

Abstract

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Marine Fatty Acid Intake Is Associated with Breast Cancer Prognosis.

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OBJECTIVE: EPA and DHA, long-chain (n-3) PUFA largely obtained from fish, inhibit the proliferation of breast cancer cells in vitro and reduce the initiation and progression of breast tumors in laboratory animals. Our purpose in this analysis was to examine whether intake of these marine fatty acids (EPA and DHA) were associated with prognosis in a cohort of women who had been diagnosed and treated for early stage breast cancer (n = 3,081).

METHODS: Median follow-up was 7.3 y. Dietary intake was assessed using 24-h recalls (~4 recalls per dietary assessment obtained at 7 time points over 6 y). Survival models with time-dependent covariates were used to examine the association of repeated measures of dietary intake of EPA and DHA from food (i.e., marine sources) and supplements with disease-free survival and overall survival.

RESULTS: Women with higher intakes of EPA and DHA from food had an approximate 25% reduced risk of additional breast cancer events [tertile 2: HR = 0.74 (95% CI = 0.58-0.94); tertile 3: HR = 0.72 (95% CI = 0.57-0.90)] compared with the lowest tertile of intake. Women with higher intakes of EPA and DHA from food had a dose-dependent reduced risk of all-cause mortality [tertile 2: HR = 0.75 (95% CI = 0.55-1.04); tertile 3: HR = 0.59 (95% CI = 0.43-0.82)].

CONCLUSIONS: EPA and DHA intake from fish oil supplements was not associated with breast cancer outcomes. The investigation indicates that marine fatty acids from food are associated with reduced risk of additional breast cancer events and all-cause mortality.

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