

補充大豆蛋白對術後、長期臥床病人營養狀況之影響

## Effect of Soy Protein Formula on the Nutritional Status of Post-operative and Long-term Bedridden Patients

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### 摘要

蛋白質是構成身體組織、維持生長及建造修補體內組織的必需營養素；而對於手術後、骨折、老年人、長期臥床等患者，蛋白質的攝取量需提高以避免營養不良的發生。本研究乃針對手術後與長期臥床病人進行高蛋白補充，評估是否對營養狀況有促進的結果。受試者在補充前後均給予營養評估，項目包括體位測量、生化檢驗、臨床症狀、及飲食評估。大豆蛋白補充品的蛋白質主要來源為粉末狀之大豆蛋白，補充方式為一日添加 2 匙（72 大卡，16 克蛋白質）於受試者飲食中，補充四週。結果發現體重、三頭肌皮層厚度、中臂圍及中臂肌肉圍皆有增加，血清白蛋白、前白蛋白值均顯著上升，表示營養狀況有所改善。臨床檢查結果發現在補充期間並無任何不良腸胃反應。由以上結果可得，補充大豆蛋白補充劑對於手術後與長期臥床病人的營養狀況皆有明顯改善效果。

### Abstract

Dietary proteins are involved in the synthesis of tissue proteins and are required to maintain body tissue, so protein intake must be increased to avoid development of malnutrition in patients who are elderly, bedridden, or undergoing surgery. The aim of this study was to investigate the clinical effectiveness of 4 weeks of ingestion of a high-protein formula for postoperative and long-term bedridden patients. Before the investigation, all subjects were given a nutritional assessment, including anthropometry, biochemical measurements, clinical assessment, and dietary intake analysis. The major constituent of the high-protein formula is powdered soy protein, and two spoons (72 kcal, 16 g of protein) were added to the diets daily. After 4 weeks of treatment, ingestion of the soy protein formula had significantly increased mid-arm circumference (MAC), serum albumin, and serum prealbumin ( $p < 0.05$ ); body weight, triceps skinfold thickness, and mid-arm muscle circumference (MAMC) had slightly but not significantly increased ( $p > 0.05$ ). During the treatment period, no clinically problematic symptoms were observed. In summary, supplementation of a soy protein formula improved the nutritional status of surgical patients and those suffering from long-term chronic disease.