THE IMPACT OF BODY MASS INDEX ON ACHIEVEMENT OF FUNCTIONAL CHANGES DURING INPATIENT REHABILITATION FOR LOWER LIMB AMPUTEES

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Objective: This study examined the impact of Body Mass Index (BMI) on functional outcomes during inpatient rehabilitation for patients with amputations.

Design: A retrospective chart review was conducted using a computerized medical record database. Records for patients with lower limb amputations admitted for inpatient rehabilitation from 2002 to 2009 were reviewed. The most recent admission data were used for each patient due to the heterogeneous nature of such factors as number of admissions and cause of admission. Functional Independence Measure (FIM), length of stay (LOS), height, weight, age, sex, reason for inpatient admission, and etiology and location of amputation were obtained from medical records. FIM_{change} ($=FIM_{discharge} - FIM_{admission}$) and FIM efficiency ($=FIM_{change}/LOS$) were calculated for each patient. Patients were grouped based on BMI category: Underweight (BMI <18.5), Normal weight (BMI 18.5-24.9), Overweight (BMI 25.0-29.9), and Obese (BMI > 30.0). Group means and 95% confidence intervals were calculated.

Results: No statistically significant differences were seen for FIM_{change} (total, motor and cognitive), LOS, FIM efficiency or age between BMI categories. Statistical significance was accepted at $p < 0.05$. Also, little or no divergence was observed in sex, etiology of amputation and admission, and location of amputation between BMI categories.

Conclusions: Patients with lower limb amputations in the overweight and obese BMI categories achieved comparable functional gains to those in the normal BMI category. This study supports the benefits of inpatient rehabilitation for all amputees regardless of BMI.