



## Telephone Counseling Can Promote Substantial Dietary Change in Healthy Adults

**Objective.** To determine whether a 3-month/8-call telephone counseling intervention can promote dietary changes associated with reduction in risk of chronic diseases.

**Design.** An intervention study comparing baseline and 6-month dietary intake data in adults consuming <5.0 servings of vegetables and fruits daily at study entry.

**Subjects/setting.** 97 adults (mean age 46 years; range 21 to 84) completed the intervention and the 6-month followup assessments between 2002 and 2004. Approximately half were of non-White ethnicity (53%). The majority were female (95%) and had never had cancer (89%).

**Intervention.** Eight telephone counseling calls over 3 months. Dietary targets: 3-5 vegetable servings/day; 2-4 fruit servings/day; and 3 whole grain and/or beans/legume servings/day.

**Main outcome measures.** Average total daily intake of vegetables, fruits, whole grains, beans/legumes, fiber, and fat at baseline and 6 months assessed by three 24-hour recalls. Plasma carotenoids were measured on a subsample (n=41) as an objective biomarker of vegetable and fruit intake.

**Statistical analyses performed.** Change in mean self-reported dietary intake (vegetables, fruit, whole grains, beans/legumes, fiber, fat) and plasma carotenoids were compared by paired T-tests.

**Results.** The intervention significantly ( $p < 0.001$ ) increased vegetable servings/day (baseline, 2.1; 6-mo, 3.5; 66% increase); fruit servings/day (baseline, 1.4; 6-mo, 2.4; 71% increase); and whole grain and/or bean servings/day (baseline, 1.0; 6-mo, 1.4; 40% increase). These changes were corroborated by a significant ( $p < 0.001$ ) increase in total plasma carotenoids.

**Applications/conclusions.** A 3-month/8-call telephone counseling intervention produced a major dietary change in healthy adults consuming less than 5 servings/day of vegetables and fruit at study entry.

**Funding.** American Cancer Society (ACS) and Avon Foundation.