

# Fish Oil Reduces Muscle Damage From Chemotherapy

*Source: nbiondemand.com*

Fish oil contains both eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Both of these are members of omega-3 family of fatty acids and are different from the omega-3 fatty acids found in oils from vegetable sources.

In the late 1970s, scientists learned that the native Inuits in Greenland, who consumed a diet very high in omega-3 fatty acids, had surprisingly low rates of heart attacks. Since that time thousands of scientific studies have evaluated the multiple ways that omega-3 fatty acids promote not only cardiovascular health, but also the healthy functioning of many other biological activities.

Many Americans don't get enough of it in their diets. One reason is that omega-3 oils are very susceptible to spoilage and so many food manufacturers remove it to keep products fresh. Another reason is that omega-3 oils mostly come from cold water fish and wild game— something most Americans don't eat in great quantities. The body can manufacture EPA and DHA by conversions from linolenic acid.

Chemotherapy is the treatment of a disease with chemicals. It acts by killing cells that divide rapidly which is one of the main properties of most cancer cells. This means it also harms healthy cells resulting in side effects such as: nausea, vomiting, tiredness, pain and hair loss. After chemotherapy, healthy cells usually recover and side effects gradually go away. The response rate is under 30 percent in patients with lung cancer being treated with chemotherapy.

Other studies using fish oil showed an increase in chemotherapy efficacy without having a negative effect on nontarget tissue. Scientists in this study evaluated whether fish oil and chemotherapy was beneficial in response rate, maintaining weight and preventing muscle loss. Forty-six patients with advanced nonsmall cell lung cancer were enrolled and divided into two groups (one group received standard care and the other group received fish oil containing 2.5 g EPA plus DHA daily for one year.

Patients who received fish oil experienced an increase in response rate and greater clinical benefit in comparison to the standard care group. In conclusion the researchers stated that patients in the fish oil group maintained their weight and muscle mass. Also, the fish oil group experienced a reduction in adipose tissue wasting. These results along with increased chemotherapy efficacy without affecting the toxicity profile may contribute to increased survival.<sup>1</sup>

1 Murphy RA, Moutzakis M, Chu QS, et al. Supplementation with fish oil increases first-line chemotherapy efficacy in patients with advanced nonsmall cell lung cancer. *Cancer*. Feb2011.