

Beyond the Pyramid: Diet and Alternative Compounds for Cancer Prevention

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Personal dietary choices have long-term health consequences, with important roles in disease development and incidence including heart disease, diabetes, and cancer. It is estimated that 30-40% of all cancers can actually be prevented by adopting a well-balanced diet and other healthy lifestyle choices (e.g. reduced stress, increased exercise). The scope of dietary intervention research with regards to cancer prevention and treatment is large; ranging from dietary restriction such as specific amino acid restriction (tyrosine/phenylalanine) to dietary supplementation including curcumin and saw palmetto.

In the past, nutritional experiments have largely focused on the relative immediate effects of dietary intervention with regards to alterations of important signaling pathways. These experiments have often exhibited moderate and somewhat inconclusive effects in vitro, in vivo, and in the clinic; however, as new innovative research is beginning to illustrate, dietary intervention is not strictly about immediate and direct effects. Through the alteration of essential protein, genetic and epigenetic expression, the effect of diet and nutrition on cancer and disease incidence is subtle with long-term consequences which can span generations. By understanding these subtle dietary effects with regards to overall health, novel biomarkers for cancer incidence may be discovered and novel drug targets could be developed.

In order to achieve a truly successful use of diet in the prevention of cancer, we must move beyond laboratory and clinical research, and also begin to focus on dietary education, of patients, the general public and the medical community.

Biography

Dr. Jeffery Herman achieved his PhD in Pharmacology/Toxicology from the Washington State University under the mentorship of Dr. Gary G Meadows. Dr. Herman has worked at top research facilities including Oregon Health Science University and San Francisco Veteran Affairs Medical Center/University of California San Francisco. Dr. Herman's research interests largely lie in the role of dietary and nutritional intervention of cancer and other diseases. Dr. Herman has published papers in peer reviewed scientific journals, maintains a successful science and nutrition website and is an active science/medical writer.