High Baseline Vitamin C Levels Do Not Prevent a Positive Outcome of a Lifestyle Intervention: Response to Thamer et al.
I evaluated study nonsupplemented subjects with an increased risk for type 2 diabetes (1), whereas our study has determined the effects of vitamin supplementation in young healthy adults (2).

Plasma vitamin C concentrations are widely used as surrogate markers of dietary intake of fruits and vegetables (3). A number of prospective studies have demonstrated the potential of increased dietary intake of fruits and vegetables to act as a type 2 diabetes–preventive factor as cited and discussed by Thamer et al. (1), our study (2), and others (4). In contrast, prospective studies examining defined vitamin supplements after correction for dietary habits have found no beneficial influence of vitamin C supplements on glucose metabolism (4), and our study demonstrated a clear effect of combined vitamins C and E supplementation of the insulin-sensitizing effect of exercise training (2). As discussed extensively in the respective publications, these latter(4) and our own (2) findings suggest that while fruits and vegetables may have an effect in preventing or delaying type 2 diabetes, supplementation with antioxidants is not likely to do the same.

As proposed in an earlier study (5) and now supported by the study of Thamer et al. (1), fruits and vegetables may exert their diabetes–preventive potential independent of their content in vitamin C. Thus, as we previously emphasized (2), antioxidant supplements cannot compensate for inadequate intake of dietary fruits and vegetables in regards to the prevention of type 2 diabetes.

References


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