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Intake of Antioxidant Vitamins, Calcium, Beverages and Mortality: The 90+ Study: P03.055

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OBJECTIVE: To study the association between intake of antioxidant vitamins, calcium, and certain beverages and all-cause mortality

BACKGROUND: Studies have suggested that certain diets and mild to moderate alcohol intake can protect against some chronic diseases and all-cause mortality. However, studies of these factors in the oldest old are limited.

DESIGN/METHODS: Participants are elderly adults from the Leisure World Cohort Study, a population-based prospective investigation in a California retirement community. Between 1981 and 1985, 13979 subjects completed a baseline mailed survey about lifestyle and medical history. Diet information was collected with a food-frequency questionnaire that included beverages and 58 foods (or food groups) that are common sources of dietary vitamins A, C and calcium. Cox proportional hazards analyses were performed to estimate the risk of mortality associated with intake of the following: vitamins C and A (diet plus supplements), vitamin E (supplements), calcium (diet), coffee (regular and decaffeinated), tea, and alcohol. The model adjusted for the potential confounding effects of gender, baseline age, smoking, exercise, body mass index (BMI), and history of several medical conditions typically associated with decreased survival (hypertension, angina, myocardial infarction, stroke, diabetes, fractures, and cancer). The relative risks (RR) for all the variables were estimated simultaneously in one model. Because of the many concurrent estimates, we used a significance level of 0.001.

RESULTS: As of October 2002, there were 9869 deceased participants. Subjects were excluded from analyses if their information for the variables of interest was missing (n=983). The average age at baseline of the 12,996 analyzed participants was 73.6 (range=44-101) and their average follow-up was 12.8 years (range = 0-21). After adjusting for age, gender, smoking, exercise, BMI, and medical histories, alcohol intake (Rr=0.91 for +/-1 drink/day; Rr=0.85 for>1 drink/day vs. no intake) and the highest category of caffeinated coffee drinking (Rr=0.90 for>1 cup/ day vs. no intake) were associated with a reduction in all-cause mortality. Wine appeared to be the specific type of alcohol most responsible for the reduction (Rr=0.88 for +/-1 glass/day; Rr=0.86 for>1 glass/day vs. no wine intake). Intake of antioxidant vitamins, calcium, or tea was not

associated with mortality. The RRs for medium and high tertiles respectively vs. low tertile were 0.99 and 0.97 for total vitamin A; 1.00 and 1.01 for total vitamin C; 0.96 and 0.97 for vitamin E supplements; 1.02 and 1.07 for calcium. For +/-1 cup/day and>1 cup/day vs. no tea, the RRs were 0.98 and 0.96.

CONCLUSIONS: Mild to moderate alcohol drinking, particularly wine, as well as high coffee consumption were related to a decreased risk of all-cause mortality.

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Disclosure: Dr. Corrada, Dr. Paganini-Hill and Dr. Kawas have nothing to disclose.

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