

# Advancing Nutrition Science

## TUFTS FRIEDMAN SCHOOL OF NUTRITION SCIENCE AND POLICY

The Friedman School of Nutrition Science and Policy at Tufts University is dedicated to improving our nation's understanding of the science and value of sound nutrition and its connection to health.

### Poor Diets are Harming our Health and our Economy:

Poor nutrition is the **number one cause** of negative health outcomes in America, with billions of dollars spent each year on preventable, diet-related illnesses. Poor nutrition challenges almost every aspect of our society, contributing to negative health outcomes and preventable health care spending across the U.S. and around the world. These burdens **disproportionately harm** people with lower incomes, people in minority racial and ethnic groups, and people who are less educated, contributing to existing health disparities. Diet-related diseases create enormous economic challenges for American businesses, families, and individuals through rising health care premiums, out-of-pocket-costs, missed work, and lower productivity.

### Nutrition Science is a Critical Part of the Solution:

A clear understanding of the nutritional value of our food – as well as the ways in which Americans consume foods and beverages – has proven critical in treating costly, diet-related health conditions like diabetes, obesity, and heart disease and in advancing health equity. Nutrition research is advancing quickly, but there's still much left to learn.

Among areas of research that warrant significant funding, **leading nutrition scientists** have **recommended** further examination of:

- Diet-microbiome interactions
- Health disparities in diet-related diseases
- The effect nutrition has on Alzheimer's disease, cancer, maternal health and child development, and mental health
- How nutrition in the first 1000 days of life, from pregnancy to early childhood, affects optimal child development and future health
- Cardiometabolic effects of specific foods and nutrients (e.g., dairy fats, probiotics, fermented foods, coffee, tea, cocoa, eggs, specific vegetable and tropical oils, vitamin D, individual fatty acids, etc.)
- Variability in metabolic responses to diet and food to advance personalized nutrition and better inform public health and food policy

They also adversely affect our nation's military readiness and national security. For example:

- Our yearly combined health care spending and lost productivity from suboptimal diets cost the economy **\$1.1 trillion**
- **1 in 2** U.S. adults are living with diabetes or prediabetes and **7 in 10** with overweight or obesity.
- Such diet-related conditions impact our nation's military readiness. **8 in 10** U.S. young adults aged 17-24 are unfit to serve in our military, with overweight or obesity as the top medical disqualifier.

- Nutritional factors that influence both disease initiation and progression, as well as response to therapy
- Biochemical and behavioral bases for food choices and intake over time

Nutrition science, however, extends far beyond these areas; it affects individuals' daily decisions, the nutrition guidance that health providers offer to patients, and the nutrition standards that undergird federal, state, and local public health programs and policies. **Evidence-based programs, policies, and education campaigns** that improve consumer knowledge, promote experiential learning, support healthier food environments, and expedite translation and dissemination of the evidence connecting food, nutrition, and health are important for promoting long-term behavior change and reducing prevalence of diet-related diseases.

- Despite unhealthy diets accounting for **20%** of U.S. health care costs, only **\$1 million** of the National Institute of Health's (NIH) annual **\$45 billion** budget (.002%) goes to the Office of Nutrition Research.
- A 2021 U.S. Government Accountability (**GAO**) **report** highlights the country's fragmented nutrition science efforts and the need for more coordinated and strengthened federal nutrition research, finding 200 federal efforts related to diet strewn across 21 agencies.

**WE NEED A NATIONAL NUTRITION SCIENCE STRATEGY:**

Nutrition research is currently funded through more than 20 government departments and agencies, without sufficient coordination or authority for harmonized goals, data-sharing, or translation.

Strengthening federal nutrition research will enable individuals, health care providers, food system stakeholders, and government policymakers to better improve health through nutrition – particularly in communities that are underserved and suffer severe diet-related health disparities due to **constrained access** to nutritious foods and other structural barriers that challenge healthy food choices. Now more than ever, Congress and other government stakeholders should prioritize advancing nutrition science as an effective mechanism to improve health outcomes for all Americans, reduce health care spending, improve national security, promote business innovation, and promote health equity.

The new **National Strategy** highlights the role of nutrition science and education in supporting America's vitality, calling for investment in nutrition research to inform policy and implement a vision for advancing nutrition science.

**A COORDINATED NATIONAL NUTRITION SCIENCE STRATEGY WILL BRING:**

- Complementary and amplified nutrition science efforts across multiple Federal departments and agencies
- Acceleration of essential basic, clinical, public health, and translational discoveries
- Groundbreaking advances to address Alzheimer's disease, cancer, maternal health and child development, and mental health
- Essential scientific advances to address major nutrition-related health disparities by geography, income, education, race, and ethnicity
- Expanded and modernized nutrition-related monitoring and surveillance
- A skillfully trained nutrition science workforce
- Coordinated medical health professional education and training that includes licensing and certification standards for nutrition education
- Evidence base required for providing regular updates to the Dietary Guidelines for American (DGAs) and Dietary Reference Intakes (DRI)
- Strengthened intersections between nutrition science and food products, supply chains, and sustainability
- Improved communication to the public around evidence-based nutrition information and education to inform choice and reduce confusion

## KEY POLICY SOLUTIONS



Congress should **increase funding for the Office of Nutrition Research** in the National Institute of Health (NIH) to increase leadership, coordination, and investment in nutrition research.



Congress should **double federal funding** for nutrition research across the NIH to **at least \$4 billion per year** to better support high-impact research on topics related to hunger, nutrition, health, and their social determinants.



Congress should **increase funding for USDA Research, Education, and Economics (REE)** and ensure emphasis across REE on the critical nexus of agriculture production, human health, and soil health.



NIH, the Health Resources and Services Administration (HRSA), and Centers for Medicare and Medicaid Services (CMS) should **provide funding for the training of health care professionals** for clinical care and basic and translational science in nutrition through the establishment of **nutrition-focused research fellowships and postdoctoral programs**, and Congress should recommend increasing nutrition education requirements in Graduate Medical Education.



Congress should work to **increase diversity and inclusion in the nutrition science workforce** including by ensuring that a diverse range of academic institutions receive adequate funding.



Congress should **increase investment in nutrition research** at the intersection of agricultural production and nutrition for the **U.S. Department of Agriculture** (USDA) Agricultural Research Service (ARS) including its network of Human Nutrition Research Centers, the National Institute of Food and Agriculture (NIFA) extramural research programs, and the Economic Research Service (ERS) programs – which assesses demographic, social, informational, and economic determinants of dietary consumption and associated health outcomes.



USDA should **expand research to improve public guidance and education** that would enhance consumer knowledge and understanding of nutrition and health including MyPlate, Nutrition Facts Labels, and menu labeling.



USDA should **conduct recurring analyses of the impact of nutrition assistance program participation on diet quality, nutrition, and health** to inform future policy and program decisions that would strengthen benefits and access.



Congress should **increase funding for CDC surveillance on nutrition** and the national food environment.



Congress and the Administration should work towards creating a **new National Institute of Nutrition at the NIH**, accompanied by meaningful new funding to complement existing NIH activities.