James & Esther King Biomedical Research Program

Martin, Anatole

Physical Therapy
University of Florida

2009 Program
Florida Research Challenge
(2-year project)

Project Title: Inspiratory Muscle Strength Training in Ventilator Dependent Patients

Project Summary: Mechanical ventilators are life-saving devices for acutely ill patients unable to breathe without assistance; however, these machines may weaken the breathing muscles, making it difficult for patients to breathe without ventilator support after their acute illness has resolved. Cigarette smoking has been shown to increase the time patients need support from ventilators compared to nonsmokers. For this study, the researchers are initiating a respiratory muscle strength-training program on patients soon after they start receiving mechanical ventilation in order to compare their outcome to patients that receive a sham treatment. It is hoped that by starting breathing muscle rehabilitation activities very soon after starting mechanical ventilation, patients will require fewer days of mechanical ventilation and will be easier to wean from mechanical ventilation. Lowered healthcare costs for these patients could also result.