Under the editorial guidance of Dr. Ingrid Kohlstadt, physician nutrition specialist, this authoritative reference equips clinicians with the information they need to fully utilize nutritional medicine by enabling them to adjust medication dosage with diet, diagnose and correct nutrient deficiencies, and counsel patients on food selection. An emerging recommendation may soon be, "take 2 cups of kale, and call me in the morning."

"Dr. Kohlstadt has clearly targeted a very different audience. The book does an excellent job of achieving its goal, which (my words) is to educate medical doctors as to the evidence-based, biochemical underpinnings of food and nutrient therapy in addressing common health conditions. The book will be indispensable for medical students, and any allopathic doctor who wants to learn the science behind food as medicine. This will serve as powerful and comprehensive evidence to combat the oft-heard claim that "there isn't any science behind" food and nutrients as therapy. *hellip*; This textbook will be on my shelf *ndash*; the one arm's reach from my desk *ndash*; as I know I will use it time and again to provide my clients the best approaches science has to offer." American Nutrition Association

Although *Food and Nutrients in Disease Management*, edited by Ingrid Kohlstadt, is geared toward the physician, this book would be of utmost importance for nutritionists and anyone working in the alternative health field. As well, for a patient of any of the diseases mentioned, this book would give clarity and direction of using food as a healing mechanism.

Reader Views, April 2012 An interesting and practical addition to the regular medical textbooks. *Pediatric Endocrinology s*, Vol. 7, No. 4, June 2010 *Food and Nutrients in Disease Management* provides a wealth of information on the relationships between food, nutrients, and management of disease. All of the chapters are well referenced. The book is an up-to-date reference text that physicians, particularly family practice physicians, should have on their bookshelves. The text should be of interest to nutritionists, dieticians, pharmacists, and other health professionals. *hellip*; Judith A. Driskell, JAMA, Vol. 302 Fantastic! Every physician who treats patients should devour this book. Sherry A. Rogers, M.D., ABEM, FACA, FACN, ABFP *Food and Nutrients in Disease Management* is a text that is long overdue. Written by pioneering experts in the field of nutrition and health, this text pulls together in one convenient place material that has been difficult to find in mainstream medicine. Every physician in the world should read, refer to, and apply the information in these pages. Christiane Northrup, M.D. Ingrid Kohlstadt, M.D., is prominent among the 22,000 physicians and scientists of the American Academy of Anti-Aging Medicine, who see the potential for dramatic improvements in both health span and lifespan, and her new book gives the prescription and clear roadmap to maximum longevity. Ronald Klatz, M.D., D.O., President, American Academy of Anti-Aging Medicine Dr. Kohlstadt has established a benchmark of nutrition and nutrient effects on health and disease that meets the educational needs of a growing group of doctors, who are poised to use the best foods and nutrients available to

promote health and treat disease. Patrick J. Hanaway, M.D., Chief Medical Officer, Genova Diagnostics, President, American Board of Integrative Holistic Medicine; Many of the bright lights of nutritional medicine have had a hand in crafting this practical, well-done text. As an educator in an integrative medicine academic practice, I would have this text available and required reading for all of the students, residents, and fellows that rotate through our program. The recommendations for use of nutrition and nutritional supplements during healthcare are made with the latest evidence at hand, coupled with great clinical insight. Jeanne A. Drisko, M.D., Riordan Professor of Orthomolecular Medicine, The University of Kansas Medical Center; Dr. Ingrid Kohlstadt has skillfully edited the contributions of 64 distinguished contributors to create a comprehensive resource on the importance of good nutrition in the promotion of health and in healing disease. The industrialization of agriculture and the tremendous growth of processed foods threaten the availability of a diverse, nutrient-rich diet. This book will inform clinicians to provide scientific advice to their patients and help them to improve. Robert S. Lawrence, M.D., Director, Center for a Livable Future, Johns Hopkins Bloomberg School of Public Health There are some books that have classic written all over them, destined to take up a permanent position within arms' reach in the library of every writer, researcher, and clinician concerned with holistic health . . . Food and Nutrients in Disease Management is such a book . . . Virtually every chapter in this brilliant volume can serve as a basic reference article on the disease being discussed, as well as providing a treasure trove of research summaries of the relevant effects of various foods, dietary strategies, and nutritional supplements. Highly recommended. Jonny Bowden, Ph.D.; Townsend Letter, June 2009 From the Author Top 10 reasons to buy this book: Anchor your consulting practice in the latest science Show your patients how nutrition is important for their health Personalize your recommendations Use it as a course textbook Health care professionals in training can access 70 experts Give it to your doctor; Tell them you think nutrition is important Use it as a second opinion, and third, fourth, and fifth; Gift this to friends and change their health Change public policy around nutrition with this authoritative work Become better informed about potentially questionable or misleading claims from food and nutrition companies About the Author Ingrid Kohlstadt MD, MPH is a graduate of Johns Hopkins School of Medicine, Class of 1993, and is Faculty Johns Hopkins Bloomberg School of Public Health. She earned her bachelor's degree in biochemistry at the University of Maryland and as a Rotary Club International Scholar at Universitauml; Tuuml;bingen, Germany in 1989. Board-certified in General Preventive Medicine and with a graduate degree in epidemiology, Dr. Kohlstadt became convinced that nutrition is powerful and underutilized in preventing disease. She therefore focused her career on nutrition through fellowships at Johns Hopkins and The Centers for Disease Control and Prevention, as well as bariatric physician with the Johns Hopkins Weight Management Center, the Indian Health Service, and the Florida Orthopedic Institute. She has been elected a Fellow of the American College of Nutrition, and a Fellow of the American College of Preventive Medicine. Dr. Kohlstadt maintains that clinical advances emerge at the interface between research and regulation, where she has worked as an inaugural U.S. Food and Drug Administration Commissioner's Fellow, a local health officer, a congressional intern and a consulting physician with the United States Department of Agriculture. Having practiced medicine on every continent including as station doctor in Antarctica, she is convinced that nutrition is much broader than health. "It is an expression of our inter-connectedness with the earth and future generations, with each other and those who have gone before us." -Ingrid Kohlstadt MD, MPH