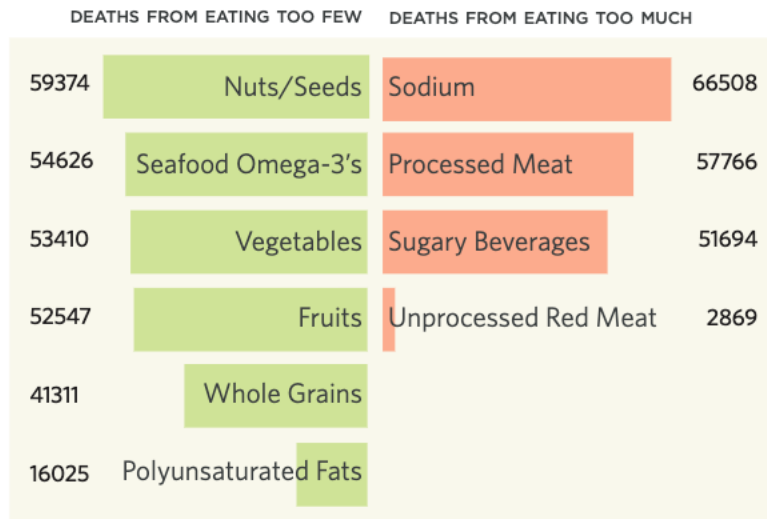


Food is Medicine: Key Facts

The Friedman School of Nutrition Science and Policy at Tufts University is collaborating with Congressional leaders, advocacy partners, and other key stakeholders to advance a bipartisan Food is Medicine Initiative. Our goal is to raise awareness of the tremendous impact of food on virtually all issues facing our country – from health care costs and disparities, to economic competitiveness and military readiness – and provide trusted science on actionable changes.

10 foods are estimated to cause nearly half of all US deaths from heart disease, stroke, and type 2 diabetes each year.



SNAP is an invaluable anti-poverty tool, but deep disparities in diet quality remain between SNAP participants and the general population.

12-19% fewer American households experience severe food insecurity thanks to SNAP

\$1400 amount saved on healthcare expenditures per SNAP participant per year

51.2% of households that receive SNAP benefits remain food insecure

\$1.76 is the average SNAP supplement to the cost of each meal for a family of four

65% of adult Medicaid participants receive SNAP benefits

2x SNAP participants are two times more likely to die from cardiovascular disease than nonparticipants

3x SNAP participants are three times more likely to die from diabetes than nonparticipants

Diet-related disease is a leading driver of sky-rocketing healthcare costs.



The health costs of cardiovascular disease are estimated to be **\$316 billion/year**, including **\$190 billion/year** in direct healthcare costs.

The yearly cost of diabetes in the US is **\$327 billion**.

Diet-related disease impedes economic competitiveness and military readiness

The costs from lost productivity due to cardiovascular disease are estimated to be about **\$126 billion/year**.



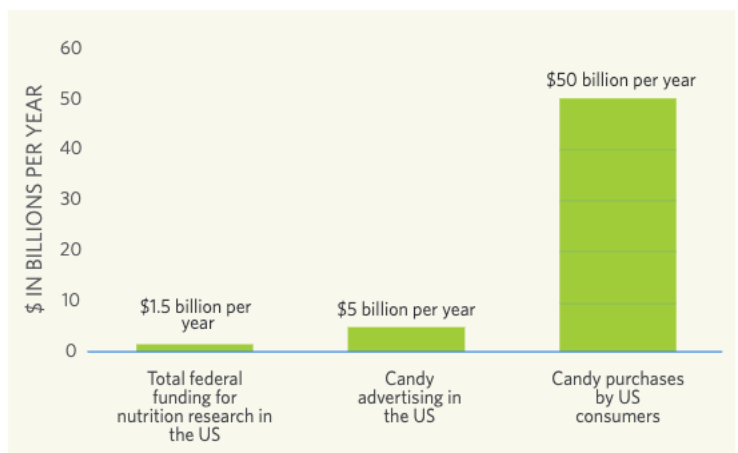
Active duty forces have seen a **61 percent rise** in obesity since 2002.



1 in 4 adults are too obese to serve in the US military



Nutrition science is advancing quickly but is significantly underfunded.



One Initiative: Saving thousands of lives + billions of dollars

The costs of diet-related disease are immense, but fortunately, strategic policies and novel research have the potential to dramatically improve health outcomes and garner tremendous savings.

Worksite Wellness — investing in health is a smart business decision

Reducing employee health risks such as high glucose and blood pressure by **just 1 percent** could save employers **\$83 to \$103 per person annually**.



Every dollar that employees spend on wellness programs generates about **\$3.27** in lower medical costs and **\$2.73** in less absenteeism.



Nutrition research is advancing quickly, but there's still so much left to learn. Areas of research that warrant funding include:



The cardiometabolic effects of phenolics, dairy fat, probiotics, fermentation, coffee, tea, cocoa, eggs, specific vegetable and tropical oils, vitamin D, individual fatty acids, diet-microbiome interactions.

Strengthening the 'N' in SNAP



Making nutrition a core SNAP objective would improve the lives of millions of low income families, while lowering health care costs and reducing disparities.

30% fruit and vegetable (F&V) incentive to all SNAP participants is estimated to save...

\$6.77 Billion in healthcare costs over a lifetime!

\$39.16 Billion: amount of healthcare savings over a lifetime that would be produced by a combined incentive/disincentive program within SNAP

Healthcare — the number one cause of poor health should be the number one priority of the healthcare system

Providing a **20 percent incentive** for fruit and vegetable purchases to Medicaid and Medicare beneficiaries is estimated to prevent **1.95 million** cardiovascular disease events and to save **\$40.9 billion** in healthcare costs.



Providing free fresh food as a treatment for diabetes yields a **more than 40% decrease** in the risk of death or serious complications.



A broader **20 percent incentive** including whole grains, nuts, fish, and plant-based oils would prevent **3.31 million** cardiovascular disease events save **\$102.4 billion** in healthcare costs.



The Friedman School at Tufts University

The Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University was established in 1981 with the mission of bringing together biomedical, social, political, and behavioral scientists to conduct research, educational, and community-service programs to improve the nutritional health and well-being of populations throughout the world.

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Renata Micha, "Association Between Dietary Factors and Mortality from Heart Disease, Stroke, and Type 2 Diabetes in the United States," JAMA, 317(9): 912-924, 2017.

The US Burden of Disease Collaborators. The State of US Health, 1990-2016 Burden of Diseases, Injuries, and Risk Factors Among US States. JAMA. 2018;319(14):1444-1472. doi:10.1001/jama.2018.01580)

Dariusz Mozaffarian, et al., "Heart Disease and Stroke Statistics – 2016 Update." Circulation, 133: 38-360, 2016.
(<http://www.diabetes.org/diabetes-basics/statistics/infographics/adv-staggering-cost-of-diabetes.html>)

Yujin Lee, et al., "Cost-effectiveness of Financial Incentives for Improving Diet and Health through Medicare and Medicaid," Manuscript submitted for publication, 2018.

James Mabli, Jim Ohls, "Supplemental Nutrition Assistance Program participation is associated with an increase in household food security in a national evaluation," Journal of Nutrition, Education, and Behavior 145, no. 2 (2015): 344-51.

Alisha Coleman-Jensen, et al., "Household Food Security in the United States in 2016," Economic Research Service, September 2017.

Seth Berkowitz, et al., "Supplemental Nutrition Assistance Program (SNAP) Participation and Health Care Expenditures Among Low-Income Adults," JAMA Internal Medicine 177, no. 11 (2017): 1642-9.

Official USDA Food Plans: Cost of Food at Home at Four Levels, U.S. Average, April 2018.
<https://www.cnpp.usda.gov/sites/default/files/CostofFoodApr2018.pdf>.

U.S. Department of Agriculture Food and Nutrition Service, Diet Quality of Americans by SNAP Participation Status: Data from the National Health and Nutrition Survey 2007-2010, 2015. Available at: <https://fns-prod.azureedge.net/sites/default/files/ops/NHANES-SNAP07-10.pdf>.

Steve Garasky, et al., Foods Typically Purchased by SNAP Households, IMPAQ International for USDA Food and Nutrition Service, November 2016 Analysis of 2013-2014 National Health and Nutrition Examination Survey data.

Dariusz Mozaffarian, et al., "Cost-Effectiveness of Financial Incentives and Disincentives for Improving Food Purchases and Health through the U.S. Supplemental Nutrition Assistance Program (SNAP)," Manuscript submitted for publication, 2018.

Dariusz Mozaffarian, et al., "Cost-Effectiveness of Financial Incentives and Disincentives for Improving Food Purchases and Health through the

U.S. Supplemental Nutrition Assistance Program (SNAP)," Manuscript submitted for publication, 2018.

USDA, Economic Research Service, "Federal Support for Nutrition Research Trends Upward as USDA Share Declines." June 1, 2015. Available at: <https://www.ers.usda.gov/amber-waves/2015/june/federal-support-for-nutrition-research-trends-upward-as-usda-share-declines>.

Dariusz Mozaffarian, et al., "Heart Disease and Stroke Statistics – 2016 Update." Circulation, 133: 38-360, 2016.
Mission Readiness, "Retreat is Not an Option," 2014,
<http://missionreadiness.s3.amazonaws.com/wp-content/uploads/MR-NAT-Retreat-Not-an-Option.pdf>.

R.M. Henke, et. al., "The relationship between health risks and health and productivity costs among employees at Pepsi Bottling Group," J Occup Environ Med , 52(5): 519-527, 2010. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/20431407>.

Katherine Baicker, et. al., "Workplace Wellness Programs Can Generate Savings," health Affairs, 29(2), 2010. Available at: <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2009.0626>.

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