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## FREQUENTLY ASKED QUESTIONS

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### **Why does the University of California recommend implementing guidelines for healthier vending machines?**

The University of California is committed to expanding access to healthier food and improving the health of individuals in our community. Vending machines serve as convenient food sources for college communities and other organizations around the world. Despite the convenience of this food source, vending offerings are typically of poor nutritional quality. A great majority of snack options are high in calories, fat, sodium, and added sugars, which contribute to the obesity epidemic and other health issues across the country. Most of the beverages offered are high in calories and sugar, which, if consumed in excess, can lead to diabetes, heart disease, and liver disease.<sup>1 2</sup> Recent studies have found that healthier items are not only in growing demand,<sup>3 4 5</sup> but that selling them is financially feasible for university vending operations.<sup>6 7 8</sup> These guidelines aim to improve the community's food environment and support lasting changes in health behavior without compromising taste, convenience, or choice.

### **How do these guidelines benefit the health of faculty, staff, students, and visitors?**

A healthy diet can reduce the risk of chronic disease, and has also been shown to be one of the biggest predictors of higher grade point averages (GPA) in university students.<sup>9 10</sup> When healthy options are always available, it is easier for students and others to choose wisely and support healthier eating.

### **Which other educational settings have done this?**

Nationwide, primary and secondary schools have begun to highlight the importance of healthful food service and vending machine policies in recent years.<sup>11</sup> For over a decade, California K-12 schools have been governed by state-legislated competitive food and beverage policies, which cover vending machines.<sup>12</sup> Healthier options will be familiar and accepted by these students when they enter college. In fact, UC and other universities nationwide have already begun implementing healthy vending machine policies.<sup>13 14</sup> These policies have been shown to be well received by college students.<sup>15</sup> By ensuring students, faculty, and staff have easy convenient access to healthier choices in vending machines, the GFI supports and encourages a healthy lifestyle for our community.

### **How will the implementation of these guidelines affect revenue?**

Increasing healthier options in vending machines has been shown to increase sales over time.<sup>16</sup> Many settings such as city parks, office buildings, and hospitals have reported positive feedback and increases in sales after implementation of healthier products.<sup>17 18 19</sup> Even though some locations experienced initial dips in sales, revenue returned to previous levels within six months.<sup>20</sup> Furthermore, the transition to healthier vending options proved to be even more successful when coupled with nutrition education, taste tests, promotions and pricing changes.<sup>21 22</sup>

### **What is the current status of UC vending machines?**

The University of California has approximately 530 food vending machines and 780 beverage vending machines. Currently all vending contracts are expected to follow the California Senate Bill 912 regulations which govern vending machines on state property. Some campuses are going beyond SB 912 with their own healthy campus initiatives (e.g., UCSF's Healthy Beverage Initiative, UCLA's Healthy Campus Initiative). These guidelines set healthier and stronger requirements than SB 912 for the percentage of foods and beverages that must meet the nutrition guidelines. It leads by setting an example for colleges, universities, and institutions across the country and beyond.

### **Which food and beverage components does these guidelines address?**

These guidelines establish nutrition standards for several food and beverage components to help our community better meet the 2015-2020 Dietary Guidelines for Americans.

1) Sodium: The 2015-2020 Dietary Guidelines for Americans recommend that people ages 14 years and older consume no more than 2,300 milligrams of sodium per day<sup>23</sup>, which is equivalent to 1 teaspoon. However, Americans eat more than 3,400 milligrams of sodium each day.<sup>24</sup> High sodium intake is associated with increased risk of heart disease and high blood pressure. More than 75% of the sodium in American diets comes from processed foods and restaurant meals.<sup>25</sup> These guidelines will ensure low sodium options are available for all students, faculty, staff, and visitors.

2) Fat: While fats are a part of a healthful diet, the type and total amount of fat consumed matters. The 2015-2010 DGA recommends that less than 10% of calories come from saturated fats and suggests that a healthy diet can contain 35% calories from fat. There is evidence that replacing saturated fat with unsaturated fat is associated with reduced risk of heart disease. Choosing lower fat, nutrient-dense foods can also help consumers meet the food group recommendations, without going over their caloric needs.<sup>23, 26</sup>

3) Sugar: The dietary guidelines recommends limiting total daily intake of added sugars to less than 10% of calories per day, explaining that studies show that consuming fewer added sugars is linked to reduced risk of cardiovascular disease, obesity, type 2 diabetes, and some types of cancer.<sup>26</sup> The UC Healthy Vending Guidelines currently address total sugar. Because of the negative effects of added sugar on health, the Food and Drug Administration will require food labels to provide added sugar amounts on food labels starting July 26, 2018. These guidelines will be revised to address the issue of added sugars as this labeling requirement becomes effective.<sup>27</sup>

4) Caffeine: The safety of caffeine as an additive in energy drinks has been a concern for researchers, clinicians, and public health professionals.<sup>28</sup> Recent reports have linked highly caffeinated energy drinks with injury, cardiovascular complications, neurological symptoms, and even death. This is concerning as 30 to 50% of adolescents and young adults consume energy drinks.<sup>29 30 31 32</sup> Currently, caffeine

content in energy drinks varies and is much higher than that of sodas. The FDA approves as safe only the amount of caffeine found in a typical cola-beverage<sup>33</sup> (71 mg per 12 fl oz serving). The UC Healthy Vending Guidelines applies the same caffeine standard to energy drinks in University vending machines.

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<sup>1</sup> Byrd-Bredbenner, C., Johnson, M., Quick, V. M., Walsh, J., Greene, G. W., Hoerr, S., ... & Horacek, T. M. (2012). Sweet and salty. An assessment of the snacks and beverages sold in vending machines on US post-secondary institution campuses. *Appetite*, 58(3), 1143-1151.

<sup>2</sup> Sugar-Sweetened Beverages. (n.d.). Retrieved April 05, 2016, from <http://www.sugarscience.org/sugar-sweetened-beverages/#.VwQgFBMrKR>s

<sup>3</sup> Wyatt SL. State of the Snack Food Industry 2010. PowerPoint Presentation, 2011.

<sup>4</sup> Ali, H., Jarrar, A., Abo-El-Enen, M., Shamsi, M., & Ashqar, H. (2015). Students' perspectives on promoting healthful food choices from campus vending machines: A qualitative interview study. *BMC Public Health*, 15(512). doi:10.1186/s12889-015-1859-2

<sup>5</sup> Park, H., & Papadaki, A. (2015). Nutritional value of foods sold in vending machines in a UK University: Formative, cross-sectional research to inform an environmental intervention. *Appetite*, 96(1), 517-525. doi:10.1016/j.appet.2015.10.022

<sup>6</sup> Viana, Joe (2014). *LiveWell UCLA*. Retrieved from [https://dl.dropboxusercontent.com/u/204936973/PDF%20-%20Eat%20Well/Vending%20Presentaion\\_EatWell%20\(1\)%20\(2\)%20\(2\).pdf](https://dl.dropboxusercontent.com/u/204936973/PDF%20-%20Eat%20Well/Vending%20Presentaion_EatWell%20(1)%20(2)%20(2).pdf)

<sup>7</sup> French SA, Jeffery RW, Story M et al. (2001) Pricing and promotion effects on low-fat vending snack purchases: the CHIPS Study. *Am J Public Health* 91, 112–117.

<sup>8</sup> Lapp, J. L., Ressler, W. H., & Frith, A. L. (2014). College students, vending machines, and improving nutritional choices: the effects of adding healthier foods on perceptions of vending machines. *International Journal of Food Safety, Nutrition and Public Health*, 5(1), 16-33.

<sup>9</sup> George, D., Dixon, S., Stansal, E., Gelb, S. L., & Pheri, T. (2008). Time diary and questionnaire assessment of factors associated with academic and personal success among university undergraduates. *Journal of American College Health*, 56(6), 706-715.

<sup>10</sup> Wald, A., Muennig, P. A., O'Connell, K. A., & Garber, C. E. (2014). Associations between healthy lifestyle behaviors and academic performance in US undergraduates: a secondary analysis of the American College Health Association's National College Health Assessment II. *American Journal of Health Promotion*, 28(5), 298-305.

<sup>11</sup> Chriqui, J., Resnick, E., Schneider, L., Schermbeck, R., Adcock, T., Carrion, V., & Chaloupka, F. (2013). School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years after the Federal Mandate. Brief Report. Volume 3. *Robert Wood Johnson Foundation*.

<sup>12</sup> State property: vending machines, Senate Bill 912, Chapter 571 (2014)

<sup>13</sup> Viana, Joe. (2014)

<sup>14</sup> Partnership for a Healthier America: Healthier Campus Initiative. (n.d.). Retrieved March 10, 2016, from <http://ahealthieramerica.org/campuses/>

<sup>15</sup> Lapp, J. L., Ressler, W. H., & Frith, A. L. (2014).

<sup>16</sup> Center for Science in the Public Interest. Financial Implications of Healthy Vending. Retrieved June 9, 2016, from [https://cspinet.org/new/pdf/revenue\\_fact\\_sheet.pdf](https://cspinet.org/new/pdf/revenue_fact_sheet.pdf)

<sup>17</sup> Mason M., et. al. "Working with Community Partners to Implement and Evaluate the Chicago Park District's 100% Healthier Snack Vending Initiative." Preventing Chronic Disease. Access at [http://www.cdc.gov/pcd/issues/2014/14\\_0141.htm](http://www.cdc.gov/pcd/issues/2014/14_0141.htm) on November 24, 2014.

<sup>18</sup> Missouri Department of Health and Senior Services. "Healthier Vending Campaign at Missouri Health and Senior Services." Report, December, 2009. Accessed at [http://astphnd.org/resource\\_files/225/225\\_resource\\_file1.pdf](http://astphnd.org/resource_files/225/225_resource_file1.pdf) on February 26, 2013.

<sup>19</sup> Public Health Law Center. "Healthy Beverage Programs, Healthy Bottom Lines." Accessed at <http://www.publichealthlawcenter.org/sites/default/files/resources/MN.healthcare.Healthy%20beverage%20programs,%20healthy%20bottom%20lines.pdf> on April 23, 2013.

- <sup>20</sup> Galindo RR. "Achieving a Healthy Community." PowerPoint Presentation, September 29, 2010. Accessed at <[http://astphnd.org/resource\\_files/225/225\\_resource\\_file2.pdf](http://astphnd.org/resource_files/225/225_resource_file2.pdf)> on February 26, 2013.
- <sup>21</sup> Association of State and Territorial Public Health Nutrition Directors. "Healthy Vending Machine Sales Data." Accessed at <[http://astphnd.org/resource\\_read.php?resource\\_id=225&sid=a9cb71&origin=&category=](http://astphnd.org/resource_read.php?resource_id=225&sid=a9cb71&origin=&category=)> on February 26, 2013.
- <sup>22</sup> Fidles C, Schlichtholz MB. Rethink Your Drink Initiative Healthy Beverages Symposium. PowerPoint Presentation, February 21, 2013.
- <sup>23</sup> U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines/>
- <sup>24</sup> American Heart Association. How much sodium should I eat per day? Retrieved June 9, 2016, from <http://sodiumbreakup.heart.org/sodium-411/how-much-sodium-do-you-need/>
- <sup>25</sup> Centers for Disease Control and Prevention. (2016). Get the Facts: Sodium and the Dietary Guidelines. Retrieved June 9, 2016, from [http://www.cdc.gov/salt/pdfs/sodium\\_dietary\\_guidelines.pdf](http://www.cdc.gov/salt/pdfs/sodium_dietary_guidelines.pdf)
- <sup>26</sup> United States Department of Agriculture. (2016). 2015-2020 Dietary Guidelines: Answers to Your Questions. Retrieved June 9, 2016, from <http://www.choosemyplate.gov/2015-2020-dietary-guidelines-answers-your-questions>
- <sup>27</sup> Food Labeling: Revision of the Nutrition and Supplement Facts Labels, Department of Health and Human Services, Food and Drug Administration (2016)
- <sup>28</sup> City and County of San Francisco, Office of the City Attorney (2013). Herrera, 18 scientists urge FDA action on Monster, other caffeinated energy drinks [Press release]. Retrieved from <http://www.sfcityattorney.org/wp-content/uploads/2015/07/Herrera-Scientists-letter-to-the-FDA-re-caffeinated-drinks.pdf>
- <sup>29</sup> Seifert SM, Schaechter JL, Hershorin ER, Lipshultz SE. Health effects of energy drinks on children, adolescents, and young adults. *Pediatrics*. 2011;127(3):511-528.
- <sup>30</sup> Malinauskas BM, Aeby VG, Overton RF, Carpenter-Aeby T, Barber-Heidal K. A survey of energy drink consumption patterns among college students. *Nutr J*. 2007;6(1):35-41.
- <sup>31</sup> Simon M, Mosher J. Alcohol, energy drinks, and youth: A dangerous mix. San Rafael, CA: Marin Institute; 2007.
- <sup>32</sup> Miller KE. Wired: Energy drinks, jock identity, masculine norms, and risk taking. *J Am Coll Health*. 2008;56(5):481-490.
- <sup>33</sup> *U.S. Code of Federal Regulations, nr 21CFR-182.1180. Food and Drug Administration. 2012.*