

A top-down view of a variety of fresh and dried ingredients including fruits, vegetables, grains, and herbs. The ingredients are arranged in a dense, overlapping pattern. Visible items include: sliced lemons, almonds, ginger, pineapple chunks, cherry tomatoes, an avocado, garlic, quinoa, corn, blueberries, kiwi slices, celery, and various spices. The background is dark, making the colors of the food stand out.

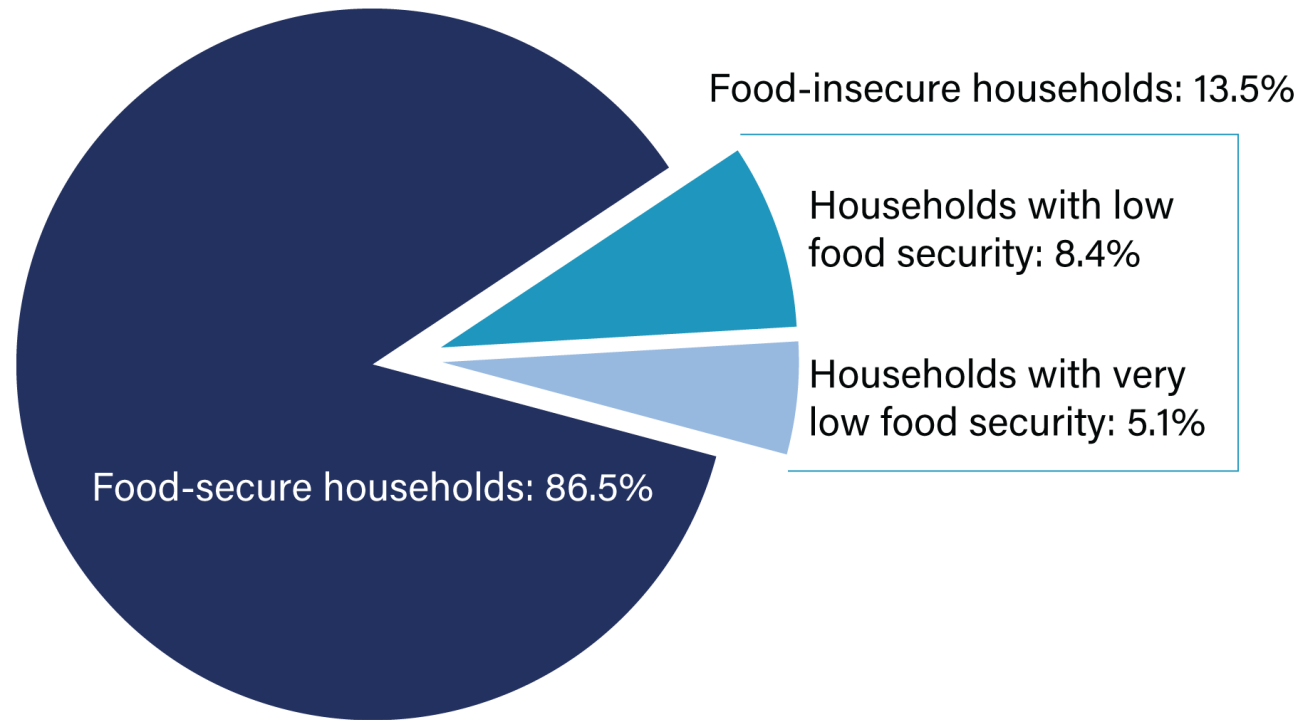
You are what you eat: Food is Medicine

Valerie Borum Smith, MD, MPH, FAAP



Food Insecurity in the United States, 2023

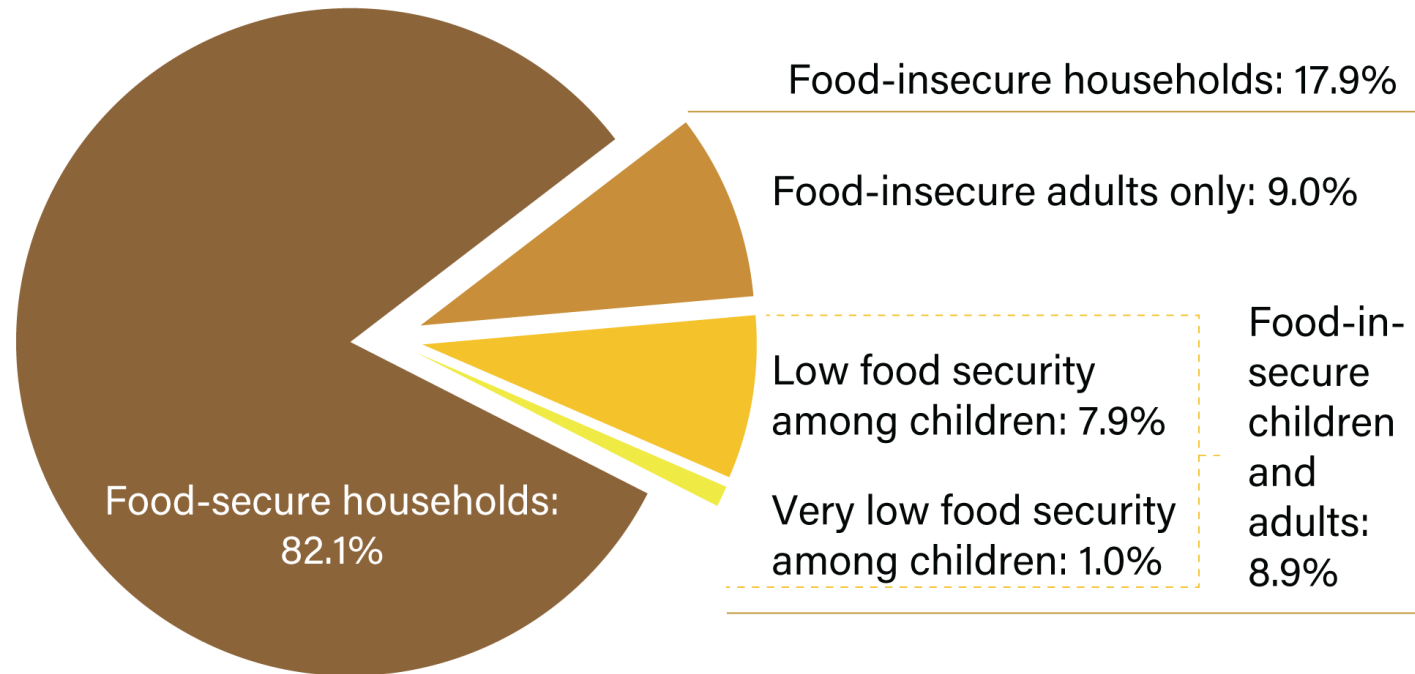
U.S. households by food security status, 2023



Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Food Insecurity in US Households with Children, 2023

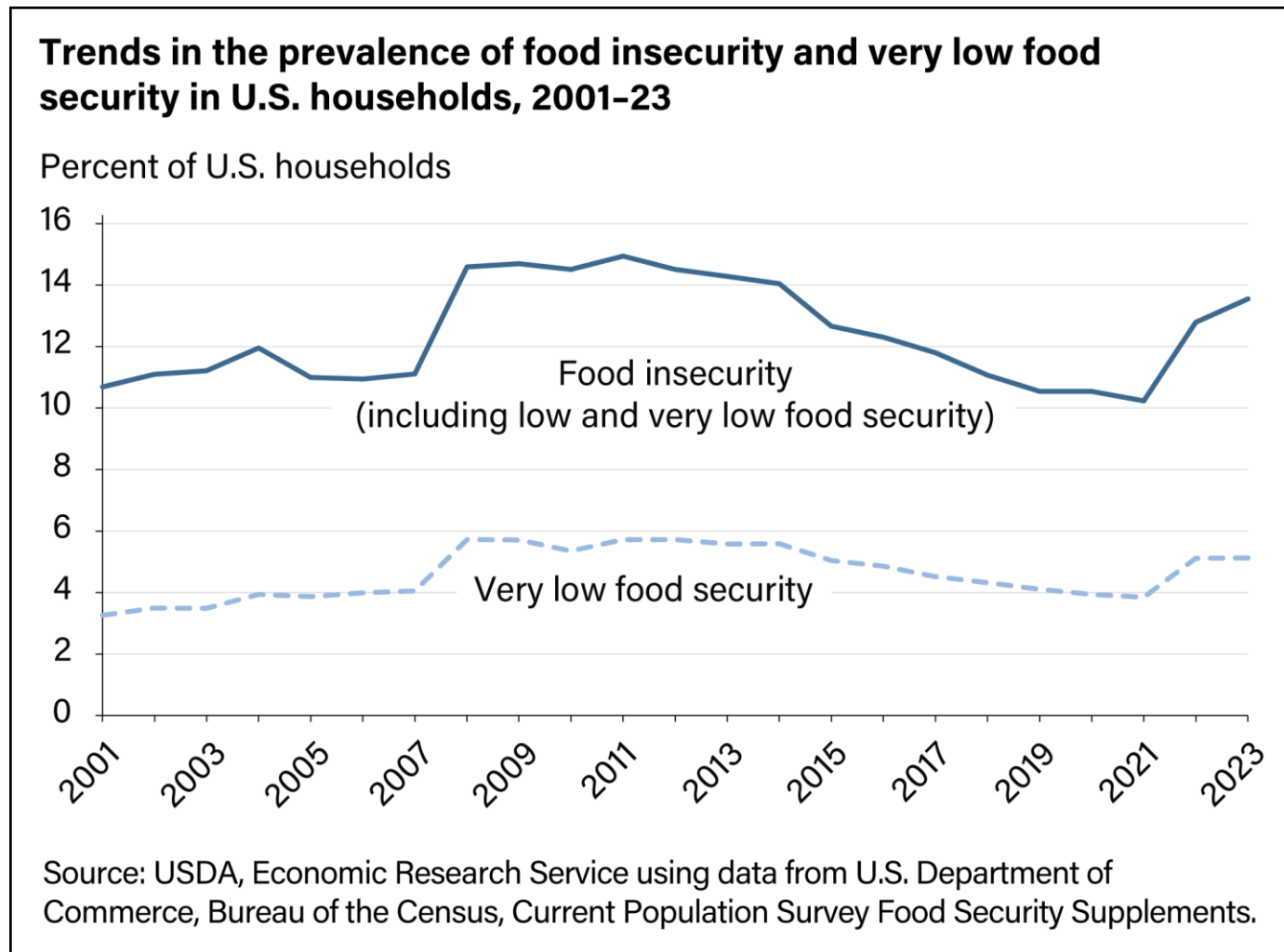
U.S. households with children by food security status of adults and children, 2023



Note: In most instances, when children are food insecure, the adults in the household are also food insecure.

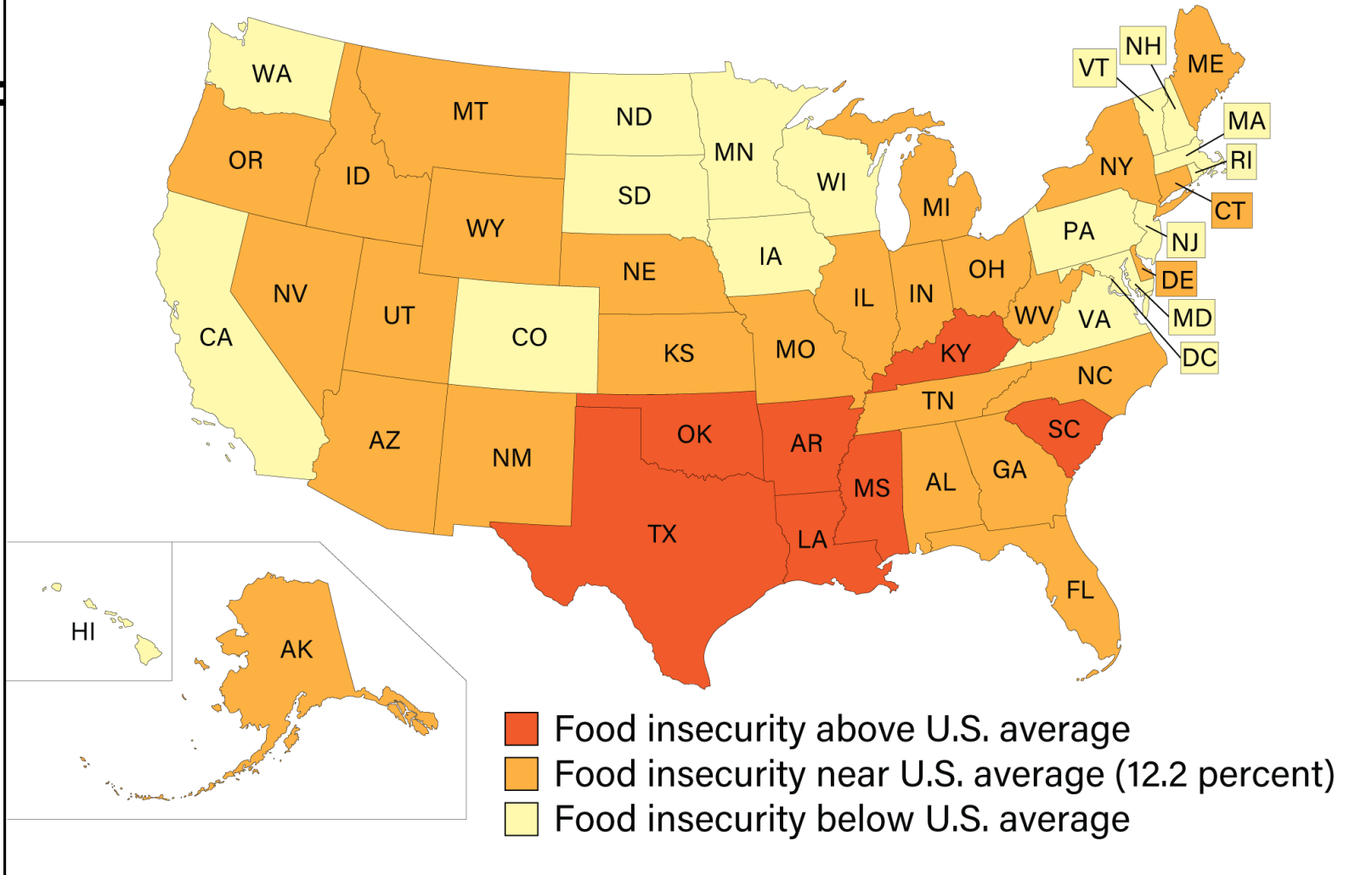
Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Trends in Food Insecurity in US Households



Prevalence of Food Insecurity by State

Prevalence of food insecurity, average 2021-23



Childhood food insecurity has consequences



Academic Achievement:

- Lower scores in math and reading
- Lower engagement in class
- Loss of school days
- Repeated grades



Health:

- Lower health in general
- More stomach aches
- More headaches



Behavioral Outcomes:

- Externalized: aggression, hyperactivity, inattentiveness
- Internalization: Depression, anxiety, substance abuse



A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



Adapted: Seligman HK, Schilling D. N Engl J Med. 2010;363:6-9.

Food as preventative medicine to
encourage health and well-being



Food as medicine to
improve nutrition security



Food as Medicine
is a philosophy where
food and nutrition
aids individuals through
interventions that
support health
and wellness.

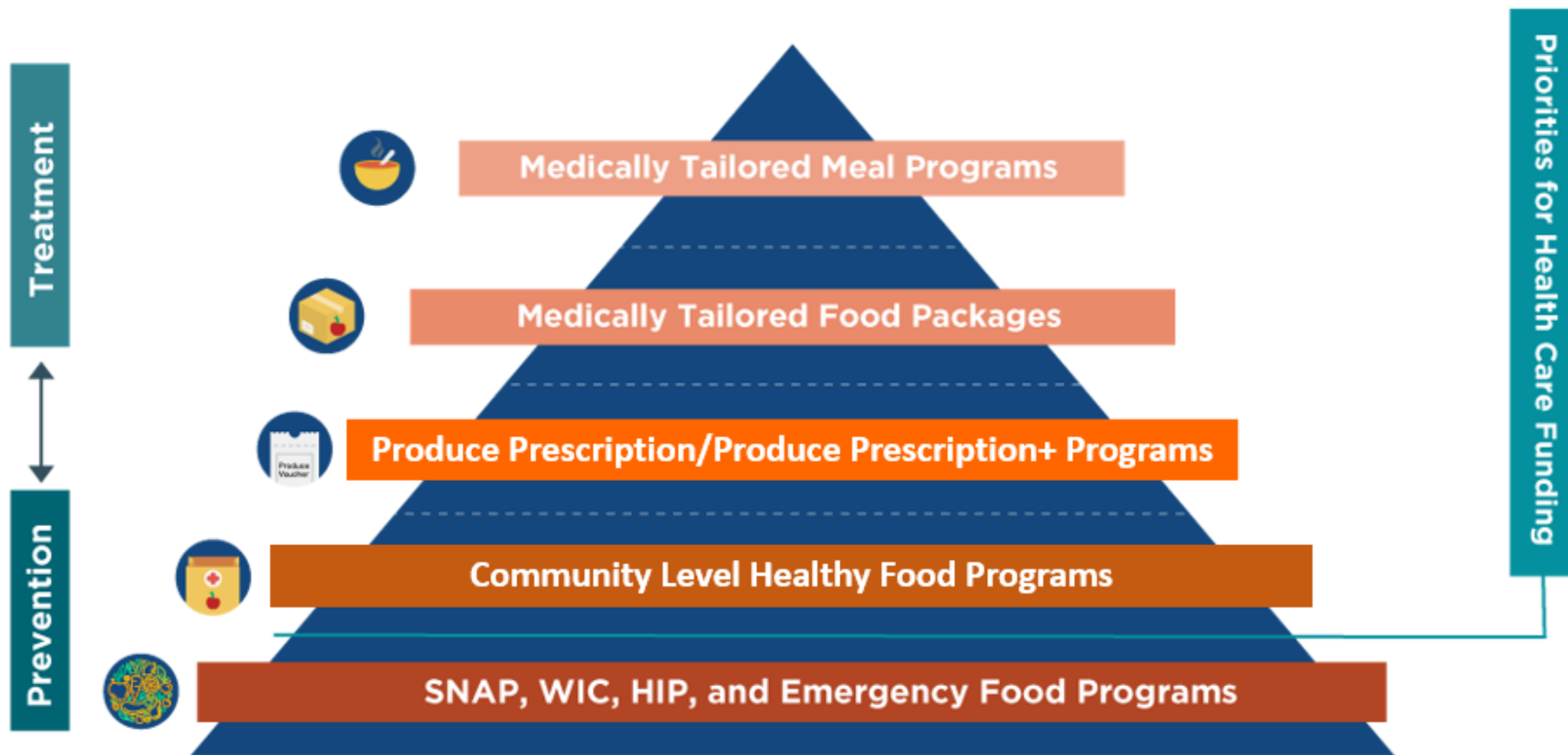
Food as medicine in **disease**
management and treatment



Food as medicine to
promote food safety



FOOD IS MEDICINE PYRAMID



Patient Identification and Eligibility

Food-Based Nutritional Treatments and Supports

Health, Utilization, and Other Outcomes



Physician Evaluation



Medically tailored meals



Medically tailored groceries



Social needs assessment



Produce prescriptions



Nutrition and culinary education


- Food-Related Risks**
- Food security
 - Nutrition security
 - Dietary quality

- Health Markers**
- Glucose control
 - Blood pressure
 - Body weight

- Patient-Centered Outcomes**
- Disease self-management
 - Self-perceived physical and mental health

- Health Care Utilization**
- Hospitalizations, ED visits, nursing home use
 - Total medical costs





*Let food be thy
medicine and
medicine be thy food.*

— Hippocrates

