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**Abstract**  
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**Abstract**  
**Title:** Cruciferous vegetable intake is inversely associated with lung cancer risk among smokers

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**Block:** Inverse associations between cruciferous vegetable intake and lung cancer risk have been consistently reported. However, associations within smoking strata are not consistent. Inadequate control of the confounding effect of cigarette smoking could contribute at least in part to the observed inconsistencies. We conducted a hospital-based case-control study with lung cancer cases and controls matched on smoking status, and then further adjusted smoking status, duration, and intensity in the multivariate models. After controlling for smoking habits and other lung cancer risk factors, we observed strong linear inverse associations between intakes of fruit, total vegetables, and cruciferous vegetables and risk of lung cancer (ORs ranged from 0.53-0.70, with P for trend < 0.05). Interestingly, intake of fruits and total vegetables showed relatively stronger association among never smokers, whereas the significant inverse associations with cruciferous vegetable intake were only observed among smokers, in particular former smokers, although we did not detect significant interactions between smoking and either food group intake. Of four histological subtypes of lung cancer, the significant inverse association was only noticed among patients with squamous or small cell carcinoma, which are the two subtypes more strongly associated with heavy smoking. These findings are consistent with the smoking-related carcinogen-modulating effect of isothiocyanates, a group of phytochemicals uniquely present in cruciferous vegetables. Our data strongly suggest that a diet with high consumption of cruciferous vegetables may reduce the risk of lung cancer among smokers.

**Abstract**  
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