# Healthy School Lunches? 

> "This is a landmark moment for school food. We were so excited to see how the data showed that we could reduce our carbon and water footprint by serving healthy, delicious food-like the vegetarian tostadas with fresh made-in-house salsa, that kids absolutely love - all while saving money."
> - Jennifer LeBarre, executive director of nutrition services for Oakland Unified School District'

## Understanding School Lunch by the Numbers

- More than 30 million students-about 3 in 5 schoolkids-participate daily in the National School Lunch Program (NSLP). ${ }^{2}$ (source)
- 5 billion lunches are served each year in 95 percent of public schools and thousands of (non-profit) private schools. ${ }^{3}$ (source)
- Limited funds for the program make innovation difficult. Public Schools have an average of about $\$ 3.00$ total per lunch/per student ${ }^{3}$ (source). Of this money, $\sim 50 \%$ is spent on the food offered and 50\% on staff and overhead costs like electricity in the cafeteria. ${ }^{4}$ (source)
- 5 and 3: National School Lunch Program cafeteria line must follow an "offer vs. serve" model. They must offer 5 food groups - protein, fruit, veg, grain, and milk-and each student must take at least 3, and in some cases all 5 parts, for the school to receive a government reimbursement for that meal. ${ }^{4}$ (source)


## Meat and Dairy at School ${ }^{5}$

- The origins of the National School Lunch Program date back to 1946, when Congress' goal was not only to promote good nutrition, but also to support farmers by providing more markets for the excess food they produced. ${ }^{4}$ (source)
- In addition to reimbursements, the government supports the NSLP through purchases of surplus food items from producers known as "USDA Foods," which schools depend upon heavily - typically USDA Foods make up 15-20 percent of the foods served each day. ${ }^{5}$ (source)


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- Most of the USDA Foods used are meat and dairy. ${ }^{5}$ (source)
- Schools can "trade" USDA raw commodities for finished products by having the commodity items shipped directly to manufacturer and the manufacturer then ships a finished project, such as burger patties, to the school system. ${ }^{4}$ (source)


## Milk at School

- By law, the National School Lunch Program must offer milk.
- Federal law requires that schools do not "directly or
 indirectly restrict the sale or marketing of fluid milk products by the school... at any time or place" (source) This means schools can be cited for placing other beverages, such as water, near the milk on the lunch line.
- 70 percent of milk served in schools is flavored. ${ }^{7}$ (source)
- A single serving of chocolate milk contains between four and six teaspoons of sugar (the recommended daily limit for young children is three teaspoons).7 (source)


## Milk and Health

- The journal Pediatrics published a review of 58 studies looking at dairy consumption and health. After looking at the evidence, the researchers concluded that "neither increased consumption of dairy products, specifically, nor total dietary calcium consumption has shown even a modestly consistent benefit for child or young adult bone health."8 (source)
- Drinking cow milk does not reduce the risk on bone fractures and in some cases can increase the risk. One study found that milk consumption was not associated with a decreased risk of fractures, while also showing 9\% increase in risk for hip fractures in men for each additional glass of milk consumed during teenage years. ${ }^{9}$ (source)
- Hip fractures rates are highest in populations with the most milk consumption. ${ }^{9}$ (source)
- Studies have shown a connection between cow's milk protein and chronic constipation in children. In one study, eliminating all cow's milk lead to $100 \%$ resolution ${ }^{10}$ (source), and another showed just removing fluid milk (without taking other dairy products out of the diet) resolved more than $2 / 3$ of cases. ${ }^{11}$ (source)



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## Plant-based Diets and Kids' Health

- Studies show that children whose diets emphasize plant-based foods grow as tall or taller than their meat-eating peers and gain a measure of protection from the health risks that await many young people as they reach adulthood: obesity, diabetes, hypertension, and heart disease, among others. ${ }^{12,13}$ (source, source)
- Dietary habits start forming in childhood. Adult vegetarians tend to have lower cancer rates ${ }^{14}$ (source). For example, one study that found vegetarians' cancer rates to be 25-50 percent below population averages. ${ }^{15}$ (source) Vegetarians are also less likely to die from heart disease as compared to meat eaters. ${ }^{16}$ (source).


## Trends

- Oakland Unified School District reduced its meat and dairy purchases showing dramatic reductions in water use, greenhouse gas emissions and increased savings (see the graphic on page 2 and quote on page 1). ${ }^{17}$ (source)
- Some school districts have adopted the Good Food Purchasing Policy, which requires a reduction in meat along with other provisions around the environment, local economies, health, animal welfare and workers' rights: LA Unified, Oakland Unified, San Francisco and Chicago Public Schools. ${ }^{18}$ (source)
- Fifteen Brooklyn schools adopted "Meatless Monday" in October $2017{ }^{19}$ (source) and the Coalition for Healthy School Food has implemented a number of plant-based programs in schools in New York City and State over the years. ${ }^{20}$ (source)
- Universal free meals: Some schools and districts with very high percentages of low-income students offer "universal free meals." Allowing all students to receive free meals ensures all students have access to healthy meals while reducing program administrative costs-and social stigma for kids and families. Universal free lunch also ensures a more secure budget for school food directors which in turn supports their menu-innovation efforts. ${ }^{4}$ (source)


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## Appendix

1. Friends of the Earth. 2017 [cited 2018 Feb 26]. p. 1. Available from: https://foe.org/news/2017-02-new-data-finds-climate-friendly-healthy-meals-within-reach-for-public-schools/
2. School Nutrition Association. School Meal Trends \& Stats [Internet]. [cited 2018 Mar 7]. Available from: https://schoolnutrition.org/ AboutSchoolMeals/SchoolMealTrendsStats/
3. Are You School Lunch Savvy? [Internet]. The PEW Charitable Trusts. 2016 [cited 2018 Mar 7]. Available from: http://www.pewtrusts. org/en/multimedia/surveys-and-quizzes/2016/are-you-school-lunch-savvy
4. Poppendieck J. Free for all : fixing school food in America
5. NATIONAL SCHOOL LUNCH PROGRAM FOOD AND NUTRITION SERVICE USDA. 2016 [cited 2018 Mar 7]; Available from: https:// fns-prod.azureedge.net/sites/default/files/fdd/NSLP-White-Paper.pdf
6. 42 U.S. Code § 1758 - Program requirements | US Law | LII / Legal Information Institute [Internet]. [cited 2018 Mar 7]. Available from: https://www.law.cornell.edu/uscode/text/42/1758?qt-us_code_temp_noupdates=O\#qt-us_code_temp_noupdates
7. Kiera Butler. The Surprising Reason Why School Cafeterias Sell Chocolate Milk - Mother Jones [Internet]. Mother Jones. 2015 [cited 2018 Mar 7]. Available from: https://www.motherjones.com/environment/2015/11/milk-companies-market-schools-fast-food/
8. Subar AF, Krebs-Smith SM, Cook A, Kahle LL. Dietary Sources of Nutrients Among US Children, 1989-1991. Pediatrics [Internet]. 1998 Oct 1 [cited 2018 Mar 22];102(4):913-23. Available from: http://www.ncbi.nlm.nih.gov/pubmed/9755265
9. Feskanich D, Bischoff-Ferrari HA, Frazier AL, Willett WC. Milk consumption during teenage years and risk of hip fractures in older adults. JAMA Pediatr [Internet]. 2014 Jan [cited 2018 Mar 22];168(1):54-60. Available from: http://www.ncbi.nlm.nih.gov/ pubmed/24247817
10. Crowley E, Williams L, Roberts T, Dunstan R, Jones P. Does Milk Cause Constipation? A Crossover Dietary Trial. Nutrients [Internet]. 2013 Jan 22 [cited 2018 Mar 7];5(12):253-66. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23340316
11. Iacono G, Cavataio F, Montalto G, Florena A, Tumminello M, Soresi M, et al. Intolerance of Cow's Milk and Chronic Constipation in Children. N Engl J Med [Internet]. 1998 Oct 15 [cited 2018 Mar 7];339(16):1100-4. Available from: http://www.ncbi.nlm.nih.gov/ pubmed/9770556
12. Nathan I, Hackett AF, Kirby S. A longitudinal study of the growth of matched pairs of vegetarian and omnivorous children, aged $7-11$ years, in the north-west of England. Eur J Clin Nutr [Internet]. 1997 Jan [cited 2018 Mar 22];51(1):20-5. Available from: http://www. ncbi.nlm.nih.gov/pubmed/9023462
13. Yen C-E, Yen C-H, Huang M-C, Cheng C-H, Huang Y-C. Dietary intake and nutritional status of vegetarian and omnivorous preschool children and their parents in Taiwan. Nutr Res [Internet]. 2008 Jul [cited 2018 Mar 22];28(7):430-6. Available from: http://www.ncbi. nlm.nih.gov/pubmed/19083442
14. Craig WJ, Mangels AR, American Dietetic Association. Position of the American Dietetic Association: vegetarian diets. J Am Diet Assoc [Internet]. 2009 Jul [cited 2018 Mar 7];109(7):1266-82. Available from: http://www.ncbi.nlm.nih.gov/pubmed/19562864
15. Chang-Claude J, Frentzel-Beyme R, Eilber U. Mortality pattern of German vegetarians after 11 years of follow-up. Epidemiology [Internet]. 1992 Sep [cited 2018 Mar 22];3(5):395-401. Available from: http://www.ncbi.nlm.nih.gov/pubmed/1391130
16. Thorogood M, Mann J, Appleby P, McPherson K. Risk of death from cancer and ischaemic heart disease in meat and non-meat eaters. BMJ [Internet]. 1994 Jun 25 [cited 2018 Mar 22];308(6945):1667-70. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8025458
17. Hamerschlag K, Kraus-Polk J. Shrinking the Carbon and Water Footprint of School Food: A RECIPE FOR COMBATING CLIMATE CHANGE. 2017 [cited 2018 Mar 22]; Available from: https://1bps6437gg8c169iOy1drtgz-wpengine.netdna-ssl.com/wp-content/ uploads/2017/webiva_fs_2/FOE_FoodPrintExecSumm_7.pdf
18. STORIES - Center for Good Food Purchasing" Center For Good Food Purchasing. , 2018, online, Internet, 22 Mar. 2018. , Available: https://goodfoodpurchasing.org/stories/
19. Mayor de Blasio Announces 15 Brooklyn Schools to Participate in Meatless Mondays | City of New York [Internet]. NYC Gov. Website. 2017 [cited 2018 Mar 22]. Available from: http://www1.nyc.gov/office-of-the-mayor/news/675-17/mayor-de-blasio-chancellor-fari-a-borough-president-adams-15-brooklyn-schools-to
20. Projects: NY Coalition for Healthy School Food [Internet]. [cited 2018 Mar 22]. Available from: https://www.healthyschoolfood.org/ projects.htm
