Food is Medicine

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Dean
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41st Annual National Food Policy Conference
Washington, DC
March 29, 2018

The Global Nutrition Crisis

Health and wellbeing
Health care costs and access
Government budgets
Private business, economic growth
Sustainability and climate change
National security
Disparities
Our Food: The #1 Cause of Poor Health

Risk Factors
- Dietary risks
  - Tobacco smoking
  - High blood pressure
  - High body mass index
  - Physical inactivity and low physical activity
  - High fasting plasma glucose
  - High total cholesterol
  - Ambient particulate matter pollution
  - Alcohol use
  - Drug use
  - Lead exposure
  - Occupational risks
  - Low bone mineral density
  - Residential radon
  - Ambient ozone pollution
  - Intimate partner violence
  - Childhood sexual abuse

US Burden of Disease Collaborators, JAMA 2013

Diet-Related Disease: Enormous Economic Burdens

Annual direct and indirect costs:

- **Cardiovascular diseases:** $317 billion/year
  ($193B in direct healthcare, $124B in lost productivity)

- **Type 2 diabetes:** $320 billion/year
  ($112B in direct healthcare, $208B in lost productivity)

- **All obesity-related conditions:** $1.42 trillion/year
  (~ 8% of U.S. gross domestic product)

American Heart Association, *Heart Disease and Stroke Statistics*, 2016
The Milken Institute, *Weighing Down America*, 2016
Nutrition: Passion and Confusion

Explosion of Nutrition Science

Source: Google images

Source: Pubmed/Medline (to Aug 2016)
Lesson #1. Foods and Obesity: More than Calories

- Hunger, fullness
- Glucose, insulin, other hormonal responses
- Liver de novo fat synthesis (conversion of starch and sugar to fat)
- Brain reward, craving
- Gut microbiome (bacteria) responses
- Body’s metabolic rate (energy out)

All Calories are Not Created Equal

e.g., Browning AJCN 2011; Ebbeling JAMA 2012; Poutahidis Plos ONE 2013; Lennerz AJCN 2013; Ludwig JAMA 2014; etc.

Lesson #2. Diet & Well-Being: Complex Pathways

Mozaffarian D, Circulation 2016
Lesson #3. Priorities: Foods and Food Patterns

Dietary Priorities: Healthy Food Patterns

**Benefit**
- Fruits, Nuts, Fish
- Vegetables, Plant Oils
- Whole Grains, Beans, Yogurt
- Cheese
- Eggs, Poultry, Milk
- Butter
- Unprocessed Red Meats

**Harm**
- Refined Grains, Starches, Sugars
- Processed Meats, High Sodium Foods
- Industrial Trans Fat

‘high fat Mediterranean diet’

Mozaffarian D, Circulation 2016
Lesson #4. Policy and Systems Changes

Afshin et al, 2014

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“Best Buy” Policies

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www.food-price.org
Food is Medicine

• Tufts is working with multiple stakeholders on a bipartisan initiative: Food is Medicine.

• Effective food and nutrition policy is essential for addressing health and well-being, healthcare costs, business competitiveness, disparities, and military readiness.

• Remarkable advances in science and technology now provide relevant, cost-effective solutions.

• New evidence on actionable and impactful policy priorities for private business and local, state, and federal governments.

http://now.tufts.edu/articles/healthy-diets-better-health

Food is Medicine: Health Care Reform

• Electronic health records (EHR)

• Fruit and vegetable prescriptions

• Medically tailored meals

• Novel technologies for patient incentives, nudges

• Medical education: licensing exams (USMLE), specialty certifications (ABIM)

• Reimbursement and quality metrics
Medicare and Medicaid: Unsustainable Rise in Costs

- **25% of the total federal budget**
- **Medicaid Incentives for Prevention of Chronic Diseases** (2011 ACA/CMS pilot)
- **Medicare “Better Health Rewards”** (2012 Senator Rob Portman, R-OH)

Food Rx in Medicare and Medicaid: Health Impacts, Costs?

- **F&V Incentive (30% subsidy)**
- **Healthy Food Incentive (30% subsidy)**

Lee et al, AHA Spring Meeting, March 2018

www.food-price.org
Food is Medicine: Worksite Wellness

- Healthy food incentives
- Novel technologies for wellness platforms
- Cafeteria & vending nutrition standards
- Cafeteria nudges

Novel Technology Platforms: Healthy Food Incentives

e.g. John Hancock Vitality, with Nutrisavings and Tufts
Food is Medicine: SNAP, WIC, Meals on Wheels

- Novel technology platforms
- Healthy food incentives
- Food eligibility standards
- Retailer eligibility standards
- Align SNAP with Medicaid, Medicare

Healthy SNAP: Bipartisan Policy Center

Executive Summary
Leading with Nutrition: Leveraging Federal Programs for Better Health
Recommendations from the BPC SNAP Task Force

SNAP Task Force co-Chairs: Senator Bill Frist, USDA Sec. Dan Glickman, USDA Sec. Ann Veneman

https://bipartisanpolicy.org/library/leading-with-nutrition-leveraging-federal-programs-for-better-health/
**Healthy SNAP: Bipartisan Policy Center**

The Supplemental Nutrition Assistance Program (SNAP) provides food assistance to more than 40 MILLION AMERICANS costing approximately $70 BILLION EACH YEAR.

**Key Recommendations:**

1. Prioritize nutrition in SNAP
2. Strengthen SNAP Education
3. Align SNAP and Medicaid
4. Coordinate federal and state agencies and programs

[https://bipartisanpolicy.org/library/leading-with-nutrition-leveraging-federal-programs-for-better-health/](https://bipartisanpolicy.org/library/leading-with-nutrition-leveraging-federal-programs-for-better-health/)

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**SNAP Incentives/Disincentives: Health Impacts, Costs?**

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<th>F&amp;V Incentive (30% subsidy)</th>
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<td>F &amp; V</td>
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<td>Whole Grains</td>
<td>Plant-based Oils</td>
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<td>Junk Food</td>
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Liu et al, AHA Spring Meeting, March 2018
[www.food-price.org](http://www.food-price.org)
FDA: Defining “Healthy” Foods

- Specific healthful foods (2015 DGA): F&V, nuts, seeds, beans, whole grains, fish, yogurt
- Fat quality (not quantity): Ratio of unsaturated to saturated fat
- Carbohydrate quality: Ratio of total carbohydrate to natural fiber (approximates starch+sugar vs. whole grains, bran, seeds, etc.)
- Limits on sodium and added sugar
- Only selected micronutrients “of concern”

Use of the Term “Healthy” in the Labeling of Human Food Products, April 24, 2017

School Meals

Brooklyn, NY, March 22, 2018: Today, Brooklyn Borough President Eric Adams and Council Member Fernando Cabrera introduced a groundbreaking New York City Council resolution that calls on the NYC Department of Education to ban processed meats from being served in NYC public schools.

The World Health Organization (WHO) has classified processed meat as a Group 1 carcinogen; intake also linked to diabetes, CVD.

The NYC Department of Education serves around 950,000 meals to students daily, including current offerings of processed meats.

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**Food is Medicine:** Selected Partners and Events

- **U.S. House bipartisan Food is Medicine Working Group**
  - Lynn Jenkins (R-KS), Roger Marshall (R-KS), Jim McGovern (D-MA), Chellie Pingree (D-ME)
  - Launched Jan 17
  - Next briefing on Medically tailored meals, May 9, Washington DC

- **The Milken Institute**
  - Global Conference 2018, April 29-30, Los Angeles

- **Partnership for a Healthier America**
  - 2018 Summit, May 3, Washington DC

http://now.tufts.edu/articles/healthy-diets-better-health

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www.food-price.org
Want to fix America’s health care? First, focus on food

September 12, 2017 10:33pm EDT

theconversation.com/want-to-fix-americas-health-care-first-focus-on-food-81307