

Communication between Animal Cells and the Plant Foods they Ingest: Phyto-Zooidal Dependencies and Signaling

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Abstract. The beneficial effect of plant foods on human health is unmistakable. Time and time again, studies have found foods of plant origin to reduce the risk of most major chronic illnesses suffered by the human population. Possible mechanisms for the preventative effects of these foods are discussed. Each of the plant groups reviewed was found to reduce the risk of one or more of the following: cardiovascular disease, cancer (lung, breast, colon, rectal, prostate, epithelial, stomach, esophageal, oral, pharynx, larynx, urinary tract, endometrium, pancreas, thyroid, liver, ovary, gallbladder, bladder, kidney), diabetes, hypertension, bone degeneration, diverticulitis, constipation, gallstones, age-related blindness. Almost no evidence was found to suggest a negative effect on health due to consumption of these plant foods. Based on this material and a review of conserved animal signaling molecules we surmise that animals require these “plant” chemicals to enhance specific mammalian cellular processes, demonstrating phyto-zooidal signaling. Further, this diet dependency coupling between plants and animals probably evolved because of the abundance of a particular plant material in a local environment, which is now broken because of enhance human travel, i.e., technological advances. In conclusion, the overwhelming majority of evidence shows that people may significantly decrease their risks of the aforementioned diseases by increasing their intake of these foods since they represent a natural method to enhance animal processes and signaling.