Dynamic Chiropractic

VITAMINS / SUPPLEMENTS

Two Recent Studies Support Antioxidant Supplements and a Low Fat Diet in the Prevention of Ovarian Cancer

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More than 15,000 American women die each year from ovarian cancer, making it the most common cause of death from gynecological malignancy. Contributing to the high mortality rate associated with this tumor is the advanced stage of disease at the time of diagnosis. Early-stage disease is rarely symptomatic, making early detection difficult. Epithelial carcinomas account for less than 90 percent of ovarian neoplasms, with the median age of diagnosis approximately 63 years. Despite the fact that this tumor represents a disease of great public health importance, little is known of its etiology. Although a family history of ovarian cancer is recognized as a risk factor, only about five percent of cases are considered hereditary. Previous epidemiological studies suggest that hormones, environmental exposures, diet and genetics may influence the risk of the disease.

Hormonal or reproductive factors, such as pregnancy and use of oral contraceptives, decrease ovarian cancer, with multiple births having an increasingly protective effect. Conversely, infertility appears to increase disease risk; the use of drugs to stimulate ovulation, such as clomiphene, is associated with a two-to-threefold increase of risk. In general, however, the worldwide variation in ovarian cancer risk suggests strongly that environmental factors, particularly diet, play a prominent role in determining risk of ovarian cancer in North American women. Migration studies also support this notion. Women emigrating from Japan (a low-risk country) to the U.S. (a high-risk country) experience increased rates of ovarian cancer, some to the levels experienced by American women. The diet of the immigrants was generally altered to a more North-American-style food selection.

Dietary Fat and Ovarian Cancer

A number of epidemiological studies have examined the relationship between fat consumption and the risk of ovarian cancer, but in volume 40 of *Nutrition and Cancer* (2001), Michael Huncharek and Bruce Kupelnick published the results of their meta-analysis on this subject after pooling all available observational studies. Their data showed that ovarian cancer risk was increased by 70 percent in women consuming a high-animal-fat diet, compared to women consuming a low-animal-fat diet.

High dietary fat, in general, was associated with a 24 percent increased risk of ovarian cancer, regardless of the source or type of fat consumed. This may partially explain why Asian women following a traditional diet have very low rates of ovarian cancer. The traditional Asian diet derives only 15-20 percent of calories from fat, mostly not animal fat. In support of their findings, the authors point out that international comparisons show that incidence rates for ovarian cancer are positively associated with per capita dietary fat consumption, with additional evidence to support this hypothesis coming from several case-control studies.

Antioxidants and Ovarian Cancer

In the same edition of *Nutrition and Cancer,* Aaron Fleischauer, et al., presented the results of their case-control study that compared the lifelong dietary and supplementation patterns of 168 women under 18 who developed invasive ovarian cancer, with 159 control subjects free from ovarian cancer. The environmental and socio-economic variables of the two groups were comparable. After controlling for other confounding variables, the study demonstrated a 60 percent reduced risk of ovarian cancer among women who used vitamin C supplements (over 90 mg per day), compared with nonusers. There was a 67 percent reduced risk of ovarian cancer for those who used vitamin E supplements containing over 30 mg per day (nearly 40 IU). Intake of vitamin A, beta-carotene, and selenium from supplements was not related to risk. Women consuming both vitamin C and vitamin E (total combined intake of 150-1000 mg per day) demonstrated a 63-percent reduced risk of ovarian cancer, compared to women ingesting supplement doses below this threshold level.

Antioxidant consumption from food alone was not associated with a reduction in risk; only users of vitamin supplements derived the risk-reduction benefit. Based upon these findings, and the other studies cited by these authors, a protective effect of higher intake and blood levels of antioxidants against many degenerative diseases was revealed. Fleischauer, et al., concluded that their results supported an increase in RDA levels for vitamin C and E, where minimum protective doses are each 1.5 times the current RDA values. This argument has been made by Carr and Frei, who indicate that a substantial amount of clinical and epidemiological data suggest that an intake of 90-100 mg/day of vitamin C is required for optimum reduction of chronic disease. The current RDA for vitamin C is 60 mg.

The recently published studies cited add to the compelling evidence that suggest that dietary patterns and supplementation practices can strongly influence a woman's risk of ovarian cancer. As there are no risks associated with these interventions and the potential benefit may be substantial, primary health practitioners should consider educating their female patients on the importance of a low-fat diet, and taking antioxidant supplements containing at least 90 mg of vitamin C, and at least 30 mg (40 IU) of vitamin E.

With ovarian cancer so difficult to detect in its early stages, it is vitally important to encourage patients to act on any viable proactive interventions that may serve to prevent the development of this prevalent, life-threatening malignancy.

References

1. Huncharek M, et al. Dietary fat intake and risk of epithelial ovarian cancer: A meta-analysis of 6,689 subjects from eight observational studies. *Nutrition and Cancer* 2001; 40(2):87-91.
2. Fleischauer A, et al. Dietary antioxidants, supplements, and risk of epithelial ovarian cancer. *Nutrition and Cancer* 2001;40(2):92-98.
3. Carr AC, Frei B. Toward a new recommended dietary allowance for vitamin-C, based on antioxidant and health effects in humans. *Am J Clin Nutr* 1999;69:1086-1107.

Please take time to listen to Dr. Meschino's interviews on ChiroWeb.com. The subjects of the first three are: *Combining Traditional, Complementary and Natural Interventions, The Benefits of Melatonin,* and *Using Natural Remedies to Manage Women's Health Issues.* Each interview is packed with important information available to you and your patients. You can listen to the interviews at www.chiroweb.com/audio/meschino. There is a link on the directory page for your feedback.

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JUNE 2002