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Medical Nutritional Supplement Improves Fatigue levels and Muscle Strength in Adults complaining of Generalized Weakness and Fatigue

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Objective: The aim of this study was to determine the effect of 3 months consumption of medical nutrition supplement (MNS) in adults complaining of generalized weakness and fatigue.

Background: Aging is accompanied by substantial changes in body composition which affects both physical abilities and appearance. After reaching a peak in early adult years, skeletal muscle mass and strength gradually decline (1). Despite its high prevalence, fatigue remains an often-neglected symptom. It is usually defined as a state related with the weakening and/or depletion of the individual's physical and/or mental resources. Fatigue is strongly associated with poor physical performance (2). Proper balanced daily nutrition is vital for adults, which includes adequate levels of essential high-quality proteins, amino acids and complex carbohydrates to help meet adult nutritional needs (3,4). Therefore, in the present study, the short-term effects of MNS rich in proteins, hemo-nutrients and biotin in adults complaining of generalized weakness and fatigue were studied.

Design: This was a retrospective observational study where MNS (Maxvida™) was given to 289 subjects (aged 18-45 years) between 1st March to 30th April 2019 and evaluated for their clinical data (age, weight, and BMI), Modified Fatigue Impact Scale (MFIS) and hand-held dynamometry (HHD) at 1, 2 and 3 months.

Results: The mean age of patients was 33.5 years in this study. A significant improvement in BMI was observed from baseline 22.3 ± 0.3 to 22.8 ± 0.2 at 3 months. Weight was found to increase from baseline 55.5 ± 0.7 kg to 57.7 ± 0.6 kg at 3rd months ($p = 0.017$). Statistically significant increase in Hb levels was observed from baseline 9.6 ± 0.1 to 11.6 ± 0.1 at 3 months ($p = 0.0001$) due to MNS intake. There was a significant reduction in MFIS score from baseline 48.8 ± 0.9 to 31.4 ± 1.2 at 3 months ($p = 0.0001$), and improvement in HHD score from 21.6 ± 0.5 to 26.4 ± 0.5 at 3 months ($p = 0.001$). No serious adverse effects were noticed during consumption.

Discussion: Poor nutritional status and advancing age can be the contributing factor of fatigue and decrease muscular strength. This study evaluated the efficacy and safety pattern of consuming MNS. Overall, at 3 months, there was a significant reduction in MFIS score by 17.4 points ($p = 0.0001$), and improvement in HHD score by 4.8 ($p = 0.001$), showing increase in muscular response and improvement from fatigue. Hb levels also increased by 2.0% at the end of 3 months with overall statistical increase in BMR.

Conclusion: MNS used in the study was found to be efficacious in improving the fatigue levels and muscle strength in subjects with no deleterious effects.

Biography

Chetan Mehndiratta has completed his M.Sc and commenced PhD and now he works in Matram Hospital in India.

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