

International Journal of Physical Activity and Health

Volume 2
Issue 1 *Supplemental Issue: Abstracts of 2022*
International Chinese Society for Physical
Activities and Health

Article 4

2-2023

Exercise Prescription in Patient with Different Complications of Leukemia: Recommendations for Clinical Practice

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Recommended Citation

Chen, Yanzhong (2023) "Exercise Prescription in Patient with Different Complications of Leukemia: Recommendations for Clinical Practice," *International Journal of Physical Activity and Health*: Vol. 2: Iss. 1, Article 4.

DOI: <https://doi.org/10.18122/ijpah.020104.boisestate>

Available at: <https://scholarworks.boisestate.edu/ijpah/vol2/iss1/4>

Exercise Prescription in Patient with Different Complications of Leukemia: Recommendations for Clinical Practice

Abstract

Common treatment of leukemia will have side effects on nerve function, affecting the patient's physical function, which makes patients often accompanied by infection, bone and joint pain, fatigue and other symptoms. Exercise can improve the level of body function, enable patients to tolerate stronger chemotherapy during treatment, help improve the survival rate and recovery chances of patients, and has been used as an effective means to promote recovery. Recommendations for leukemia and exercise have been primarily based on the results of existing relevant studies. To provide more targeted recommendations for the leukemia, we gathered evidence for the efficacy of exercise for leukemia, and concluded with recommendations for exercise prescription for the rehabilitation of patients with leukemia during and after chemotherapy. We used "leukemia", "exercise" as keywords, retrieving related literatures in CNKI, VIP, Wanfang, PubMed and Web of Science databases by December 20, 2021. Based on the analysis of research methods and outcome indicators, we extracted the exercise prescription for leukemia patients. Relative safe and effective exercise prescriptions were obtained for leukemia patients. For example, for patients with cardiopulmonary injury, a 6-minute walk can be more safely used for testing, aerobic exercise can be performed for 3-5 days/week, and each exercise time can be gradually increased from 10min to more than 30min. Also, it may be more effective to replace HHR (40%~59%) with RPE (12~13) for their intensity monitoring. Therapeutic exercise, especially with an element of strengthening combined with aerobic training, is an efficacious treatment for leukemia. Notably, with the development of technology, the ways of exercise available are diversifying, many complementary training methods such as Spotlight program, Team works, are also effective. At the same time, multi-mode, remote and home interventions are becoming more and more popular, providing a new direction for patient prognosis. However, the prescription recommendations are only for practical reference. There are insufficient high quality studies on exercise rehabilitation and prescription for patients with leukemia and various complications, and more research support is needed to develop more accurate exercise prescription.

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Keywords: leukemia, exercise prescription, review