Supplementation

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, -
Cancer: colorectal	Vrieling A	Lycopene supplementation elevates circulating insulin-like growth factor binding protein-1 and -2 concentrations in persons at greater risk of colorectal cancer. Vrieling A, Voskuil DW, Bonfrer JM, Korse CM, van Doorn J, Cats A, Depla AC, Timmer R, Witteman BJ, van Leeuwen FE, Van't Veer LJ, Rookus MA, Kampman E. Am J Clin Nutr. 2007 Nov;86(5):1456-62.	2007	BACKGROUND: Higher circulating insulin-like growth factor I (IGF-I) concentrations have been related to a greater risk of cancer. Lycopene intake is inversely associated with cancer risk, and experimental studies have shown that it may affect the IGF system, possibly through an effect on IGF-binding proteins (IGFBPs). OBJECTIVE: The objective of our study was to investigate the effect of an 8-wk supplementation with tomato-derived lycopene (30 mg/d) on serum concentrations of total IGF-I, IGF-II, IGFBP-1, IGFBP-2, and IGFBP-3. DESIGN: We conducted a randomized, placebo-controlled, double-blinded crossover study in 40 men and 31 postmenopausal women with a family history of colorectal cancer, a personal history of colorectal adenoma, or both. RESULTS: Lycopene supplementation significantly (P = 0.01) increased serum IGFBP-1 concentrations in women (median relative difference between serum IGFBP-1 concentrations after lycopene supplementation and after placebo, 21.7%). Serum IGFBP-2 concentrations were higher in both men and women after lycopene supplementation than after placebo, but to a lesser extent (mean relative difference 8.2%; 95% CI: 0.7%, 15.6% in men and 7.8%; 95% CI: -5.0%, 20.6% in women). Total IGF-I, IGF-II, and IGFBP-3 concentrations were not significantly altered by lycopene supplementation. CONCLUSIONS: This is the first study known to show that lycopene supplementation may increase circulating IGFBP-1 and IGFBP-2 concentrations. Because of high interindividual variations in IGFBP-1 and IGFBP-2 effects, these results should be confirmed in larger randomized intervention studies.	RCT				(-)/N (-) ↑ IGFPB-1 IGFBP-2 ~~~~~ N IGF-1 IGF-II IGFBP-3	
Cancer: colorectal	Walfisch S	Tomato lycopene extract supplementation decreases insulin-like growth factor-I levels in colon	2007	Epidemiological studies have shown that high serum levels of insulin-like growth factor-I are associated with an increased risk of colon and other types of cancer. The aim of this study was to determine whether short intervention with dietary tomato lycopene extract will affect serum levels of the insulin-like growth factor system components in colon cancer patients. The study had a double-	RCT				(-)/N (-) ↓ IGF-1 ~~~~~	

		cancer patients. Walfisch S, Walfisch Y, Kirilov E, Linde N, Mnitentag H, Agbaria R, Sharoni Y, Levy J. Eur J Cancer Prev. 2007 Aug;16(4):298-303.		blind, randomized, placebo-controlled design. Colon cancer patients (n=56), candidates for colectomy, were recruited from the local community a few days to a few weeks before surgery. Personal and medical data were recorded. Plasma concentrations of insulin-like growth factor-I and II and insulin-like growth factor-I-binding protein-3 were assayed by routine laboratory methods. Lycopene was assayed by high-performance liquid chromatography. Plasma lycopene levels increased by twofold after supplementation with tomato lycopene extract. In the placebo-treated group, there was a small nonsignificant increase in lycopene plasma levels. The plasma concentration of insulin-like growth factor-I decreased significantly by about 25% after tomato lycopene extract supplementation as compared with the placebo-treated group ($P<0.05$). No significant change was observed in insulin-like growth factor-I-binding protein-3 or insulin-like growth factor-II, whereas the insulin-like growth factor-I/insulin-like growth factor-I-binding protein-3 molar ratio decreased significantly ($P<0.05$). Given that high plasma levels of insulin-like growth factor-I have been suggested as a risk factor for various types of cancer including colon cancer, the results support our suggestion that tomato lycopene extract has a role in the prevention of colon and possibly other types of cancer.					N IGF-II & IGF-1 BP	