

Pilot Study: Soybean Oil Alleviates Cancer-Related Fatigue

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Researchers from the University of Rochester Medical Center recently reported that supplementing the diet with soybean oil significantly reduces fatigue in breast cancer survivors.¹ Although a pilot trial, these new findings suggest soybean oil may function as a treatment for this common condition.

The study offers new hope for patients suffering from cancer-related fatigue (CRF), which is marked by severe exhaustion, cognitive deficits including memory loss, reduced psychosocial well-being, and inability to maintain social activities.² In most cases, CRF resolves within about 6 months following treatment, but for about one-third of cancer patients, fatigue can last for five to ten years.^{3,4}

CRF is well characterized but its etiology is not fully understood. However, evidence suggests that inflammation is an important contributing factor.⁵ With this background in mind, Peppone and colleagues set out to determine whether fish oil supplements, which had previously been shown to reduce inflammation in cancer patients⁶ could reduce CRF in breast cancer survivors.¹

Three groups of women were randomly assigned to one of three treatments for six weeks. One group took 6 grams of fish oil supplements daily, which provided 3.3 grams of DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), one group took 6 grams of soybean oil daily and another group took 3 grams each of fish oil and soybean oil daily. The soybean oil was designated as the control or placebo.

Soybean oil is comprised of approximately 15% saturated fat, 22% monounsaturated fat and 62%, polyunsaturated fat. The polyunsaturated fat content is comprised of approximately 6 to 8% of the essential omega-3 fatty acid, a-linolenic acid and ~55% of the essential omega-6 fatty acid, linoleic acid.⁷

Eighty breast cancer survivors completed the study. To qualify, participants had to have completed post-adjuvant treatment within the past 4-36 months (ongoing hormonal therapy was allowed) and reported having CRF, as indicated by a response of ≥4 on an 11-point symptom inventory scale anchored by "0" = no fatigue and "10" = as bad as you can imagine. Patients were stratified into the three groups by baseline CRF level (two levels: 4-6 [moderate] or ≥7 [severe]).

At study termination, fatigue had decreased in all three groups, however, the biggest decrease occurred in the soybean oil group. More specifically, in the soybean oil group, fish oil group and combined oil group, symptom score decreased by 2.51 points, 2.14 points and 0.93 points,

respectively. The difference between the soybean oil and fish oil groups was statistically significant (p