

The Relationship Between Vitamin A, Vitamin C, and Vitamin E Intake and Total Cholesterol Levels in Patients with Hypercholesterolemia at Community Health Centers in Jember Regency

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ABSTRACT

Hypercholesterolemia is a condition characterized by elevated total blood cholesterol levels and serves as a risk factor for cardiovascular disease. The prevalence of hypercholesterolemia remains high and continues to rise, including in Jember Regency. Intake of vitamins A, C, and E, which possess antioxidant properties—is considered a potential factor in the regulation of cholesterol levels. This study aimed to analyze the relationship between the intake of vitamins A, C, and E and total cholesterol levels in patients with hypercholesterolemia at Community Health Centers in Jember Regency. An observational analytic study with a cross-sectional design was employed. A total of 108 respondents were selected using purposive sampling. Data on vitamin A, C, and E intake were collected through interviews using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ), while total cholesterol data were obtained via testing using a FamilyDr device. Data analysis was performed using the Chi-Square test to determine the relationship between the independent and dependent variables. The results showed no statistically significant relationship between total cholesterol levels and the intake of vitamin A ($p = 0.662$), vitamin C ($p = 0.074$), or vitamin E ($p = 0.516$). Thus, it can be concluded that the intake of vitamins A, C, and E is not significantly associated with total cholesterol levels in patients with hypercholesterolemia at Community Health Centers in Jember Regency.

Keywords: hypercholesterolemia, vitamin A, vitamin C, vitamin E, total cholesterol