

**Thesis Title**                    Effect of Different Nonprotein Caloris: Nitrogen  
Ratio of Blenderized Formulae on Protein Calories  
Status in Head Injured Patients

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### Abstract

The purpose of this study is to determine whether changing protein-calorie status and nitrogen balance are effected by high protein intake in head injured-patients. Data was collected at the neurosurgical ward of Vajira Hospital from June 1 to December 31, 1991. Twelve head-injured patients without other major injuries were randomized into two comparable treatment groups. One group received blenderized formula with non-protein calorie: nitrogen ratio of 153:1 and the other group received 94:1. The feeding of 1800 kilocalories/day was provided for a 14 day period for both groups. The lower protein group received an average of nitrogen 8.64 g/day and the higher protein group received 12.96 g/day. The results were compared: the higher protein group had significantly higher mean nitrogen balance ( $p = 0.0250$ ) than the lower protein group. Though their protein intake was high, the patients' anthropometry decreased over 14 days. This could be due to slightly inadequate energy intake. By comparison,

serum total protein, albumin, BUN, and creatinine increased throughout the study period showed no different between groups.

This study demonstrated that a high protein blenderized formula (The low ratio of nonprotein calorie: nitrogen) slightly offered better nutritional status. Therefore, this formula might be useful for the patients by increasing calories intake.