

Fishing for optimum health



By David E. Frulla and Andrew E. Minkiewicz

Heart disease is at epidemic levels in the United States. The American Heart Association reports 80.7 million people have some form of cardiovascular disease. Doctors warn millions of adults to watch cholesterol levels, prescribing at record rates medications to reduce their low-density lipoproteins (LDL), aka “bad cholesterol.”

Tara Parker-Pope in *The New York Times* on July 8, 2008, noted that “statins, which are the most prescribed drugs in the world, have been shown to lower risk for heart attack and death in middle-aged men with existing heart disease.” For several years, statins such as Lipitor and Zocor have topped *Forbes* magazine’s list of America’s best selling drugs.

In addition to pharmaceutical advances, reducing cardiovascular disease requires evaluating not only lifestyles and diets, but regulations. It also requires understanding why some statins actually work. Recent studies, including those by Dr. James Liao of Brigham & Women’s Hospital, show the statins most effective against cardiovascular disease are the ones that, in addition to lowering cholesterol levels, decrease inflammation in the body’s arteries and tissues. As the Jan. 17 *Business Week* cover story by John Carey entitled “Do Cholesterol Drugs Do Any

Good?” explains, these studies are showing that statins may block an enzyme, Rho kinase, that causes arterial inflammation.

Understanding why such inflammation occurs and how it can be prevented or reduced is thus key. The good news is that Americans have more options than cocktails of pills. One answer may be found at the grocery store fish counter or in fish oil supplements. Indeed, nature has its own way to fight arterial inflammation, via the omega-3 fatty acids abundantly found in fish. The American Heart Association states, “We recommend eating fish at least two times a week. Fish is a good source of protein and doesn’t have high saturated fat that fatty meat products do. Fatty fish like mackerel, lake trout, herring, sardines, albacore tuna and salmon are high in two kinds of omega fatty acids, eicosapentaenoic acid and docosahexaenoic acid.”

Large scale epidemiological studies have shown a correlation between high fish consumption and low incidence of cardiovascular disease. The University of Pittsburgh Graduate School of Public Health on July 28 released a study regarding an article, “Eating Fish May Explain Very Low Levels of Heart Disease in Japan,” published in the *Journal of American College of Cardiology*. The study evaluated 868 Japanese, white American and Japanese-American men, noting, “Fish consumption of Japanese men is one of the highest in the world. Japanese men consumed an average of 100 grams, equivalent to about 3.75 ounces of fish every day from early in life. Meanwhile, Americans typically eat fish less than two times a week.” The study concluded that high levels of omega-3 fatty acid in these Japanese men’s diets helped prevent arterial cholesterol buildup and increased their cardiovascular health. Other studies have shown the same results for fish-eating Greenlanders and Quebec Inuit, as



Dr. William Lands explained in “A critique of paradoxes in current advice on dietary lipids,” published in *Progress in Lipid Research* 47 (2008).

To understand why omega-3s are proving to be effective, one must take into consideration another essential fatty acid — omega-6. The human body cannot function optimally without a balanced ratio of essential fatty acids to give balanced responses to stress. For example, too much omega-6 promotes an inflammatory state, which in turn increases one’s risk for blood clots and narrowing of blood vessels. Omega-6s, which are found in poultry, eggs, soy, and processed foods, are far more prevalent than omega-3s in the typical American’s diet. In fact, Lands found the typical Western diet may contain 14 to 25 times more omega-6 than omega-3 fatty acids. This is one reason why health experts are recommending Americans eat more fish, to better balance omega-3 and omega-6 intake.

U.S. fisheries management is more robust than anywhere else in the world, with annual catch limits implemented and rebuilding plans for any species determined overfished. Yet America now imports 84 percent of its fish, in part because management measures do not allow the full utilization of the available fish within the U.S. exclusive economic zone. Such underutilization of domestic fish resources influences what ends up on our dinner table. The fishing industry needs management that allows domestic fishermen to harvest the optimum yield to meet an increased demand for sustainable domestic fish. Our country has been dealt a strong hand of natural resources. Go fish.

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