

To Whom It May Concern:

I appreciate the opportunity to offer our comments to inform a national strategy on behalf of the Seafood Nutrition Partnership (SNP) as part of the White House Conference on Hunger, Nutrition, and Health. SNP is a charitable non-profit formed in 2013 to educate all Americans about the public health benefits of consuming seafood as recommended by prominent health organizations.ⁱ

The following is a response to the request to hear stories and shared experiences with hunger and/or diet-related diseases. We urge the White House Conference on Hunger, Nutrition, and Health to include seafood nutrition in the national strategy as it is essential for brain health, heart health, and overall wellness. We have provided scientific studies and brief examples showing how seafood nutrition is critical in reducing risks of diet-related diseases and the overall public health benefits of seafood consumption.

SNP'S EATING HEART HEALTHY STORY: JACQUIE BOSTON

Jacque Boston is a graduate of SNP's Eating Heart Healthy 4-week nutrition intervention programⁱⁱ and a resident of Roxbury Tenants of Harvard. "I wish I was taught the importance of good nutrition, especially seafood nutrition, for my children's brain and heart health. After attending Seafood Nutrition Partnership's nutrition education workshops in our community I now make sure my grandson eats seafood at least twice a week - and he loves it!" Jacque loves the affordable seafood recipes and in addition to the heart health benefits she said she came out of her depression that she was feeling before attending the nutrition classes and now feels more energized. More than five years after completing the program, Jacque and her grandson are feeling great and she continues to be a champion in her community for seafood nutrition. She regularly hosts classes on her own to teach neighbors how to prepare nutritious seafood meals for their family. See Jacque and her EHH class here.ⁱⁱⁱ

MY STORY

I am personally passionate about the importance of seafood nutrition because I have seen firsthand how it has impacted me and my family. When my family immigrated from Taiwan more than 40 years ago to the U.S., we wanted to be as American as possible and began eating the typical American diet. Everyone in my family suffers from heart disease and high blood pressure, except me. My mother is a stroke survivor and that was a wake up call for all of us to go back to the traditional healthy diet we had in Taiwan, which mainly comprised lots of seafood, vegetables, and rice. After learning that we can reduce our risks of heart disease by 30-50% with eating more seafood, and the breadth of science on seafood nutrition, I made it my personal mission to share this information as widely as possible. What we eat matters to our health and seafood is a vital part of a healthy diet.

NATION'S PUBLIC HEALTH CRISIS

America has a national health crisis with preventable diseases such as obesity, cardiovascular disease, diabetes, and mental health. Cardiovascular disease (CVD) is the leading cause of

death in the United States and it is estimated that more than 877,500 Americans die of heart disease or stroke each year.^{iv} The annual economic toll of CVD is approximately \$363 billion in healthcare costs and lost productivity.^v We know that heart disease is 80-90% preventable with proper diet, exercise and lifestyle modifications.^{vi, vii} Drs. Mozaffarian and Rimm found that eating approximately one to two servings of fatty fish a week—salmon, herring, mackerel, anchovies, or sardines—reduces the risk of dying from heart disease by 36%.^{viii} Mozaffarian and Rimm evaluated potential costs of consuming the DGA-recommended 250 mg/d of EPA and DHA from fish. The daily cost was as low as 9 cents, or 63 cents/wk. For combinations of different types of salmon; salmon and tuna; or salmon, tuna, anchovies, and sardines, the average cost was 37 cents/d (\$2.59/wk) or less. Through education programs, such as WIChealth.org courses and recipes^{ix} and the Eating Heart Healthy program, people at-risk for chronic preventable diseases can learn how to eat right within their budget. These cost-effective protein options should be made accessible to all Americans including in feeding programs.

Depression and anxiety are the most common mental health conditions in the world, and they are on the rise. The annual economic toll of Alzheimer's and dementia is approximately \$321 billion in healthcare costs, and projects to reach nearly \$1 trillion by 2050.^x Anxiety affects more than 19% of men and women in the United States.^{xi} People who regularly eat fish are 20 percent less likely than their peers to have depression.^{xii} In fact, the American Psychiatric Association has endorsed the fatty acids in fish as an effective part of depression treatment.^{xiii} On a population level, studies show that depression is less common in countries where people eat more fish.^{xiv, xv} Over the past 20 years, dozens of research studies with more than 20,000 cases have shown that eating 12 ounces of fish per week and/or consuming omega-3 supplements significantly reduces risk for major depression.

The general public needs to be educated about the essential health and nutritional benefits that come from eating seafood. Prominent organizations have recommended eating at least two servings of seafood per week for quite some time, including the USDA/HHS Dietary Guidelines for Americans in 2010, 2015, 2020; Food and Drug Administration from 2004 to today^{xvi}; World Health Organization^{xvii}, and American Heart Association^{xviii}. The Dietary Guidelines for Americans recommend eating at least two servings of seafood weekly for a healthy diet, but only 1 in 5 Americans follow the Guidelines according to the Centers for Disease Control and Prevention National Health and Nutrition Examination Survey.^{xix}

NUTRITION INTERVENTION PROGRAM: EATING HEART HEALTHY AND BRAIN HEALTHY

Consumer data indicates one of the biggest barriers to eating seafood is the lack of confidence in knowing how to select, buy, prepare and eat seafood. Those barriers are preventing Americans from incorporating a healthy and lean protein into their diets. Programs such as the Eating Heart Healthy program were designed to overcome these barriers and give an example of how providing nutrition information and cooking skills to the public can improve health outcomes.

The Eating Heart Healthy (EHH) program was developed by the Seafood Nutrition Partnership (SNP) in partnership with Brigham and Women's Hospital and Roxbury Tenants of Harvard. EHH teaches selection and preparation of seafood with budget-friendly recipes and its health benefits through interactive cooking and nutrition workshops. The recipe focus was FISH: Fast, Inexpensive, Sustainable, Healthy. This 4-week interactive cooking and nutrition program was designed for women ages 35-50 at risk of heart disease. This collaborative effort focused on increasing awareness of a heart healthy diet and building skills to incorporate healthy fats and nutrient dense foods into daily meals. The EHH program materials are available for free on the Seafood Nutrition Partnership website.²

Through this program, we found that behavior change is possible with nutrition information, cooking demonstrations, recipes, monthly eNewsletters, and weekly text messages.

As one indicator of health improvements that came from this program, the participants' omega-3s EPA and DHA blood levels were taken and improvements could be seen within 4 months of eating seafood twice a week. Ninety-two percent of the first program participants increased their omega-3 levels after eating seafood twice a week for four months, and 80% maintained an increase in their omega-3 levels after 1 year.

Dr. JoAnne Foody, former medical director for both the Pollin Cardiovascular Wellness Center at Brigham & Women's Hospital and the Eating Heart Healthy program stated that, "Following a Mediterranean diet rich in seafood can reduce the risk of dying from heart disease by 30 to 50 percent. The initial outcomes of our program have borne this out."

Dr. William Harris, omega-3 researcher, AHA advisor and founder of OmegaQuant, maker of the Omega-3 Index test, stated that, "The results achieved by the first Eating Heart Healthy cohort are clinically significant, and they have shown that having knowledge of baseline Omega-3 levels is a good motivator towards increased seafood consumption."

This pilot program showed programs similar to that of Eating Heart Healthy are beneficial in improving our population's overall health. Higher omega-3 index has shown a reduced CVD risk, and therefore should be considered in future public health programs and scaled nationwide.

SCIENTIFIC STUDIES

There are more than 40,000 studies on the benefits of seafood omega-3s for human health since the 1970s. The following are a few studies that assess the deficient levels of omega-3s EPA and DHA in the general US population and the immense benefits for brain health with adequate seafood consumption.

An important study by Dr. Harris showed that higher omega-3 fatty acid blood levels, as assessed by the Omega-3 Index (O3I, erythrocyte eicosapentaenoic [EPA] + docosahexaenoic [DHA] percentage), have been linked with lower risk for cardiovascular disease and total mortality. The data from this study showed that individuals living in a coastal community with

presumed easy access to fresh seafood had a higher O3I than others living further from the sea, thus a reduced risk of CVD. Nevertheless, the individuals from the coastal communities still had suboptimal O3I levels. This study and the results of SNPs EHH pilot program show that public health programs should be implemented to encourage increased omega-3 intake, ideally through seafood but also via omega-3–fortified foods and dietary supplementation, which would result in increased population O3I levels.^{xx}

Another study showed the omega-3 Index is inversely related to risk for CVD. The cardioprotective target O3I is 8%–12%. O3I levels in American regions with high CVD risk are poorly characterized. The study conclusions show that individuals in the CVD “belt” had relatively low O3I levels. Since in other settings, a low O3I is associated with increased risk for CVD, this may be one factor contributing to the higher risk for CVD in this region of the US. The data shows that public relations programs that encouraged increased omega-3 intake, ideally through seafood but also via omega-3–fortified foods and dietary supplementation, would result in increased population O3I levels and reduce CVD risk.^{xxi}

Eating seafood – whether canned, cooked from frozen or fresh - during pregnancy is important for both mom and baby. Seafood is the only food rich in a healthy fat called omega-3 DHA, which is needed for the baby’s brain and eye development. Seafood consumption in mothers who ate seafood during pregnancy had children with higher I.Q. by an average of 7.7 I.Q. points.^{xxii} A public health program promoting seafood consumption would be beneficial as moms-to-be in the United States eat on average 1.8 ounces of seafood per week compared to the dietary recommendation of 8-12 ounces of seafood per week.^{xxiii} There is also strong medical evidence showing that nutrients specific to seafood reduce the risk of dangerous, early preterm birth by over 40%. In the United States, 1 in 10 infants are born too early which impacts brain development, vision, and hearing. In 2020, the rate of preterm birth among African-American women was about 50 percent higher than the rate of preterm birth among white or Hispanic women.^{xxiv}

PROMOTE THE PUBLIC HEALTH BENEFITS OF SEAFOOD COLLABORATIVELY IN PUBLIC-PRIVATE PARTNERSHIP

How Americans think about, purchase, and consume seafood may be at a turning point. Seafood consumption has hovered around 15 to 19 pounds per person per year for the last three decades and showed signs of increasing due to pandemic-related changes in consumer behaviors. The seafood industry has a profound need to respond strategically to nascent signs of change in consumer preferences, but this is a very fragmented industry compared to other food sectors in the U.S. Early signs of success with the Seafood4Health Action Coalition^{xxv} convened by Seafood Nutrition Partnership at the start of the pandemic in April 2020 to communicate the public health benefit of seafood with consumers shows that a public-private partnership is possible and this coalition has grown to more than 50 nonprofits, trade associations, government agency, philanthropy, seafood companies, retailers, and foodservice operators. The seafood industry does not have a generic seafood marketing program similar to other commodities in the USDA Agricultural Marketing Services. Funding support is needed to help Americans understand the essential health benefits of seafood; how to access seafood

affordably; how to prepare and store seafood safely; and how to eat seafood more often per the Dietary Guidelines for Americans and FDA recommendations.

For improved public health, there is a need to include seafood nutrition in the White House Conference on Hunger, Nutrition, and Health's national strategy. Please visit seafoodnutrition.org for information on Seafood Nutrition Partnership and how we work to inspire a healthier America through partnerships and outreach to raise awareness about the essential nutritional benefits of eating seafood.

Thank you,

Linda Cornish, Founder and President
Seafood Nutrition Partnership (SNP)

Sources

ⁱ Learn more about Seafood Nutrition Partnership at <https://www.seafoodnutrition.org/>.

ⁱⁱ Learn more about the Eating Heart Healthy Program: <https://www.seafoodnutrition.org/eating-heart-healthy-program/>.

ⁱⁱⁱ See Jacquie and her EHH class in this video:

https://www.youtube.com/watch?v=xVG9Y3e0rtM&list=PLgfyOog7fhbHI-lx0pcLdiB4LYENM_bIG.

^{iv} National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP): Heart Disease and Stroke. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm#:~:text=More%20than%20877%2C500%20Americans%20die,death%20in%20the%20United%20States>. Accessed 7/8/2022.

^v National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP): Health and Economic Costs of Chronic Diseases. <https://www.cdc.gov/chronicdisease/about/costs/index.htm>. Accessed 7/8/2022.

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^{vii} World Health Organization Global Strategy on Diet, Physical Activity and Health.

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^{ix} Seafood Nutrition Partnership and WIChealth.org Introduce Seafood Nutrition Education Lesson for Pregnant Women and New Mothers: <http://www.prweb.com/releases/2017/04/prweb14206920.htm>.

^x Alzheimer's Association: Alzheimer's Disease Facts and Figures. <https://www.alz.org/alzheimers-dementia/facts-figures>. Accessed 7/14/2022.

^{xi} Anxiety & Depression Association of America. <https://adaa.org/understanding-anxiety/facts-statistics>. Accessed 7/14/2022.

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- ^{xvii} World Health Organization Global Strategy on Diet, Physical Activity and Health. https://www.who.int/dietphysicalactivity/media/en/gsf_general.pdf.
- ^{xviii} American Heart Association: Seafood Long-Chain n-3 Polyunsaturated Fatty Acids and Cardiovascular Disease. <https://professional.heart.org/en/science-news/seafood-long-chain-n3-polyunsaturated-fatty-acids-and-cardiovascular-disease>. Published: May 17, 2018.
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