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## Hyperkalemia Induced by Excessive Consumption of Dried Fruits-Manifestation of an Undiagnosed Eating Disorder?

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TO THE EDITOR: Hyperkalemia is a common medical problem that can cause serious cardiac arrhythmias and death.<sup>1</sup> Potassium rich foods usually cause hyperkalemia in patients with underlying medical conditions such as diabetes mellitus and renal insufficiency and/or use of potassium sparing medications.<sup>1,2</sup> Excessive intake of potassium rich foods or drinks due to known psychiatric disorder can cause hyperkalemia in physically healthy people with normal kidney function.<sup>3,4</sup> There are no reports on nutritional hyperkalemia in healthy people who are not taking potassium supplements or potassium-sparing medications. Described is a case of recurrent hyperkalemia caused by excessive consumption of potassium-rich dried fruits in a physically healthy person with no known psychiatric disorders.

### Case Report

Ms. A, a 36 year-old female presented for medical and psychiatric evaluation to determine eligibility for a mental health study for which she had volunteered as a healthy control. She reported good physical and mental health and denied any complaints. She was not taking any medications or supplements and her medical and psychiatric history and physical examination were normal.

Laboratory testing revealed moderately severe hyperkalemia (potassium of 6.4, normal 3.3-5.2 nmol/L). Complete blood count, chemistry panel, thyroid panel, drug screen, and electrocardiogram were normal. Repeat potassium 4 hours later was 5.8 and an internal medicine consult was obtained. The internist concluded that the volunteer's hyperkalemia was most likely caused by a high intake of dried fruits, believed to be ingested accidentally. She was advised to limit her consumption of dried fruits and her potassium was normal the following day.

Three weeks later, Ms. A presented for screening for another study. She claimed that she was healthy and that she did not need another evaluation as she had been recently evaluated and cleared as a healthy control. Surprisingly, laboratory testing revealed recurrent hyperkalemia (potassium of 5.4 nmol/L). When informed about her electrolyte disturbance, Ms. A stated that she had eaten one pound of dried figs the previous night.

### Discussion

There are only two case reports of nutritional hyperkalemia in patients without any predisposing medical conditions or medications. In both cases, patients had previously diagnosed psychiatric disorder.<sup>3,4</sup> In an adolescent with anorexia nervosa, recurrent hyperkalemia was caused by obsessive eating of up to 20 bananas per day.<sup>3</sup> In another case, a patient with schizophrenia and psychogenic polydipsia was water-restricted but developed hyperkalemia because she replaced water with excessive consumption of orange juice.<sup>4</sup> Her nurses reported being aware that the patient was drinking orange juice, but stated that they followed the orders to restrict free water.<sup>4</sup>

Hyperkalemia in this self-proclaimed healthy volunteer may be a manifestation of an undiagnosed eating disorder. In her medical history self-report, Ms. A marked off bingeing on food in her early 20s, however this was initially considered to be of no clinical significance and a subsequent psychiatric evaluation did not reveal any current or past eating disorders. Moreover, hypokalemia, not hyperkalemia, is a common electrolyte disturbance associated with eating disorders.

This case illustrates the importance of screening for medical and psychiatric disorders and is an example of a probable eating disorder presenting as a medical problem.<sup>5</sup>

Clinicians should consider bingeing on potassium-rich foods in physically healthy people who present with otherwise unexplained hyperkalemia. In addition to questioning about medications, supplements, and substance use, careful history regarding dietary and eating habits should be obtained. A possibility of disordered eating should be entertained even if the history is negative. Given today's preoccupation with healthy eating, readers should be aware that even healthy foods may be harmful if consumed in excessive quantities.

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## References

1. Williams E, Fulop D. A puzzling case of hyperkalemia. *Lancet*. 2001; 357:1176–1176. [PubMed: 11323046]
2. Nagasaki A, Takamine W, Takasu N. Severe hyperkalemia associated with “alternative” nutritional cancer therapy. *Clinical Nutrition*. 2005; 24:864–865. [PubMed: 16083995]
3. Tazoe M, Narita M, Sakuta R, et al. Hyperkalemia and hyperdopaminemia induced by an obsessive eating of banana in an anorexia nervosa adolescent. *Brain and Development*. 2007; 29:369–372. [PubMed: 17194559]
4. Berk DR, Conti PM, Sommer BR. Orange juice-induced hyperkalemia in schizophrenia. *Int J Psychiatry Med*. 2004; 34:79–82. [PubMed: 15242143]
5. Pavletic AJ, Luckenbaugh MA, Pao M, et al. The importance of medical screening of volunteers participating in research on mental illness. *Primary Psychiatry*. 2008; 15:71–76.