Oxalate Content of Food: A Tangled Web

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OBJECTIVE: To account for variations in dietary oxalate content in resources available to hyperoxaluric patients. Our objective is to examine the heterogeneity of the oxalate content reported across various Web-based sources and smartphone applications.

METHODS: A search of “oxalate content of food” was performed using the Google search engine. Smartphone applications were identified by their ability to assess oxalate content. Oxalate contents were obtained, and common foods were selected for comparison. Food groups were compared to better understand how patients are guided when using these references to manipulate their diet.

RESULTS: Thirteen sources were identified, and 8 sources (6 Web sites and 2 applications) were used to construct figures for comparison of commonly listed foods. Oxalate content was extremely variable between various sources. Fruits with the widest observed range of oxalate included oranges (2.07-10.64 mg/100 g) and bananas (0.9-9.9 mg/100 g). Among vegetables, the oxalate contents of spinach (364.44-1145 mg/100 g), rhubarb (511-983.61 mg/100 g), and beets (36.9-794.12 mg/100 g) were most variable. Among nuts, the oxalate content of peanuts ranged from 64.57 to 348.58 mg/100 g, and pecans ranged from 4.08 to 404.08 mg/100 g.

CONCLUSION: Wide variations exist in the reported oxalate content of foods across several Web-based sources and smartphone applications, several of which are substantial and can have a sizable impact on the construction of a low oxalate diet. As dietary counseling has proven benefits, patients and caregivers should be aware of the heterogeneity that exists in the reported oxalate content of foods.