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# Omega-3 Fatty Acids and Prostate Cancer? Oh Really?

By Dr. Barry Sears

**There was a recent publication suggesting that higher levels of omega-3 fatty acids are associated with a greater risk of prostate cancer<sup>(1)</sup>. Of course, the immediate media response was “taking fish oil supplements is dangerous”. Of course, let’s not forget about eating fish, which must also be dangerous...**

**Before letting the media focus on sound bites, a realistic first-step might be to analyze the data and use some common sense to see if it justifies the headlines.**

Everyone in the cancer field agrees that inflammation drives cancers. I believe the best marker for inflammation is the AA/EPA ratio as I have outlined in my various books for the more than a decade. The reason is simple, as AA/EPA ratio decreases, you make fewer inflammatory hormones (i.e. eicosanoids coming from AA) and more anti-inflammatory hormones (i.e. resolvins coming from EPA). Bottom line this means less inflammation in the body. So let’s look at the fatty acid data as percent of the total fatty acids that was presented in this article.

	Non-cancer	Cancer	Low-grade cancer	High-grade cancer
<b>EPA</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.7%</b>
<b>AA</b>	<b>11.4%</b>	<b>11.2%</b>	<b>11.2%</b>	<b>11.3%</b>
<b>AA/EPA</b>	<b>19</b>	<b>16</b>	<b>16</b>	<b>16</b>

Having decades of experience of doing fatty acid analysis, I can tell that these numbers are clinically insignificant. What does that mean? The numbers are basically the same. They might be statistically significant, but the differences definitely are not clinically relevant.

I have been very consistent over the years in stating that to have an impact on reducing inflammation, you have to have EPA levels greater than 4% of the total fatty acids, AA levels less than 9% of the total fatty acids and an AA/EPA ratio between 1.5 and 3. As you can see, the subjects in this article were nowhere close to those parameters. In fact, I would say all the subjects in this trial were all identical relative to AA, EPA and the AA/EPA ratio. In other words, the analysis is meaningless.

Well is their any population in the world that may have those ranges that I recommend? The answer is the Japanese population. Their levels of EPA are about 3% of total fatty acids and they have an AA/EPA ratio of about 1.6 (2). This is where common sense hopefully comes into the play. If the conclusion of the article was

correct, then the Japanese should be decimated with prostate cancer. So what are the facts? The Japanese have one of lowest rates of prostate cancer incidence in the world. In fact, their rate of prostate cancer incidence is between 10 times lower than the U.S. (3). More importantly, the mortality from prostate cancer also about 5 times less in Japan than in the U.S. (4). I emphasize the word mortality since prostate cancer is usually very slow growing so that males usually die with prostate cancer, not because of it. This is why the recent recommendation is dramatically reduce the screening for prostate cancer because the harm of treatment usually outweighs the benefits of detection.

Common sense (and a little understanding of the biochemistry of inflammation) says that if you reduce inflammation (determined by your AA/EPA ratio), then your likelihood of living longer is greatly increased. The best way to reduce AA is to follow a strict Zone Diet. The best way to increase EPA is take adequate levels of purified omega-3 fatty acids rich in EPA. It is obvious the subjects of this study were doing neither.