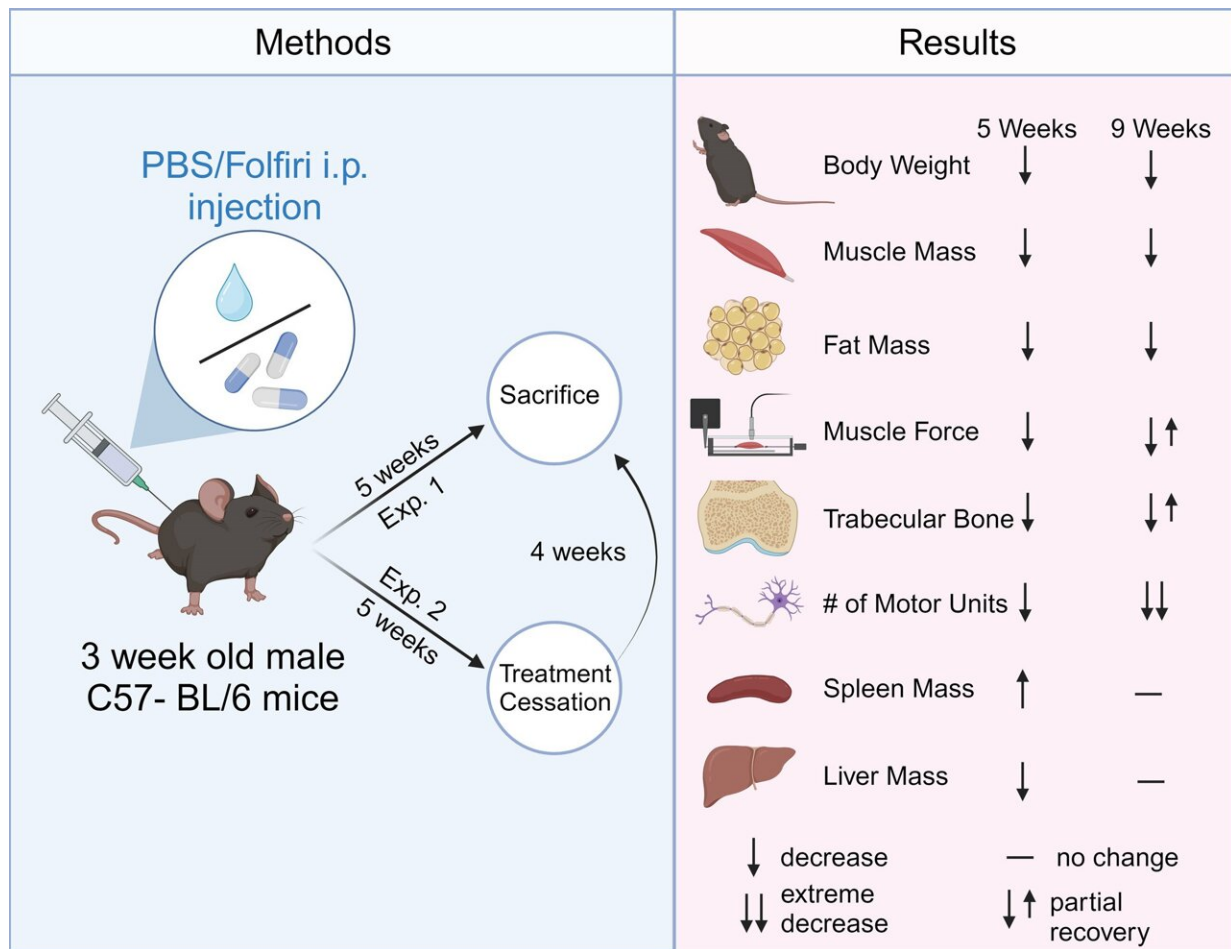


Chemotherapy in pediatric mice linked to long-term muscle defects

April 4 2024



Credit: *Function* (2024). DOI: 10.1093/function/zqae011

Recent progress in research related to cancer treatment has made it

possible for children with cancer to survive into adulthood. However, the long-term physiological consequences of chemotherapy are understudied.

A new study, by researchers from universities in Indiana and Colorado, U.S., investigated persistent musculoskeletal consequences of [chemotherapy](#) in four-week-old male mice. Findings indicate anticancer treatments may lead to long-lasting musculoskeletal complications in actively growing pediatric mice.

The paper, "Long-term musculoskeletal consequences of chemotherapy in pediatric mice," is [published](#) in the journal *Function*.

A month after chemotherapy ended, physiologists discovered a "significantly slower" growth rate in the mice, resulting in diminished lean and fat mass, as well as significantly smaller muscle size. In addition, these mice showed persistent musculoskeletal defects, including nerve impairment and abnormal mitochondrial stability.

"Altogether, our data supports the need for further studies to determine the mechanisms responsible for these [complications](#), so that new therapies to prevent or diminish chemotherapy-related toxicities can be identified," the research team wrote.

More information: Joshua R Huot et al, Long-term musculoskeletal consequences of chemotherapy in pediatric mice, *Function* (2024). [DOI: 10.1093/function/zqae011](https://doi.org/10.1093/function/zqae011)

Provided by American Physiological Society

Citation: Chemotherapy in pediatric mice linked to long-term muscle defects (2024, April 4)
retrieved 2 May 2024 from

<https://medicalxpress.com/news/2024-04-chemotherapy-pediatric-mice-linked-term.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.