Diabetes Mellitus
Risk Review

Disease type	First Author	Study Title and Complete Citation	Date	Abstract	Study Type	G.Tom +, N, -	P.Tom +, N, -	F.Tom +, N, -	Lyco +, N, -	Other +, N, -
Diabetes	Donaldson MS.	Nutrition and cancer: a review of the evidence for an anti-cancer diet. Donaldson MS. Nutr J. 2004 Oct 20;3:19.	2004	It has been estimated that 30-40 percent of all cancers can be prevented by lifestyle and dietary measures alone. Obesity, nutrient sparse foods such as concentrated sugars and refined flour products that contribute to impaired glucose metabolism (which leads to diabetes), low fiber intake, consumption of red meat, and imbalance of omega 3 and omega 6 fats all contribute to excess cancer risk. Intake of flax seed, especially its lignan fraction, and abundant portions of fruits and vegetables will lower cancer risk. Allium and cruciferous vegetables are especially beneficial, with broccoli sprouts being the densest source of sulforophane. Protective elements in a cancer prevention diet include selenium, folic acid, vitamin B-12, vitamin D, chlorophyll, and antioxidants such as the carotenoids (alpha-carotene, beta-carotene, lycopene, lutein, cryptoxanthin). Ascorbic acid has limited benefits orally, but could be very beneficial intravenously. Supplementary use of oral digestive enzymes and probiotics also has merit as anticancer dietary measures. When a diet is compiled according to the guidelines here it is likely that there would be at least a 60-70 percent decrease in breast, colorectal, and prostate cancers, and even a 40-50 percent decrease in lung cancer, along with similar reductions in cancers at other sites. Such a diet would be conducive to preventing cancer and would favor recovery from cancer as well.	Review					
Diabetes	Basu A	Tomatoes versus lycopene in oxidative stress and carcinogenesis: conclusions from clinical trials. Basu A, Imrhan V.	2006	OBJECTIVE: To review the effects of tomato product supplementation, containing lycopene, on biomarkers of oxidative stress and carcinogenesis in human clinical trials. ESULTS: Supplementation of tomato products, containing lycopene, has been shown to lower biomarkers of oxidative stress and carcinogenesis in healthy and type II diabetic patients, and prostate cancer patients, respectively. Processed tomato products like tomato juice, tomato paste, tomato puree, tomato ketchup and tomato oleoresin have been shown to provide bioavailable sources of lycopene,	Review					

		Eur J Clin Nutr. 2007 Mar;61(3):295-303. Epub 2006 Aug 16.		with consequent increases in plasma lycopene levels versus baseline. Dietary fats enhance this process and should be consumed together with food sources of lycopene. The mechanisms of action involve protection of plasma lipoproteins, lymphocyte DNA and serum proteins against oxidative damage, and anticarcinogenic effects, including reduction of prostate-specific antigen, upregulation of connexin expression and overall decrease in prostate tumor aggressiveness. There is limited in vivo data on the health benefits of lycopene alone. Most of the clinical trials with tomato products suggest a synergistic action of lycopene with other nutrients, in lowering biomarkers of oxidative stress and carcinogenesis. CONCLUSIONS: Consumption of processed tomato products, containing lycopene, is of significant health benefit and can be attributed to a combination of naturally occurring nutrients in tomatoes. Lycopene, the main tomato carotenoid, contributes to this effect, but its role per se remains to be investigated.						