

Neuromuscular training cuts onset of chemotherapy-induced peripheral neuropathy

July 22 2024, by Elana Gotkine



Neuromuscular training reduces the onset of chemotherapy-induced peripheral neuropathy (CIPN), according to a study published online July 1 in *JAMA Internal Medicine*.

Fiona Streckmann, Ph.D., from the University of Basel in Switzerland,

and colleagues examined whether sensorimotor training (SMT) and whole-body vibration (WBV) training reduce symptoms and decrease onset of CIPN among patients undergoing treatment with oxaliplatin or vinca alkaloids. A total of 158 patients were randomly assigned into three groups: SMT (55 patients), WBV (53 patients), and treatment as usual (TAU; 50 patients).

The researchers found that the incidence of CIPN was significantly lower in SMT and WBV groups compared with TAU (30.0 and 41.2 percent, respectively, versus 70.6 percent) in intention-to-treat analysis. The most benefit was seen for patients receiving vinca alkaloids and performing SMT. In a per-protocol analysis, the results were more pronounced (28.6 and 37.5 percent, respectively, versus 73.3 percent). For balance control bipedal with eyes open, bipedal with eyes closed, monopodal, vibration sensitivity, [sense of touch](#), lower leg strength, pain reduction, burning sensation, chemotherapy dose reductions, and mortality, improvements were seen in favor of SMT versus TAU.

"We were able to show that SMT can decrease CIPN, as well as maintain and improve subjective and objective outcomes, such as vibration sensitivity, sense of touch, lower leg strength, pain, burning [sensation](#), and [balance control](#)," the authors write. "WBV showed a reduced incidence of CIPN and improved balance in a bipedal stance."

Two authors disclosed ties to the pharmaceutical industry.

More information: Fiona Streckmann et al, Preventive Effect of Neuromuscular Training on Chemotherapy-Induced Neuropathy, *JAMA Internal Medicine* (2024). [DOI: 10.1001/jamainternmed.2024.2354](https://doi.org/10.1001/jamainternmed.2024.2354)

Arjun Gupta et al, Exercise and Physical Medicine Interventions for Managing Chemotherapy-Induced Peripheral Neuropathy, *JAMA Internal Medicine* (2024). [DOI: 10.1001/jamainternmed.2024.2367](https://doi.org/10.1001/jamainternmed.2024.2367)

Copyright © 2024 [HealthDay](#). All rights reserved.

Citation: Neuromuscular training cuts onset of chemo-induced peripheral neuropathy (2024, July 22) retrieved 22 July 2024 from <https://medicalxpress.com/news/2024-07-neuromuscular-onset-chemo-peripheral-neuropathy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.