Soy intake is associated with lower lung cancer risk: results from a meta-analysis of epidemiologic studies.


Source
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Abstract

BACKGROUND:

Although several in vitro and animal in vivo studies have suggested that soy or soy isoflavones may exert inhibitory effects on lung carcinogenesis, epidemiologic studies have reported inconclusive results on the association between soy intake and lung cancer.

OBJECTIVE:

The aim of this meta-analysis was to investigate whether an association exists between soy and lung cancer in epidemiologic studies.

DESIGN:

We searched PubMed, EMBASE, and the Cochrane Library from their inception to February 2011 for both case-control and cohort studies that assessed soy consumption and lung cancer risk. Study-specific risk estimates were combined by using fixed-effect or random-effect models.

RESULTS:

A total of 11 epidemiologic studies that consisted of 8 case-control and 3 prospective cohort studies were included. A significantly inverse association was shown between soy intake and lung cancer with an overall RR of 0.77 (95% CI: 0.65, 0.92). Findings were slightly different when analyses were restricted to 5 high-quality studies (RR: 0.70; 95% CI: 0.45, 0.99). In a subgroup meta-analysis, a statistically significant protective effect of soy consumption was observed in women (RR: 0.79; 95% CI: 0.67,
0.93), never smokers (RR: 0.62; 95% CI: 0.51, 0.76), and Asian populations (RR: 0.86; 95% CI: 0.74, 0.98).

CONCLUSIONS:

Our findings indicate that the consumption of soy food is associated with lower lung cancer risk. Because of different methods used to assess soy consumption across studies, more well-designed cohort studies or intervention studies that use unified measures of soy intake are needed to fully characterize such an association.

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