



Appraisal

Critically appraised paper: In adults with severe lower limb burns, adding a Wii Fit program to usual physiotherapy improves lower limb function and functional mobility [synopsis]

Synopsis

Summary of: Basha MA, Abdel-Aal NM, Kamel FAH. Effects of Wii Fit rehabilitation on lower extremity functional status in adults with severe burns: a randomized controlled trial. *Arch Phys Med Rehabil.* 2022;103:289–296.

Question: In adults with severe lower limb burns, how much does adding a Wii Fit program to usual physiotherapy improve lower limb function and functional mobility? **Design:** Randomised controlled trial with concealed allocation and blinded assessor. **Setting:** University hospital in Cairo, Egypt. **Participants:** Adults following hospitalisation for deep partial and full-thickness burn injury in the lower limbs due to scald or flame. Exclusion criteria: inhalation injury, peripheral nerve disease, infection, diabetes, mental/cognitive dysfunction, fracture, degenerative joint diseases or previous lower limb surgery. Randomisation of 34 participants allocated 17 to the experimental group and 17 to the control group. **Interventions:** The control group received 12 weeks of thrice-weekly usual physiotherapy, which included scar management, hand therapy, splinting, and stretching, aerobic and resistance exercises; the sessions were 1 hour long. In addition to usual physiotherapy, the experimental group received 12 weeks of a thrice-weekly Wii Fit program that included strength and aerobic training

as well as balance training conducted on the Wii Fit balance board; the Wii Fit program sessions were 30 minutes long. **Outcome measures:** The primary outcomes were lower limb function measured with the Lower Limb Functional Index (0 worst to 100 best) and functional mobility measured with the High-Level Mobility Assessment Tool (0 worst to 54 best) and the Timed Up and Go test. **Results:** All participants completed the study. At 12 weeks, the experimental group demonstrated higher scores in both the Lower Limb Functional Index (MD 11, 95% CI 5 to 17) and High-Level Mobility Assessment Tool (MD 7, 95% CI 3 to 11), and had better performance in the Timed Up and Go test (MD -4.9 seconds, 95% CI -7.3 to -2.4). **Conclusion:** In adults with severe lower limb burns, adding a Wii Fit program to usual physiotherapy caused several small to moderate improvements in lower limb function and functional mobility.

Provenance: Invited. Not peer reviewed.

Vinicius Cavalheri
Curtin School of Allied Health, Curtin University, Australia