Estimating ascorbic acid requirements for cigarette smokers.

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Abstract
This analysis of a large, population based, cross-sectional survey demonstrates that the association of smoking with decreased serum ascorbic acid (AA) levels is independent of the reduced AA intake found in smokers. Smokers have a threefold higher incidence of low serum AA levels (< or = 11 mumol/L) which could place them at increased risk for the clinical manifestations of AA deficiency. Smokers not taking vitamin supplements who consumed less than 15 servings weekly of fruits and vegetables were especially prone to have serum AA levels less than 11 mumol/L. An AA intake of > or = 200 mg was necessary to provide smokers with equivalent protection from hypovitaminosis AA as had nonsmokers whose AA intake exceeded the recommended dietary allowance (RDA [60 mg]). This level of dietary AA intake is considerably higher than the newly increased RDA for smokers of 100 mg. Although the simplest and most direct method to increase the low serum vitamin C levels found in many smokers would be to stop smoking, markedly increasing dietary AA consumption is appropriate when this is unsuccessful. However, if dietary modification fails to sufficiently increase AA intake, then vitamin supplementation may be necessary to significantly reduce the high prevalence of hypovitaminosis AA present in smokers.

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