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THE 24-HOUR URINARY SODIUM EXCRETION METHOD COMPARED TO THE 24-HOUR DIETARY RECALL METHOD FOR ESTIMATING THE DAILY SALT INTAKE OF MOROCCAN ADULTS

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Introduction: Hypertension is a public health problem in Morocco. The objective of this pilot study was to estimate the daily salt intake of Moroccan adults by measuring the 24-hour urinary sodium excretion and a nutritional survey using a standardized 24-hour recall.

Materials & Methods: A total of 132 participants (64 men and 68 women aged from 25 to 65) were recruited in four different regions in Morocco (Casablanca, Errachidia, Meknes, Mountain of High Atlas). All participants collected their 24-hour urine in plastic containers. The samples were stored at -20°C until analysis. We also recorded the food intake using a 24h recall of each participant. The calculation of the nutritional intake was carried out by combining the data of the SU-VI-MAX catalogue and the book of Foods and Preparations typical of the Moroccan population.

Results & Discussion: Urinary excretion results showed that the daily intake of salt was 7 g/day, in which 7.4 g/day in males and 6.8 g/day in women. The average salt intake by region was 7.7, 7.7, 6.8 and 6.7 g/day in Casablanca, Haut Atlats Village, Errachidia and Meknes, respectively. Regarding the results of the 24-hour dietary recall, the daily salt intake estimate was 8 g/day. In addition, the High Atlas mountain area had the highest intake, followed by Casablanca, Meknes and Errachidia with means of 8.6, 7.9, 7.9 and 7.3 g/day, respectively. Measurement of 24-hour urinary sodium excretion underestimates dietary salt intake due to extra-renal losses (10-15%). Taking into account these losses the average of the daily salt intake would be 8 g/day.

Conclusion: Both methods indicated high daily salt intakes compared to the recommendations (5 g/day), but the 24-hour urinary excretion method would not be taken into account due to non-renal sodium losses.

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