

# “PREHABILITATION” FOR HEMATOPOIETIC STEM CELL TRANSPLANT PEDIATRIC CANCER PATIENTS

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July 24, 2023

## Abstract

Hematopoietic stem cell transplant (HSCT) is associated with significant physical debility. Studies have suggested that physical activity can improve endurance and strength. However, studies have not yet investigated “prehabilitation,” exercise before HSCT, to improve functional outcomes. We describe the impact of exercise therapy on physical debility in children undergoing HSCT to inform implementation of prehabilitation. This review was conducted through a search of the electronic database PubMed. Articles included were those with original research, including randomized control trials, prospective studies, case controls, and retrospective studies. Eleven of the 191 resulted studies met our review criteria. None focused on prehabilitation, but instead on interventions during HSCT. Ten studies showed improvement or maintenance of strength, endurance, stretching, or aerobic fitness. This review shows that exercise therapy can positively affect outcomes in patients undergoing HSCT. Further investigations are needed to determine if prehabilitation has better results than concurrent exercise.

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