Advancing Nutrition Science

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FOOD IS MEDICINE INSTITUTE

The Burden of Poor Diets: Devastating Health Harms and More

Poor nutrition is a top driver of diet-related diseases such as heart disease, type 2 diabetes, obesity, hypertension, and certain cancers,[1] and contributes to many other conditions, including poor gut health, mental health, declining memory and cognitive function, immunity, and allergies. This poses multiple societal challenges. For example:

1 in 2 U.S. adults have diabetes or prediabetes[2]

7 in 10 have overweight or obesity[3]

14 in 15 U.S. adults have suboptimal cardiometabolic health[4]

U.S. teens are now developing the diet-related diseases of adults:

1 in 4 have prediabetes[2]
1 in 4 have obesity[5]
1 in 6 have fatty liver disease[6]

77% of U.S. young adults do not qualify for military service. Overweight is the leading medical disqualifier.[8]

Suboptimal diets cost the U.S. economy at least

$1.5 trillion each year[7]

in healthcare spending and lost productivity

Funding for Nutrition Research is Far Too Low

Despite rising rates of diet-related chronic diseases and their human, economic, and societal impacts, **National Institutes of Health (NIH) funding for nutrition research and training has been flat or even declining for nearly 50 years.** By the most optimistic estimates, total funding for nutrition research represents only 4% of annual NIH spending,[9] even with diet-related illnesses causing most death and disability in the nation.

The Need for Cutting-Edge Nutrition Research

Although nutrition science has advanced in recent years, so much is left to learn. A major new investment in NIH nutrition research is critical to grow the evidence base. Example of important areas include:

- Mechanisms underlying the health harms of ultra-processed foods
- The effects of different foods on mothers and their children, including for fertility and child development
- The effects of different foods and dietary patterns on mood, sleep, and mental health
- How food interacts with the gut microbiome to influence health
- Mapping the "dark matter" of food, including thousands of trace bioactive nutrients
- Optimal diets for extending both lifespan and healthspan
- How foods interact with other medical treatments, such as medications for obesity
- Cost-effectiveness and efficacy of Food is Medicine interventions
- Personalized nutrition, based on gut microbiome and epigenetic profile
- The effects of contaminants such as microplastics and heavy metals in foods

Policy Solutions

These solutions for advancing nutrition science draw from various consensus reports developed by leading experts[10,11] and priorities supported by key organizations.[12]

Congress should increase federal investment for nutrition research across NIH to at least $4 billion per year to better support high-impact research on topics related to food and chronic disease prevention and management. This includes advancing the science for dietary recommendations to the public, leveraging new technologies and data science resources and approaches, and supporting and enhancing translational and implementation science.

Congress should fund the NIH Office of the Director to launch Food is Medicine Centers of Excellence, a concept that has already received clearance at NIH, combining cutting-edge research with patient care and community outreach to advance FIM interventions in healthcare including medically tailored meals, medically tailored groceries, and produce prescriptions.

Congress should ensure sufficient funding for the Office of Nutrition Research in the NIH Office of the Director for leadership and coordination of nutrition science efforts.

Expanded funding for ONR should supplement efforts at other **NIH Institutes and Centers** to address diet-related diseases. Nutrition research occurs across NIH, focused on different diseases and conditions. Adequate ONR funding will help **coordinate and advance such efforts**, not replace them.

Increased funding for ONR will also allow it to provide **training to the next generation** of nutrition scientists and coordinate a broader portfolio of research across diseases and conditions.

Congress and the Administration should consider a new NIH National Institute of Nutrition. This new institute could:

- Coordinate and harmonize nutrition science, reducing duplication of efforts and waste across the NIH ICs and other federal agencies that conduct and utilize nutrition research.*
- Guide and support training of healthcare professionals for clinical care and basic and translational science in nutrition.
- Inform and support the Dietary Guidelines for Americans, including currently missing nutritional guidance for individuals with diet-related conditions.
- Guide the food industry to promote evidence-based innovations that improve health and advance U.S. jobs and businesses.

**Examples of other federal entities that conduct and utilize nutrition research include the U.S. Department of Agriculture, Department of Health and Human Services, Department of Defense, and Department of Veterans Affairs.*

Prioritizing the advancement of nutrition science will help to improve health outcomes for all Americans, reduce healthcare spending, create new jobs and businesses, and improve military readiness and national security.

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4 J Am Coll Cardiol. 2022 Jul 12;80(2):138-151. doi: 10.1016/j.jacc.2022.04.046
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6 Hepatol Commun. 2021;5:1676-1688. https://doi.org/10.1002/hep4.1760
7 https://www.rockefellerfoundation.org/reports/true-cost-of-food-measuring-what-matters-to-transform-the-u-s-food-system/ (the $1.1T figure from this report has been updated for healthcare inflation)
8 https://strongnation.s3.amazonaws.com/documents/1541/aab5fcd2-74e4-4b76-b260-010a5d9afcc9.pdf
9 NIH Nutrition Research Report 2022-2023. https://dpcpsi.nih.gov/onr/nih-nutrition-report
10 Am J Clin Nutr. 2020 Sep 1;112(3):721-769. doi: 10.1093/ajcn/nqaa179. PMID: 32687145
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