

Effect of Aerobic and Resistive Exercises on Resting Energy Expenditure and Lean Body Mass during Paediatric Burn Rehabilitation

Zakaria Mowafy Emam Mowafy¹, Asmaa fawzy EL-Sayed¹,
Mohamed Abd El-Monaem² and Mohamed Araby Osman¹

¹Physical therapy department for surgery, faculty of physical therapy,
Cairo University, Egypt.

²General surgery department, Faculty of medicine, Cairo University, Egypt.

Abstract: Purpose: to evaluate the efficacy of aerobic and resistive exercises on resting energy expenditure and lean body mass during paediatric burn rehabilitation. Methods of evaluation: Measurement of the lean body mass (LBM) and the resting energy expenditure (REE). **Methods:-** Thirty children with 40% total body surface area (TBSA) burns and greater, their ages ranged from 7 to 14 years were divided into two groups. Group (A) (Control group) composed of 15 patients received only the evaluation appointments and supplemented with instructions for a home-based physical rehabilitation routine without specific individualization or supervision of the exercise routines performed. Group (B) composed of 15 patients who participated in 12 week exercise programme (Treadmill for aerobic exercise and resistive exercise through dumbbells, theraband and sand bags). **Results and conclusion:-** Results showed that application of 12 week exercise programme (Treadmill for aerobic exercise and resistive exercise through dumbbells, theraband and sand bags) had a valuable effects in increasing the LBM without any significant differences in REE during paediatric burn rehabilitation. **Key words** (Aerobic and resistive exercises, Resting energy expenditure, Lean body mass and Paediatric burn rehabilitation).