

Whole almonds and almond fractions reduce aberrant crypt foci in a rat model of colon carcinogenesis.

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Abstract:

Almonds and other nuts appear to confer health benefits despite their high fat content. To assess the effect of almonds on colon cancer, whole almond-, almond meal- or almond oil-containing diet effects on aberrant crypt foci (ACF) in azoxymethane-treated F344 male rats were investigated. Six-week-old male F344 rats were fed the various almond and control diets and given subcutaneous injections of azoxymethane (15 mg/kg body weight) twice 1 week apart. After 26 weeks animals were injected with bromodeoxyuridine 1h prior to sacrifice, after which colons were evaluated for ACF and cell turnover (labeling index, LI). Whole almond ACF and LI were both significantly lower than wheat bran and cellulose diet groups (-30 and -40%, respectively), while almond meal and almond oil ACF and almond meal LI declines were only significant vs. cellulose ($P < 0.05$). These results suggest that almond consumption may reduce colon cancer risk and does so via at least one almond lipid-associated component. © 2001 Elsevier Science Ireland Ltd. All rights reserved.