



PATHWAYS

A Study of Breast Cancer Survivorship

A NEWSLETTER FOR STUDY PARTICIPANTS

SUMMER 2017

A healthy body weight and regular physical activity may protect against chemotherapy-induced peripheral neuropathy

By Heather Greenlee, ND, PhD

Chemotherapy-induced peripheral neuropathy (CIPN) is a painful and debilitating condition for many breast cancer survivors caused by nerve damage from chemotherapy. Approximately two-thirds of breast cancer patients who receive a taxane-based chemotherapy have persistent CIPN symptoms 12 months after chemotherapy is completed. There are currently no effective methods to prevent CIPN and only one drug, duloxetine, has shown any benefit in reducing painful neuropathy. There is a growing body of literature that suggests that some lifestyle factors, such as body size, physical activity, and use of dietary supplements, may affect the onset and severity of CIPN in a variety of cancer survivor populations. Pathways Study investigators used Pathways Study data to understand how these lifestyle factors may affect CIPN in breast cancer survivors who received a taxane-based chemotherapy agent.

The investigators used data from 1,237 Pathways participants who received a taxane treatment and



who provided data on neurotoxicity symptoms. Investigators also used data that were collected on body mass index (BMI, a ratio of weight to height), level and frequency of physical activity, intake of fruits and

vegetables, and use of antioxidant dietary supplements.

At the time of breast cancer diagnosis, 66% of women in the study were overweight or obese, 30% engaged in low levels of moderate-to-vigorous physical activity, 58% had low levels of fruit and vegetable intake, and 10% reported using antioxidant supplements during chemotherapy treatment. Investigators found that women were more likely to have CIPN at 2 years after study entry if they were overweight or obese at the time of breast cancer diagnosis, or if they engaged in low levels of physical activity at the time of breast cancer diagnosis. Women who started using antioxidant dietary supplements (e.g., beta-carotene, selenium, vitamin C, vitamin E, zinc) around the time of chemotherapy were more likely to report experiencing CIPN at 6 months after diagnosis compared to women who did not use antioxidant dietary supplements. There were no differences in CIPN based on intake of fruits and vegetables.

“These results are interesting because they suggest that having a healthy body weight and being engaged in regular physical activity may be beneficial for preventing CIPN in women,” according to the study’s lead author, Heather Greenlee, Associate Member of Public Health Sciences at Fred Hutchinson Cancer Research



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Center. Dr. Greenlee adds, “These findings are particularly exciting because there are currently no proven treatments to prevent CIPN. This is another study suggesting that having a healthy body weight and being physically active is beneficial to women.”

The study also had interesting findings on antioxidant dietary supplement use. Use of vitamin and mineral supplements, including antioxidant supplements, following a cancer diagnosis is often high and has been shown to increase following a breast cancer diagnosis. Investigators unexpectedly observed that either starting an antioxidant dietary supplement near the time of chemotherapy initiation was associated with worse CIPN symptoms. These findings are particularly provocative because they are consistent with the



findings of a large multisite randomized controlled trial conducted by some of the study

investigators on the use of an antioxidant dietary supplement, acetyl-L-carnitine, to prevent CIPN. That trial showed that the dietary supplement made

CIPN worse in women, instead of preventing it, as they had hypothesized.

Ultimately, the goal of Pathways Study investigators is to provide evidence to patients and their clinicians so that they can make



evidence-based decisions regarding their health and health care. This is the first CIPN study to look at all of these lifestyle behaviors at once, including body size, physical activity, diet and dietary supplements.

Dr. Marilyn Kwan, a Pathways Study investigator at Kaiser Permanente Northern California points out that, “The Pathways Study provided a wonderful opportunity to look at these research questions. The Pathways Study cohort is one of the best available to be able to understand the long term effects of lifestyle health behaviors in breast cancer survivors. Thank you to all of the study participants, staff and investigators for making this research possible!” ☒

New Follow-Up Survey Coming Soon!



With input from the newly formed Pathways Community Advisory Board (CAB), the study team is gearing up to generate the next follow-up survey. Some of your fellow participants will help choose survey topics and devise several questions for a telephone interview, which we hope will be ready to administer at the end of the calendar year. We greatly appreciate your continued participation in the study and look forward to speaking with you again soon! ☒

For the most up to date information on the Pathways study, please visit our website: <http://pathways.kaiser.org>

PATHWAYS STAFF

Isaac Ergas

is a programmer for the Pathways Study and has been with the project since its very beginning! As a programmer, he maintains all of our study databases and makes sure the data we collect are entered and analyzed correctly. Isaac has also spent the last several years living in Los Angeles and, when not working on Pathways, spends much of his time writing and making movies, including his last movie about the father of epidemiology, Dr. John Snow. Isaac is married to his wife Ojig and together they have two boys, Nshan and Jano. Their latest news is that all of them will be moving back to the Bay Area this summer so that Isaac can return to UC Berkeley to start a PhD program in epidemiology, where he aims to focus on cancer and diet. Isaac plans on staying on part time with the Pathways Study while also completing his degree. ☒



For the most up to date information on the Pathways Study, please visit our website:

<http://pathways.kaiser.org> ☒

New Contact Information?

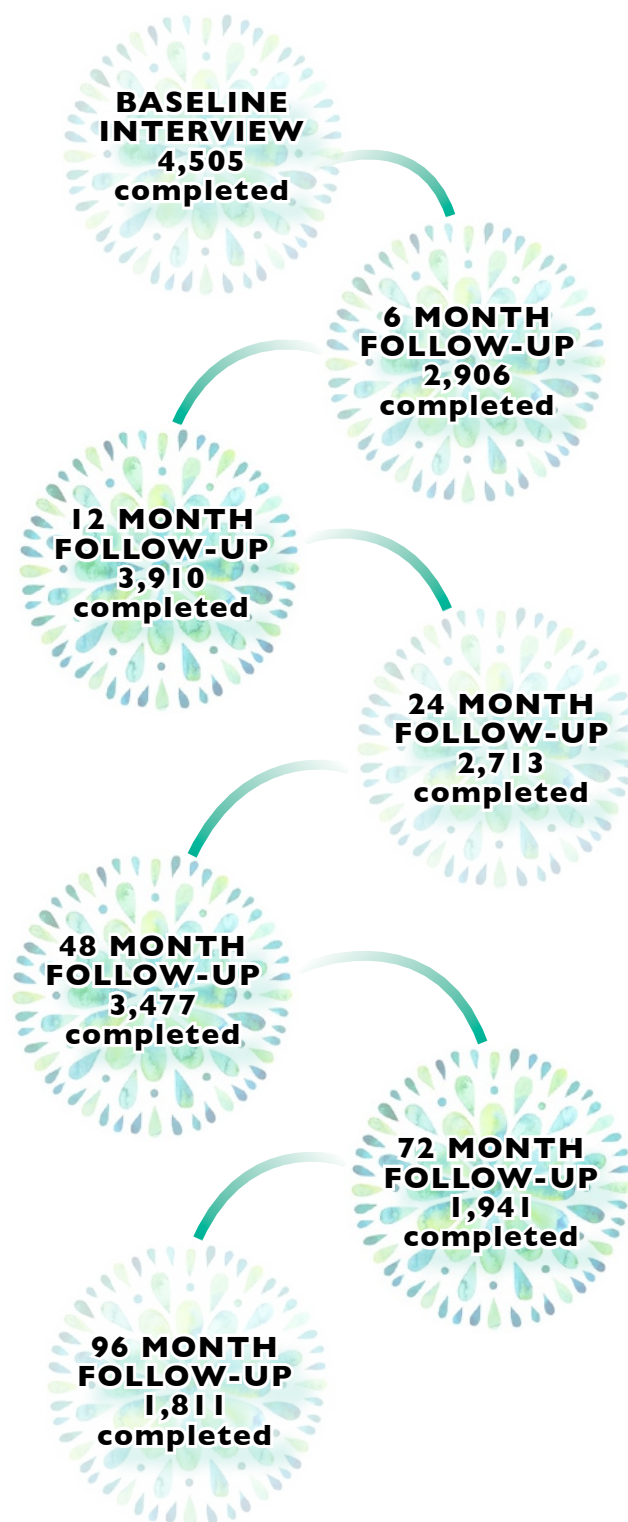
In order to keep in touch with you we must have your latest contact information. Please let us know if your phone number or home address has changed.

You can reach us by calling our toll-free number

1-866-206-2979

or emailing us at DOR-Pathways@kp.org ☒

Pathways Update: Who is Participating?



We are grateful for your role in the Pathways Study. All of you add meaning and diversity to our team, and contribute your unique perspective to the information we are gathering. Thank you for participating! ☒





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