

Cancer inhibition in mouse by Astaxanthin containing egg yolks abstract, Lee 1997

#17. Lee, S. et al. (1997). "Inhibition of benzo(a)pyrene-induced mouse forestomach neoplasia by astaxanthin containing egg yolks." *Agricultural Chemistry & Biotechnology*. 40(6): 490-494.

ABSTRACT

Anticarcinogenic activity of astaxanthin-containing egg yolks (designate AEY) was investigated for benzo(a)pyrene (BP)-induced mouse forestomach tumorigenesis initiating regimen. Female ICR mouse (6-7 weeks of age) were housed in polycarbonated cages (5 mice/cage; 20 mice/treatment) in a humidity-and-temperature-controlled facility and permitted free access to water and food. One week later, four and 2 days prior to p.o. treatment with BP (2 mg/0.2 ml corn oil), mice were given 0.2 ml PBS containing 50 mg AEY, 100 mg AEY, 150 mg AEY, or 150 mg CEY. Control mice were only given 0.2 ml PBS. Three days later this sequence was repeated for a total of 4 times. Beginning with the first intubation and continuing thereafter, body weight and food intake were recorded once weekly. All surviving mice were sacrificed 24 weeks after the first dose of BP. Mice treated with AEY developed only about one third as many neoplasms/animal as mice in control or CEY-treated group ($p < 0.05$). Reduction effect of tumor development by AEY was dependent upon doses applied. Tumor incidence was also reduced by AEY treatments, but significantly reduced only by 150 mg AEY treatment when compared to that by control or CEY. Food intake and body weight were not affected by AEY treatment. These results indicate that AEY inhibits tumorigenesis of mouse forestomach induced by BP.

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