



Sugar-sweetened Beverages and Obesity: What Should Be Done on Health of Children and Adults?

****Mohammad ZAMANI, Amin VAHEDI***

Student Research Committee, Babol University of Medical Sciences, Babol, Iran

***Corresponding Author:** Email: mzamani20@gmail.com

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Dear Editor-in-Chief

Mirmiran et al. have described well the association between consumption of sugar-sweetened beverages (SSBs) and risk of general and abdominal obesity in adults (1). SSBs include calorie containing carbonated drinks, synthetic fruit juices, energy and sports drinks and vitamin water drinks. Intake of SSBs can increase the risk of weight gain and increasing body mass index (BMI) in both children and adolescents (2).

Although SSBs consumption is increasing during the last years, several beverages have been recommended as alternatives to them, such as water, coffee, tea, 100% fruit juice, milk and artificially sweetened beverages (ASBs) (3). Substituting SSBs with water is associated with weight loss and reduction in waist circumference and body fatness (4). Furthermore, intake of water before a meal can increase fullness and reduce energy intake (5). Home delivery of bottled water and ASBs to displace SSBs for some weeks promoted weight loss in the intervention group and not in the control group, although it should be noted that consumption of ASBs should be in moderate amounts (4). Likewise, home delivery of milk was associated with the increased milk intake and decreased SSBs intake and greater development of lean body mass in the intervention group than in the control group (6). Besides, Replacing SSBs with water and milk has an inverse effect on growth of body fatness from childhood to

adolescences (7). Substituting SSBs with low-calorie beverages such as coffee and tea, is significantly correlated to the less weight gain, although displacement of water have more advantages on total energy intake, and weight loss than other low-calorie beverages (4). Another healthy alternative to SSBs is 100% fruit juice. Fruit juices consumption may be associated with lower level of body fat in youth and adolescence (8). However, due to the presence of natural sugars, they should be consumed in moderation.

One of the desirable alternatives to the SSBs is water, because it is cheap and easily available for most people. One suggested method for prevention of obesity is to 'Increase access to free, safe drinking water in public places to encourage water consumption instead of SSBs'(9). Besides, policy makers encourage children and adults to substitute SSBs with other healthy drinks, which mentioned above, by the favorable promotions in the social networks, giving facilities for buying the healthy beverages, improving knowledge about benefits of consumption of these drinks in educational centers and implementing daily programs for presenting freely milk and natural fruit juices in the schools.

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References

1. Mirmiran P, Ejtahed H-S, Bahadoran Z, Bastan S, Azizi F (2015). Sugar-Sweetened Beverage Consumption and Risk of General and Abdominal Obesity in Iranian Adults: Tehran Lipid and Glucose Study. *Iran J Public Health*, 44(11):1535-43.
2. Kaiser KA, Shikany JM, Keating KD, Allison DB (2013). Will reducing sugar-sweetened beverage consumption reduce obesity? Evidence supporting conjecture is strong, but evidence when testing effect is weak. *Obes Rev*, 14(8):620-33.
3. Avery A, Bostock L, McCullough F (2015). A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. *J Hum Nutr Diet*, 28(Suppl 1):52-64.
4. Zheng M, Allman-Farinelli M, Heitmann BL, Rangan A (2015). Substitution of Sugar-Sweetened Beverages with Other Beverage Alternatives: A Review of Long-Term Health Outcomes. *J Acad Nutr Diet*, 115(5):767-79.
5. Hu F (2013). Resolved: there is sufficient scientific evidence that decreasing sugar-sweetened beverage consumption will reduce the prevalence of obesity and obesity-related diseases. *Obes Rev*, 14(8):606-19.
6. Albala C, Ebbeling CB, Cifuentes M, Lera L, Bustos N, Ludwig DS (2008). Effects of replacing the habitual consumption of sugar-sweetened beverages with milk in Chilean children. *Am J Clin Nutr*, 88(3):605-11.
7. Zheng M, Rangan A, Olsen NJ, Andersen LB, Wedderkopp N, Kristensen P, et al. (2015). Substituting sugar-sweetened beverages with water or milk is inversely associated with body fatness development from childhood to adolescence. *Nutrition*, 31(1):38-44.
8. Hasnain SR, Singer MR, Bradlee ML, Moore LL (2014). Beverage Intake in Early Childhood and Change in Body Fat from Preschool to Adolescence. *Child Obes*, 10(1):42-9.
9. Institute of Medicine of the National Academies (2009). *Local Government Actions to Prevent Childhood Obesity*. Washington DC, 5.