

# Obesity, Diabetes and Sex

## The Links between Sex and Health

**Richard Kunin, MD** founder and President of OHM since 1994 opened the conference with a reminder about his 1980's book on nutritional medicine, Mega Nutrition, and his work on the Orthocarbohydrate diet. This diet details the unique carbohydrate requirements for all of our patients.

**Frank Shallenberger, MD, HMD.** Dr. Shallenberger reviewed the shocking statistics of obesity trends in the United States and the diabetes epidemic. He reminds us of the forgotten nutrient, oxygen, and how it can be measured in our patients and explains how decreased oxygen utilization is the cause of free radical damage and insulin resistance. Next he details ten causes of decreased oxygen utilization; decreased lipolysis, hypoglycemia, ischemia, hypoxia, decreased methylation, inflammation, toxicity, infections, stress, nutritional deficiencies, hormonal deficiencies and decreased fitness. Thyroid, adrenal, gonadal and pituitary hormone deficiencies and mitochondrial repair are all necessary for diabetes treatment and prevention.

**Gerald Reaven, MD** Professor Emeritus in Medicine at Stanford University School of Medicine. Dr. Reaven reviewed some of the history of Syndrome X and its relationship to diabetes. Several diagnoses have been associated with Syndrome X including elevated blood pressure, glucose intolerance, high triglycerides, low HDL-C, and abdominal obesity and have been designated as the metabolic syndrome. Several research groups and Dr. Reaven feel that the abdominal obesity criterion as an important single criterion is overrated and that the metabolic syndrome frequently occurs without obesity.

**Elson Haas, MD.** Dr. Haas, our most loveable, practical advocate for promoting healthful lifestyles for our patients gave us many useful techniques for communication and inspiration. Doctors should be teachers and promote low sugar diets, exercise, eating with the seasons of Chinese Medicine, quality sleep, positive attitudes, quality nutrient support, stress reduction, detoxification and fasting, hormonal support when needed, acid-alkaline balance, bowel health and awareness of the importance of vitamin D sufficiency for immunity and longevity.

**Robert Lustig, MD.** Dr. Lustig, Professor of Pediatrics and Endocrinology at UCSF, gave us a tour de force on the cause of childhood obesity. He reviewed, in great detail, the metabolism of fructose and the gargantuan increase in fructose consumption in the last 40 years. His exposition on when a calorie is not just a calorie was inspiring. By elucidating the metabolic degradation pathway of fructose which leads to a fatty liver, insulin resistance, obesity, diabetes and cancer he clearly marks the influence of fructose on our civilizations major health problems. He reminds us that the sucrose molecule is a disaccharide of glucose and fructose and that the liver metabolites have obesity generating implications and leptin inhibition. Kids can drink a 64 oz soda and have no appetite suppression before eating the double cheeseburger, fries and malt. He unfortunately reminds us that this fructose caused childhood obesity epidemic leading to diabetes is a political issue and we all should read his research and support his efforts to fight big sugar interests in the international food industry.

**Cynthia M. Watson, MD.** Dr. Watson's lecture guides us through a review of the importance of good sexual functioning for our overall health and detailed the interaction of hormones, neurochemistry and vascular issues to maintain sexual health. She notes that frequency of intercourse is associated with lower mortality in men and women. Many impediments to sexual functioning are associated with commonly prescribed medications, including anti-hypertensives, beta-blockers, anti depressants, anxiolytics, antipsychotics, steroids as well as alcohol, cigarettes and street drugs. Hormone replacement therapy with bioidentical hormones, especially testosterone in men and women repairs sexual dysfunction as well as oxytocin to improve bonding and orgasms. She also gives an extensive review of herbal agents including Horny Goat Weed for improvement of sexual function.

**Ron Kennedy, MD.** Dr. Kennedy gives us a memorable, disturbingly humorous, lecture on the top 15 causes of death and how to prevent them. I highly suggest getting the tapes of his lecture and/or checking out the lecture reproduced at [www.longevity.medical-library.net](http://www.longevity.medical-library.net). From essential nutritional support for anti aging to wearing seat belts his lifestyle suggestions are important for care givers and patients alike. Eating organic foods and avoiding GMO foods along with sensible guidelines for exercise and heavy metal removal are part of his basic message that "It's what you do every day which kills you...or keep you alive and well".

**Hyla Cass, MD.** Noted author and lecturer, Dr. Cass, addressed the topic of Women, Mood and Hormones. She notes that women are >> than men in incidence of depression, fibromyalgia, CFS, autoimmune disease, harm from alcohol, smoking and sensitivity to medications and hormone specific symptoms of PMS, perimenopause and menopause. Her lecture includes a beautiful review of stress and adrenal hormones, monitoring and regulation of thyroid hormones and all gonadal hormones (progesterone, estrogens, and testosterone) measurement and replacement therapies. She concludes with advice on nutritional supplementation, lifestyle and the importance of adaptogens and phytonutrients for women's health.

**Martin Pall, PhD.** Dr. Pall presented a unifying theory for unexplained illnesses such as CFS, Multiple chemical sensitivity, fibromyalgia, PTSD, Gulf war syndrome and other chronic diseases including Alzheimers's disease. The commonality of all these illnesses he relates to NO (nitric oxide) combining with superoxide (OO<sup>-</sup>) to form peroxynitrite (ONOO<sup>-</sup>), a powerful free radical and oxidizer. This damaging molecule can be triggered by exposures to many environmental stressors including chemicals, pesticides, heavy metals, fungicides and spinal injuries. His diagrams of chemical pathways which lead to the increased peroxynitrite production are very compelling. To combat this over production he gives a multifactoral approach for supplementation and tools for quenching this excessive free radical damage.

**Michael Kwiker, DO.** Dr. Kwiker gave a great review of the Eat Right 4 Your Type Diet book by Peter J. D'damo, Ph.D, ND. This book looks at the production of leptins, adherent proteins which bind to cell membranes and inhibit oxygen and blood sugar absorption at the cellular level and are related to many illnesses and energy deficits based on the blood type. In his system there are beneficial, neural and avoid foods depending on the blood type. Type O is the hunter and a carnivore, A is the cultivator and is more vegetarian, B is the Nomad and does better with lamb and goat foods and AB is the enigma, an evolutionary mystery with many dietary restrictions. All the blood types should use different lifestyle strategies for optimal health.

**Tapan Audhya, PhD,** Professor of Medicine and Endocrinology (NYU). Dr. Audhya's lecture is entitled Therapeutic Potential Of Pyruvate Dehydrogenase Kinase Inhibitor in Diabetes. The oxidative decarboxylation of Pyruvate to acetyl-CoA by mitochondrial Pyruvate dehydrogenase complex (PDC) results in net reduction of glucose precursors, such as, glycogen, lactate, citric acid cycle intermediates and amino acids. Upregulation of PDC allows carbohydrate to be oxidatively used in response to energy demands and is necessary for the conversion of surplus dietary carbohydrate to fatty acids. PDC is regulated by Pyruvate dehydrogenase kinase (PDK) which phosphorylates and inactivates PDC. The Pyruvate analog DCA (Dichloroacetate) is the most common classic inhibitor for PDK and has been shown to have beneficial effects in diabetes and lactic acidosis. DCA is known to have minimal toxicity. He presents confirmatory data on the effects of DCA in diabetic patients in a randomized, double-blind controlled trial.

**Barbara Lyons, MA** standing in for Chris Oakes, MA defines the terms and uses of genetic markers, namely HLA DR genetic mutations which cause or aggravate chronic disease. These mutations are particularly common in most autoimmune diseases. She emphasizes the importance of finding out the unique genetic inheritance for all of us, especially the very difficult to heal patients and other useful testing and epigenetic factors which aggravate treatment. The disease spectrum influenced by these genetic factors is dauntingly long and unfortunately the current medical model does not sufficiently address genetic and environmental factors.