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In Reply—Impact of a High-Shrimp Diet on Cardiovascular Risk: An NHANES Analysis



To The Editor: We greatly appreciate the interest by Narasimhan and colleagues in the recent major meta-analysis by Bernasconi et al.¹ In this article, we analyzed 40 studies, including more than 135,000 participants, and demonstrated that omega-3 therapy was associated with major reductions in fatal myocardial infarction (MI); (−35%), total MI (−13%), coronary heart disease (CHD) events (−10%), and CHD mortality (−9%). We further demonstrated a strong dosage effect in which higher doses of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were associated with fewer cardiovascular disease (CVD) outcomes. These data also support a major 2019 paper published in *Mayo Clinic Proceedings*, suggesting that omega-3 therapy containing EPA and DHA is associated with substantial reductions in major CVD events.²

Narasimhan et al used data from the National Health and Nutrition Examination Study (NHANES) survey to conclude that consumption of shrimp is associated with a favorable effect on plasma lipid profiles and overall risk of CVD, which is a quite important clinical finding. Although fatty fish contains more omega-3 per serving than shrimp,

shrimp remains the most consumed seafood in the United States, and it is a potentially important dietary source of omega-3s. There are important differences, however, between this study and our meta-analysis. We only included randomized controlled trials of omega-3 containing EPA and DHA and explicitly excluded studies for which the intervention was dietary advice, and we focused on the relationship between dosage and risk reduction in CVD outcomes. The NHANES data do not allow an estimate of EPA and DHA dosages derived from intake of shrimp. But even considering these differences, and the limitations of epidemiological studies, we believe that the results from Narasimhan et al are consistent with the extensive body of research that supports a diet high in omega-3s.³ Our experience is that few people eat fish regularly, and most fish intake is in the form of farm-raised catfish, which is often fried. This type of fish contains little EPA and DHA, and fried fish does not have the health benefits of seafood, including shrimp, prepared with other cooking methods. Adequate intake of omega-3 is rarely obtained in most westernized diets, even those including some routine intake of fish and shrimp. For the majority of people who do not consume adequate omega-3 from dietary sources, especially for those with known CVD or high risk of CVD, our recent study strongly suggests that clinicians should recommend omega-3 therapy containing EPA and DHA to reduce major CVD outcomes.^{1,2}

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The Role of Stress Perception for Clinical Implications of Stress



To the Editor: We read with great interest the study by Karnatovskaia et al on clinical implications of stress and fear for providers and patients during the COVID-19 pandemic.¹ However, the paper highlights only the harmful side of stress. We believe that perception of stress plays a crucial role, and understanding its clinical implications may illuminate how patients and their providers could take advantage of it.

Emphasizing only the harmful effects of stress leads to incomplete understanding.² Individuals who were instructed to perceive their high stress as an adaptive response experienced physiologic and