

DASH-Style Diet: Why Should Urologists Care?

Jawad Ahmed^{1*}, Farheen Malik¹ and Marium Zafar¹

¹Department of Internal Medicine, Dow University of Health Sciences, Karachi, Pakistan

Respected Editor,

Pakistan is one of the Afro Asian countries where the incidence of stone diseases is consistently high because of its presence in Stone Belt countries [1]. Karachi has a hot and arid climate with summer season persisting for the longest time of the year which plays a vital factor in the prevalence of renal stones in our population. A bulk of our dietary consumption is mainly animal protein, contributing to increased uric acid production. Moreover, oxalate concentration also rises with the increased intake of beets, chocolate, tea, nuts, spinach and cola leading to nephrolithiasis. The Dietary Approaches to Stop Hypertension (DASH) diet is used to manage hypertension. It has also been associated with a reduced incidence of renal stone formation [2].

The DASH diet focuses on adequate intake of vegetables and fruits, low-fat dairy products, low animal protein diet which has a decreased amount of cholesterol and fats [2]. Fruits and vegetables are an integral part of DASH style diet. They contain high oxalate content which is a known precipitating agent for calcium oxalate stones, nevertheless, fruits and vegetables also increase levels of citrate in urine which is an important inhibitor and protective factor for calcium stones [2]. Studies have shown that Phytate (Myo-inositol hexaphosphate), a factor in plant matter and a major part of the DASH diet, reduces the risk of stone development [3]. Low intake of animal protein, as recommended in the DASH diet leads to decrease uric acid production and increased urinary pH consequently decreasing the risk of uric acid stone [2]. High urinary pH can lead to the formation of calcium phosphate crystals thus the impact of the DASH diet on the development of calcium phosphate stones is still a topic of much conjecture. Stroke and coronary heart diseases, which are prevalent among our population, can be well managed and prevented with DASH-style diet [4]. Adherence to this diet can also lead to a marked reduction in the likelihood of Type 2 diabetes in a certain population [5].

In conclusion, DASH-style diet is easy to adhere, harmless, affordable and can be proven exponentially beneficial in healthcare like ours, where the cost of treatment has to be borne directly by the patients and patients' affordability is still a vital drawback. However, it should be catered according to the morbidity of the patient. Counseling of healthy individuals about foods that increase the risk of kidney stones should be carried out to reduce stone related morbidities. Further researches should be conducted in order to determine the efficacy of a DASH-style diet and if established true, this diet should be integrated for the prevention of nephrolithiasis. For, prevention is better than cure.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ACKNOWLEDGEMENTS

Jawad Ahmed and Farheen Malik contributed to the manuscript design. All authors significantly contributed to manuscript preparation. Marium Zafar critically revised the manuscript. All authors have read and approved the final version of the manuscript.

REFERENCES

1. Dirks J, Remuzzi G, Horton S, Schieppati A, Rizvi SAH. Diseases of the kidney and the urinary system. In: Jamison DT, Breman JG, Measham AR, *et al.*, Eds. Disease Control Priorities in Developing Countries. Washington (DC): Oxford University Press 2006.
2. Taylor EN, Fung TT, Curhan GC. DASH-Style diet associates with reduced risk for kidney stones. *J Am Soc Nephrol* 2009; 20: 2253-59.
3. Curhan GC, Willett WC, Knight EL, Stampfer MJ. Dietary factors and the risk of incident kidney stones in younger women: nurses' health study II. *Arch Intern Med* 2004; 164: 885-91.
4. Fung TT, Chiuve SE, McCullough ML, Rexrode KM, Logroscino G, Hu FB. Adherence to a DASH-style diet and risk of coronary heart disease and stroke in women. *Arch Intern Med* 2008; 168: 713-20.
5. Liese AD, Nichols M, Sun X, D'Agostino RB Jr, Haffner SM. Adherence to the DASH diet is inversely associated with incidence of type 2 diabetes: the insulin resistance atherosclerosis study. *Diabetes Care* 2009; 32: 1434-36.

*Corresponding Author: Jawad Ahmed, Department of Internal Medicine, Dow University of Health Sciences, Karachi, Pakistan; Email: jawadahmed13@gmail.com

Received: February 19, 2020; Revised: March 06, 2020; Accepted: March 16, 2020

DOI: <https://doi.org/10.37184/lnjpc.2707-3521.1.14>