An-Najah National University

Faculty of Medicine and Health Sciences

GRADUATION PROJECT

Hair Magnesium Levels in Nursing Women in West Bank of Palestine

Students

Haneen Jarrar (11524497)

Angham Maree (11523914)

Supervisor

Dr. Ramzi Shawahna, PhD

This graduation project is submitted in partial fulfilment of the requirements for the degree of Doctor of Medicine (MD) from the Faculty of Medicine and Health Sciences, An-Najah National University, Nablus.

Abstract

Background: Magnesium is required for many bodily processes, including muscle and nerve function, blood sugar levels, and blood pressure regulation, as well as protein, bone, and DNA formation. The magnesium store of nursing females reflects the portion that the infant will receive, which reflects the overall possible functions of the infant's various systems.

Objectives: The study's main goal was to assess hair magnesium levels in nursing mothers in five major regions of the West Bank of Palestine, as well as to determine the effects of some sociodemographic variables on hair magnesium levels.

Methods: Hair samples from 160 nursing mothers in Tubas, Jenin, Nablus, Hebron and Qalqilya were collected and analyzed for Magnesium levels using atomic spectrometry. Nursing females were also given sociodemographic questionnaires.

Results: The median hair magnesium level was 228,9771 mEq/g, with a range of (151.7 to 348.1 mEq/g). Hair magnesium levels were significantly higher in nursing mothers who used hair dye ($P < .05$), used nail make up ($P < .05$), ate fish on regular basis ($P < .05$), and took multivitamins ($P < .05$).

Conclusion: Nutritional supply including fish and multivitamins, hair dye and nail make up responsible for higher magnesium hair levels.