Republic of Yemen

University of Science & Technology

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Role of Omega-3 Fatty Acid in Childbearing Age Women with Vitamin D Deficiency in Sana'a City

Thesis Submitted in Partial Fulfillment for the Bachelor Degree in Pharmacy

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ABSTRACT

Background: The optimal intake of nutrients is a new approach to deriving nutrient requirements. Omega-3 is one of these nutrients that has a crucial role in body health. It can modulate inflammation, hyperlipidemia, platelet aggregation, and hypertension.
Objectives: This study was designed as a pilot study to evaluate the efficacy and safety of omega-3 fatty acids in improving the level of Vitamin D and calcium among Childbearing age women that suffer from Vitamin D deficiency. **Methods:** 10 childbearing women with Vitamin D deficiency. They were selected randomly. The participants were allowed to take one capsule (1000mg) of omega 3 FA twice daily for 12 weeks.
Results: Omega-3 FA showed significant beneficial effects on Vitamin D, and calcium levels in Vitamin D deficit childbearing women. Additionally, it showed cardioprotective effects as it reduced bad lipids like cholesterol, LDL-c, and risk factor and had worthwhile effects on blood coagulation.
Conclusion: The outcomes of the present study suggest that omega-3 FA if taken regularly by childbearing women may improve their maternal outcomes and save their own lives and their babies. It may have a golden standard role in bone health through strength and activation of Vitamin D thus facilitating calcium absorption and increasing bone mineral density. Additionally, it has cardioprotective and immune modulation effects.

Keywords: Omega-3 FA, Childbearing women, Vitamin D deficiency, Sana' City, Yemen.