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Nothing Fishy About It: Omega-3 Polyunsaturated Fatty Acids in Heart Failure

In a large randomized trial, adding an inexpensive, widely available supplement to heart failure treatment provided a modest but significant incremental benefit.

Mortality from heart failure remains unacceptably high. Results from secondary prevention trials have suggested that omega-3 polyunsaturated fatty acids (PUFAs) might confer a 20% relative reduction in risk for death (JW Cardiol Nov 8 2006) in patients with coronary heart disease, apparently through anti-arrhythmic effects. No large-scale trials of PUFAs have been conducted in patients with heart failure.

In a trial from the Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto miocardico (GISSI), sponsored by multiple industry partners, investigators randomized 6975 patients with symptomatic, chronic heart failure (NYHA classes II–IV) to receive placebo or an omega-3 PUFA supplement in addition to their other medications. Median follow-up was 3.9 years.

Patients assigned to PUFAs had a 9% reduction in relative risk for all-cause mortality (adjusted hazard ratio, 0.91; $P=0.041$) and an 8% reduction in relative risk for the combined endpoint of all-cause mortality and cardiovascular hospitalization (adjusted HR, 0.92; $P=0.009$). Absolute risk reductions were 1.8% (95% confidence interval, 0.3–3.9) and 2.3% (95% CI, 0.0–4.6), respectively, amounting to 56 patients needing to be treated to avoid one death, or 44 to avoid one event, in approximately 4 years. There were no between-group differences in important secondary outcomes of sudden cardiac death, first MI, hospitalization for heart failure, or stroke. Worsening heart failure accounted for the most deaths in both groups, followed by presumed arrhythmic death.