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# THE TOTAL PATIENT

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## Three studies report new developments in managing cancer-related fatigue

Bette Weinstein Kaplan

**A**lthough there have been many advances in the treatment of cancer, the debilitating fatigue caused by the disease and its treatments remains a problem, often existing for years after successful treatment has ended. Treatment teams are always trying something new, hoping to find a successful intervention for this debilitating problem. This article discusses three new studies that examined the effects of coenzyme Q10, dietary components, and ginseng on cancer-related fatigue.

### COENZYME Q10 AND FATIGUE

Coenzyme Q10 (CoQ10) is an antioxidant nutrition supplement that may be effective in reducing statin-related myopathy and may also have cardioprotective effects.<sup>1</sup> Recently, a multi-institutional oncology team undertook a study to see if CoQ10 could help alleviate fatigue and the impaired quality of life (QOL) experienced by female patients with newly diagnosed breast cancer. The randomized, double-blind, placebo-controlled investigation included 236 women. The patients, who were all about to undergo adjuvant chemotherapy, took either 300 mg CoQ10 or a placebo divided in three daily doses for 24 weeks.<sup>1</sup>

Although the participants who took CoQ10 had sustained increases in their plasma CoQ10 levels, the researchers

reported no improvement in self-reported fatigue or QOL at the end of the 24 weeks and no significant differences between the CoQ10 and placebo groups was reported.<sup>1</sup>

### EFFECTS OF DIETARY INTAKE COMPONENTS ON FATIGUE

A recent investigation looked at the association of fatigue and dietary intake in survivors of breast cancer.<sup>2</sup> The study included 42 participants whose

## Survivors of breast cancer can reduce fatigue with a low-fat, high-fiber diet.

average age was 54 years and who had an average body mass index (BMI) of 30 kg/m<sup>2</sup>. The researchers analyzed the amount of fatigue they were experiencing, as well as their body fat composition, BMI, physical activity, and dietary components. The amount of fatigue participants experienced was positively correlated with their intake of calories and fat, and inversely associated with the amount of carbohydrate and fiber in their diets. The participants who consumed less than 25 g per day of fiber experienced the most fatigue.<sup>2</sup>

The investigators concluded that survivors of breast cancer can reduce their fatigue by following a low-fat, high-fiber diet.<sup>2</sup> They call for prospective studies to evaluate further the effects of dietary change on fatigue in this patient group.<sup>2</sup>

### GINSENG

High doses of the herb American ginseng (*Panax quinquefolius*) reduced cancer-related fatigue in participants of a study led by the Mayo Clinic in Rochester, Minnesota.<sup>3</sup> In the study of 340 patients, 60% of the participants had breast cancer. All the participants were undergoing cancer treatment or had completed their treatment at one of 40 community medical centers.<sup>3</sup>

The participants received 2,000 mg of pure, ground American ginseng root prepared in capsules or a placebo capsule.<sup>3</sup> The ginseng was specially prepared because it had to be totally pure. “Off-the-shelf ginseng is sometimes processed using ethanol, which can give it estrogenlike properties that may be harmful to breast cancer patients,” explained lead researcher Debra Barton, RN, PhD, Associate Professor of Oncology at the Mayo Clinic Cancer Center.<sup>3</sup>

After taking the ginseng capsules for 4 weeks, patients experienced only a slight improvement in their fatigue symptoms. However, a significant

### This is the first study that evaluated the effect of ginseng on severe fatigue.

improvement in general exhaustion was reported by the patients at 8 weeks. The researchers noted a 20-point improvement in fatigue as measured on a 100-point standardized fatigue scale. In addition, patients experienced no side effects from the herb.

Chinese medicine has traditionally used ginseng to provide a natural energy boost; however, this is the first study that evaluated its effect on the severe fatigue experienced by as many as 90% of patients with cancer. Prior research has linked the cancer-related

fatigue to a dysregulation of cortisol and an increase in inflammatory cytokines produced by the immune system. Animal studies have shown that ginsenosides, the active ingredients in ginseng, can aid in the regulation of cortisol levels and reduce cytokines associated with inflammation.

According to Dr. Barton, “Cancer is a prolonged chronic stress experience, and the effects can last 10 years beyond diagnosis and treatment. If we can help the body be better modulated throughout treatment with the use of ginseng, we may be able to prevent severe long-term fatigue.”

Dr. Barton’s next study will take a close look at the specific biomarkers for fatigue and the effect that ginseng has on them. ■

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#### REFERENCES

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